REPORT UAG - 54

WORLD DATA CENTER A
for
Solar-Terrestrial Physics

CATALOG OF IONOSPHERE VERTICAL SOUNDINGS DATA

April 1976

WORLD DATA CENTER A

National Academy of Sciences
2101 Constitution Avenue, N. W.
Washington, D. C., U.S.A., 20418

World Data Center A consists of the Coordination Office and seven Subcenters:

World Data Center A
Coordination Office
National Academy of Sciences
2101 Constitution Avenue, N. W.
Washington, D. C., U.S.A. 20418
[Telephone: (202) 389-6478]

Glaciology:

World Data Center A:
Glaciology
U.S. Geological Survey
1305 Tacoma Avenue South
Tacoma, Washington, U.S.A. 98402
[Telephone: (206) 593-6506]

Meteorology (and Nuclear Radiation):

World Data Center A:
Meteorology
National Climatic Center
Federal Building
Asheville, North Carolina, U.S.A. 28801
[Telephone: (704) 258-2850]

Oceanography:

World Data Center A:
Oceanography
National Oceanic and Atmospheric Administration
Washington, D. C., U.S.A. 20235
[Telephone: (202) 634-7249]

Rockets and Satellites:

World Data Center A:
Rockets and Satellites
Goddard Space Flight Center
Code 601
Greenbelt, Maryland, U.S.A. 20771
[Telephone: (301) 982-6695]

Rotation of the Earth:

World Data Center A:
Rotation of the Earth
U.S. Naval Observatory
Washington, D. C., U.S.A. 20390
[Telephone: (202) 254-4023]

Solar-Terrestrial Physics (Solar and Interplanetary Phenomena, Ionospheric Phenomena, Flare-Associated Events, Geomagnetic Variations, Magnetospheric and Interplanetary Magnetic Phenomena, Aurora, Cosmic Rays, Airglow):

World Data Center A
for Solar-Terrestrial Physics
Environmental Data Service, NOAA
Boulder, Colorado, U.S.A. 80302
[Telephone: (303) 499-1000, Ext. 6467]

Solid-Earth Geophysics (Seismology, Tsunamis, Gravimetry, Earth Tides, Recent Movements of the Earth's Crust, Magnetic Measurements, Paleomagnetism and Archeomagnetism, Volcanology, Geothermics):

World Data Center A
for Solid-Earth Geophysics
Environmental Data Service, NOAA
Boulder, Colorado, U.S.A. 83002
[Telephone: (303) 499-1000, Ext. 6521]

Notes:

(1) World Data Centers conduct international exchange of geophysical observations in accordance with the principles set forth by the International Council of Scientific Unions. WDC-A is established in the United States under the auspices of the National Academy of Sciences.
(2) Communications regarding data interchange matters in general and World Data Center A as a whole should be addressed to: World Data Center A, Coordination Office (see address above).
(3) Inquiries and communications concerning data in specific disciplines should be addressed to the appropriate subcenter listed above.

WORLD DATA CENTER A
for
Solar-Terrestrial Physics

REPORT UAG - 54

CATALOG OF
IONOSPHERE VERTICAL SOUNDINGS DATA

April 1976

Published by World Data Center A for
Solar-Terrestrial Physics, NOAA, Boulder, Colorado
and printed by
U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
ENVIRONMENTAL DATA SERVICE
Asheville, North Carolina, USA 28801

SUBSCRIPTION PRICE: $25.20 a year; $12.00 additional for foreign mailing; single copy price varies.* Checks and money orders should be made payable to the Department of Commerce, NOAA. Remittance and correspondence regarding subscriptions should be sent to the National Climatic Center, Federal Building, Asheville, NC 28801, Attn: Publications.

*PRICE THIS ISSUE $2.10

Table of Contents

		Page
Preface		ii
I.	Introduction	1
II.	Instructions for Ordering Data	2
III.	Lists of Stations	3
	1. Alternate Name List	4
	2. Alphabetical Listing	6
	3. Listing by Geomagnetic Latitude	9
	4. Paired or Grouped Stations	12
	5. Supplement to Master Station List	13
	6. Map of Stations in Catalog	14
IV.	Characteristics Scaled by Stations	15
V.	Explanation of Data Formats	23
VI.	Catalog Listing of Principal Data Types	33
VII.	Special Data Holdings	103
	1. Individual N(h) Profiles	104
	2. Composite Tracings	116
	3. Special Project Soundings	117
	4. Continuous Run Soundings	119
	5. Movies	120
VIII.	Data Publications	121
IX.	Dates of Special Observational Intervals	123
X.	Addresses of Data Sources	125
XI.	Note on Preparation of Catalog	130

Preface

World Data Centers conduct international exchange of geophysical observations in accordance with the principles set forth by the International Council of Scientific Unions (ICSU). They were established in 1957 by the International IGY Committee (CSAGI) as part of the fundamental international planning for the International Geophysical Year program to collect data from the numerous and widespread IGY observational programs and to make such data readily accessible to interested scientists and scholars for an indefinite period of time. WDC-A was established in the U.S.A.; WDC-B, in the U.S.S.R.; and WDC-C, in Western Europe, Australia and Japan. This new system for exchanging geophysical data was found to be very effective, and the operations of the World Data Centers were extended by ICSU on a continuing basis to other international programs; the WDC's were under the supervision of the Comité International de Géophysique (CIG) for the period 1960 to 1967 and are now supervised by the ICSU Panel on World Data Centers.

The current plans for continued international exchange of solar-terrestrial data through the World Data Centers are set forth in the *Third Consolidated Guide to International Data Exchange through the World Data Centres,* issued by the ICSU Panel on World Data Centres, December 1973. These plans are broadly similar to those adopted under ICSU auspices for the IGY and IQSY.

Functions and Responsibilities of WDC's

The World Data Centers collect data and publications for the following disciplines: Glaciology; Meteorology; Oceanography; Rockets and Satellites; Solar-Terrestrial Physics disciplines (Solar and Interplanetary Phenomena, Ionospheric Phenomena, Flare Associated Events, Geomagnetic Phenomena, Aurora, Cosmic Rays, Airglow); Solid-Earth Geophysics disciplines (Seismology, Tsunamis, Marine Geology and Geophysics, Gravimetry, Earth Tides, Recent Movements of the Earth's Crust, Rotation of the Earth, Magnetic Measurements, Paleomagnetism and Archeomagnetism, Volcanology, Geothermics). In planning for the various scientific programs, decisions on data exchange were made by the scientific community through the international scientific unions and committees. In each discipline the specialists themselves determined the nature and form of data exchange, based on their needs as research workers. Thus the type and amount of data in the WDC's differ from discipline to discipline.

The objects of establishing several World Data Centers for collecting observational data were: (1) to insure against loss of data by the catastrophic destruction of a single center, (2) to meet the geographical convenience of, and provide easy communication for, workers in different parts of the world. Each WDC is responsible for: (1) endeavoring to collect a complete set of data in the field or discipline for which it is responsible, (2) safekeeping of the incoming data, (3) correct copying and reproduction of data, maintaining adequate standards of clarity and durability, (4) supplying copies to other WDC's of data not received directly, (5) preparation of catalogues of all data in its charge, (6) making data in the WDC's available to the scientific community. The WDC's conduct their operation at no expense to ICSU or to the ICSU family of unions and committees.

World Data Center A

World Data Center A, for which the National Academy of Sciences through the Geophysics Research Board and its Committee on Data Interchange and Data Centers has over-all responsibility, consists of the WDC-A Coordination Office and seven subcenters at scientific institutions in various parts of the United States. The GRB periodically reviews the activities of WDC-A and has conducted several studies on the effectiveness of the WDC system. As a result of these reviews and studies some of the subcenters of WDC-A have been relocated so that they could more effectively serve the scientific community. The addresses of the WDC-A subcenters and Coordination Office are given inside the front cover. There are very close connections between WDC-A for Solar-Terrestrial Physics and WDC-A for Rockets and Satellites, which exchange solar-terrestrial geophysical data; if it is more convenient, data may be sent to one WDC-A subcenter through the other one.

The data received by WDC-A have been made available to the scientific community in various ways: (1) reports containing data and results of experiments have been compiled, published and widely distributed; (2) synoptic type data on cards, microfilm or tables are available for use at the subcenters and for loan to scientists; (3) copies of data and reports are provided upon request.

Catalogue of Data

All the data associated with ionosphere vertical soundings, which have been received by WDC-A, are listed in this catalog. *This catalog supersedes all previous WDC-A catalogs for these data.*

World Data Center A Coordination Office
April 1976

I. Introduction

This Catalog is the second in the series planned by World Data Center A (WDC-A) for Solar-Terrestrial Physics to cover in considerable detail the data disciplines in Solar-Terrestrial Physics singly or in groups. It intends to cover all the data known to exist for ionospheric vertical soundings, the discipline listed as B.1 in the ICSU *Guide to International Data Exchange through the World Data Centres*. In contrast to earlier catalogs which have always begun with data for the International Geophysical Year, 1957-58, the present catalog includes all known data since the beginning of systematic multifrequency ionospheric soundings; the earliest data set is 1930. This includes all the relevant data held at the data center and direct or indirect information on data held elsewhere.

The Catalog is designed for the user rather than for the archivist. However it does give the data holdings in more detail than heretofore, both the types of data and data reports, and the time units of the data sets. Earlier catalogs indicated the completeness of data holdings by rough proportions of calendar years; the present catalog is in units of months, with corresponding indications of completeness. *This catalog supersedes all earlier catalogs of Ionosphere Vertical Soundings data issued by WDC-A.*

The arrangement of the catalog can be found in the Table of Contents. Each Section is preceded by explanatory notes with details of the format, symbols, etc.

Data are included for 310 stations throughout the world which have operated more or less systematically for at least a few months. These are shown on a fold-out map on page 14. Station locations and other details are given in Section III.

The main body of the Catalog is Section VI. This gives for each station and for each month the kinds of data held in the Center or known to exist.

II. Instructions for Ordering Data

Requests for data indicated in this Catalog should be addressed to:

World Data Center A for Solar-Terrestrial Physics
NOAA
Boulder, Colorado 80302, U.S.A.

Service will tend to be faster the more specific the request can be made. Many users prefer to discuss their needs first with data center staff by telephone (303-499-1000 X6467, Mr. Conkright or Miss Brophy) or by Telex 45897 SOLTERWARN BLDR.

Data are provided for cost of copying or under data exchange arrangements. The general price list below applies. For complex requests, estimate of costs can be provided in advance of filling an order. In some cases the actual cost, for example for computer processing not specified in the price list, can be determined only upon completion of the job.

In some cases the cost is less for the user if we supply more data than was actually requested. For example, on requests for film copies of shorter than standard lengths, we can often avoid the additional $5.15 per interval charges for film cutting and splicing if we simply copy the standard length of the film. We will fill the request at the lowest cost.

The data center staff is prepared to give various kinds of special data services and provide special data products. In many cases the costs will be shared by the data center if the resulting service or product may be of interest to other users.

Most requests are filled within three weeks.

Price List:

35 mm film copies of bottomside ionograms on 35 mm film normally supplied in 500 to 1000 ft. lengths	$ 0.082 per ft.
Cutting and splicing charge for any other than standard length of 35 mm film described above	5.15 per interval
Ionospheric data tabulations on microfilm (hourly values of up to 15 characteristics)	10.00 per station-year
Ionospheric hourly values or monthly medians on punch cards or magnetic tape	prices on request
Preparation of 35 mm microfilm of data sheets (camera negative) . . .	0.15 per frame
Microfiche copy of existing microfiche	0.55 per microfiche
Electrostatic copies of data sheets - letter size (8" x 10-1/2") . . . (reproduced from original size or larger)	0.40 per sheet (see Note 1)
Full-size electrostatic copy of data sheets longer than 11".	0.45 per ft.
Electrostatic copy prepared from 35 mm microfilm - 8-1/2" x 11" . . .	0.65 per sheet
Photographic negative (4" x 5")	3.10 per negative
Other negative sizes	prices on request
Glossy prints (8" x 10") of existing negative	3.50 per print
Magnetic tapes (new blanks)	current cost
Tape-to-tape copy of magnetic tape (if blank tape supplied and no computer processing time or other expense)	50.00 per tape
Duplicates of punched cards on file	13.30 per thousand
Interpreted duplicates of punched cards on file	15.40 per thousand
Keypunching of tabular data	price on request
Computer printout from existing tape or cards	25.50 per 100 pages plus $6.00 if special paper is required and is in stock
Ionospheric electron density, N(h) profiles calculated from ionograms (For reducing ionograms that present no major problems; otherwise on actual cost basis)	
First 50, or fewer, N(h) profiles	10.00 per profile
For N(h) profiles in excess of 50	7.40 per profile
Monthly composite N(h) profiles	56.00 per profile

Note 1 : In some cases we are able to offer price reductions for large orders involving the same kind of data preparation, when the volume reduces the handling or processing costs per unit. This can apply to any of the above. For example, for electrostatic copies of data sheets, the price is reduced from $0.40 to $0.30 per sheet for quantities of 50 or more sheets in a single order.

Note 2 : There is a minimum charge of $10.00 per order.

Note 3 : Mailing or shipping costs may be added, depending on the size of the order.

Note 4 : Checks must be made payable in U.S. currency to *Department of Commerce, NOAA/NGSDC*, and mailed to the address shown above.

III. Lists of Stations

In this Section are the names and coordinates of all the stations listed in this catalog. The map on page 14 gives their locations using the preferred station names; alternate names are given in Part 1 below. The basic lists are Parts 2 and 3 where stations are ordered by alphabet and by geomagnetic latitude, respectively. New stations which were, in effect, continuations of stations nearby are listed in Part 4. In Part 5 are detailed information on certain stations not previously published, or which needed correction.

The geographic coordinates for all stations were converted by computer program to give geomagnetic coordinates. These computations were performed using the mathematical model consisting of spherical harmonic coefficients, known as GSFC 12/66, updated to 1975, [Cain, J. C., S. J. Hendricks, R. A. Langel and W. V. Hudson, A Proposed Model for the International Geomagnetic Reference Field-1965, J. Geomagn. Geoelectr., 19, 335-355, 1967].

These lists of stations and information about them supersedes the lists and information published in the last previous catalog, UAG-30. The present list is much more nearly comprehensive, since it includes stations opened since 1973 and, more importantly, all stations which closed before 1957. The full details for these stations appear in Report UAG-38, *Master Station List for Solar-Terrestrial Physics Data at WDC-A for Solar-Terrestrial Physics*, or in the supplement for ionospheric vertical sounding stations given in Part 5 of this Section.

The explanations of the various lists are as follows:

1. Alternate Name List: This list gives other names by which a station may be known, together with the name we have used in this catalog. For convenience, two presentations of this list are given. They appear first in alphabetical order by the alternate names of stations followed by the names used in this catalog. Then the same list is given alphabetically by catalog name followed by the alternate names for that station.

2. Alphabetical Listing: This shows all stations by catalog name for which there are data entries in the catalog tables given in Sections VI and VII, which are also in alphabetical order. In addition to geographic and geomagnetic coordinates, the two letter codes used on ionograms and the alphanumeric codes used with data in computer format are indicated for all stations for which such an assignment has been made.

3. Listing by Geomagnetic Latitude: This presents the same stations and station information as given in the alphabetical listing. For many purposes the geomagnetic latitude is used as the key search parameter when looking up the availability of ionosphere vertical sounding data.

4. Paired or Grouped Stations: This list gives some of the cases where two or more nearby stations have been operated for successive periods. Thus, for many research purposes the later station is a continuation of the earlier one. In the data catalog the stations are sometimes combined under a catalog name and the names given in this list are treated as alternate names: Part 1 of this Section gives the correspondence between names.

5. Supplement to Master Station List: This list gives detailed station location information and open-close dates for 50 stations, in the same format as in Report UAG-38, *Master Station List for Solar-Terrestrial Physics Data at WDC-A for Solar-Terrestrial Physics*. Most of these are new information on open and closing dates (List I). For others there is more authentic information on station coordinates (List II). In addition, there are twelve stations which do not appear in Report UAG-38 under ionospheric vertical soundings (Program B01) (List III). The table gives geographic and geomagnetic coordinates, the geographic coordinates of the geomagnetic conjugate point, L-value, invariant latitude, geocentric dip and open-close dates for the stations which were not included in Report UAG-38 and the stations for which corrections have been made. The basis for the computed coordinates is the same as for Report UAG-38.

6. Map of Stations in Catalog: The map shows the nominal locations of all the stations listed in this catalog. Those which were operating in March 1976 are indicated by the map symbol " ▲ ", with the station "catalog" name in capital letters. Those which have closed prior to that time are indicated by " Δ ", with the name in small letters.

1. ALTERNATE NAME LIST

OTHER NAMES BY WHICH OBSERVATORY IS KNOWN	OBSERVATORY NAMES USED IN THIS CATALOG
Akita-Ken	Akita
Akita-Shi	Akita
Akrotiri	Cape Zevgari
Amundsen-Scott	South Pole
Baffin Island	Clyde
Base General Belgrano	Belgrano
Bas Roi Baudouin	Baudouin
Bekescaba	Budapest
Belgrade	Beograd
Belmar	Fort Monmouth
Beltsville	Washington
Belvoir	Washington
Boston	Billerica, Maynard
Breisach	Freiburg/Breisach
Bukhta Tikhaya	Heiss Island
Bukhta Tiksy	Tixie Bay
Cachoeira Paulista	San Jose
Cambridge Tunnel	Hobart
Cape Canaveral	Cape Kennedy
Centro Geofisico	Cuba
Chung-Li	Taipei
Cyprus	Cape Zevgari
Dapango	Togo
Dikson	Dixon
Dixson Island	Dixon
Djibouti (Arta)	Djibouti
Dumont D' Urville	Terre Adelie
Durbanville	Capetown
Ebro	Tortosa
El Cerillo	Mexico City
ESSA Boulder	Boulder
Fairbanks	College
Falkland Island	Port Stanley
Formosa	Taipei
Fort Belvoir	Washington
Godley Head	Christchurch
Great Baddow	Baddow
Haringhata	Calcutta
Harvard Univ.	Boston
Ice Island B	Fletchers Ice Island
Ivato	Tananarive
Jakutsk	Yakutsk
Karavia	Elizabethville
Kenora	Winnipeg
Kihei Maui	Maui
Kokubunji	Tokyo
Krasnaya Pakhra	Moscow
Leopoldville	Kinshasa-Binza
Lexington	Boston
Louisiana State Univ.	Baton Rouge
Macao	Macau
Meadows	Washington
Mobile Station	Batavia
Monte Capellino	Genova
Mount Stromlo	Canberra
N.A.I.C.	Arecibo
Narssarssuak	Narssarssuaq
NBS Boulder	Boulder
New Delhi	Delhi
Nichols Field	Manila
Oslo	Kjeller
Paris	Bagneux
Paris-Domont	Domont
Platteville	Erie
Point Barrow	Barrow

(continued on next page)

OBSERVATORY NAMES USED IN THIS CATALOG	OTHER NAMES BY WHICH OBSERVATORY IS KNOWN
Akita	Akita-Ken
	Akita-Shi
Arecibo	N.A.I.C.
Argentine Island	Port Lockroy
Athens (1)	Scaramanga Station
Baddow	Great Baddow
Bagneux	Paris
Baie St. Paul	Quebec
Barrow	Point Barrow
Batavia	Mobile Station
Baton Rouge	Louisiana State Univ.
Baudouin	Bas Roi Baudouin
Belgrano	Base General Belgrano
Beograd	Belgrade
Billerica	Boston
Boston	Harvard Univ.
	Lexington
Boulder	ESSA Boulder
	NBS Boulder
Budapest	Bekescaba
Calcutta	Haringhata
Canberra	Mount Stromlo
Cape Kennedy	Cape Canaveral
Capetown	Durbanville
	Simontown
Cape Zevgari	Akrotiri
	Cyprus
Casey	Wilkes
Christchurch	Godley Head
Clyde	Baffin Island
College	Fairbanks
Cuba	Centro Geofisico
Delhi	New Delhi
Dixon	Dikson
	Dixon Island
Djibouti	Djibouti (Arta)
Domont	Paris-Domont
Eights	Sky-Hi
Elizabethville	Karavia
Ellsworth	Weddell Sea
Erie	Platteville
Fletchers Ice Island	Ice Island B
Fort Monmouth	Belmar
Freiburg/Breisach	Breisach
Genova	Monte Capellino
Heiss Island	Bukhta Tikhaya
Hobart	Cambridge Tunnel
Johannesburg	Pretoria
Kermadec	Raoul Island
Kinshasa-Binza	Leopoloville
Kjeller	Oslo
Leyte	Tolasa
Longyearbyen	Svalbard
Macau	Macao
Manila	Nichols Field
	Quezon City
Maui	Kihei Maui
Maynard	Boston
Mexico City	El Cerrillo
Miedzeszyn	Warsaw
Moscoq	Krasnaya Pakhra
Narssarssuaq	Narssarssuak
Port Stanley	Falkland Island
	Stanley
Providenya	Providenie Bay
Pruhonice	Prague

(continued on next page)

1. Alternate Name List (continued)

OTHER NAMES BY WHICH OBSERVATORY IS KNOWN	OBSERVATORY NAMES USED IN THIS CATALOG
Pole Station	South Pole
Port Lockroy	Argentine Island
Prague	Pruhonice
Pretoria	Johannesburg
Providenie Bay	Providenya
Quebec	Baie St. Paul
Quezon City	Manila
Ramey AFB	Puerto Rico
Raoul Island	Kermadec
Roma	Rome
Rostov-on-Don	Rostov
Sanae Station	Sanae
San Alessio	Rome
San Francisco	Stanford
San Juan	Puerto Rico
Scaramanga Station	Athens
Showa	Syowa Base
Sky-Hi	Eights
Sottens	Schwarzenburg
Syowa Bay	Syowa Base
Stanley	Port Stanley
Sterling	Washington
Svalbard	Longyearbyen
Taiwan	Taipei
Taravao	Tahiti
Tiksy Bay (Tiksi)	Tixie Bay
Tolasa	Leyte
Trichy	Tiruchirapalli
Trivandrum	Thumba
Waller Field	Trinidad
Warsaw	Miedzeszyn
Weddell Sea	Ellsworth
Wilkes	Casey
Yuzhno Sakhalinsk	Yuzhno Sakhali

OBSERVATORY NAMES USED IN THIS CATALOG	OTHER NAMES BY WHICH OBSERVATORY IS KNOWN
Puerto Rico	Ramey AFB
	San Juan
Rome	Roma
	San Alessio
Rostov	Rostov-on-Don
Sanae	Sanae Station
San Jose	Cachoeira Paulista
Schwarzenburg	Sottens
South Pole	Amundsen-Scott
	Pole Station
Stanford	San Francisco
Syowa Base	Showa
	Syowa Bay
Tahiti	Taravao
Taipei	Chung-Li
	Formosa
	Taiwan
Tananarive	Ivato
Terre Adelie	Dumont D' Urville
Thumba	Trivandrum
Tiruchirapalli	Trichy
Tixie Bay	Bukhta Tiksy
	Tiksy Bay (Tiksi)
Togo	Dapango
Tokyo	Kokubunji
Tortosa	Ebro
Trinidad	Waller Field
Washington	Ft. Belvoir
	Kensington
	Sterling
	Beltsville
	Meadows
Winnipeg	Kenora
Yakutsk	Jakutsk
Yuzhno Sakhali	Yuzhno Sakhalinsk

2. ALPHABETICAL LISTING

STATION NAME	OBS PROG	GEOGRAPHIC LAT	GEOGRAPHIC LONG EAST	GEOMAGNETIC LAT	GEOMAGNETIC LONG EAST	STA ID	COMPUTER CODE
ABERYSTWYTH	B01	52.43	355.93	55.82	80.67		
ACCRA	B01	5.63	359.83	9.56	70.74	AG	005
ADAK	B01	51.90	183.40	47.31	240.43	AD	651
AHMEDABAD	B01	23.02	72.60	13.82	144.37	AH	223
AKITA	B01	39.70	140.10	29.53	205.87	AK	539
ALERT	B01	82.60	297.40	85.78	167.91	AL	J82
ALMA ATA	B01	43.25	76.92	33.42	151.11	AA	343
ANCHORAGE	B01	61.20	210.10	61.01	258.60	AN	761
* ARCTICA (NP-8)	B01	80.00	165.00	70.00	205.00	XI	
* ARCTICA (NP-10)	B01	78.00	165.00	69.16	208.40	XJ	
* ARCTICA (NP-11)	B01	79.00	165.00	70.04	207.06	XK	
* ARCTICA (NP-13)	B01	81.00	165.00	71.78	204.03	XL	
* ARCTICA (NP-16)	B01	78.00	176.00	70.42	214.24	XM	676
* ARCTICA (NP-19)	B01	78.00	150.00	67.92	200.59	XP	
* ARCTICA I (NP-6)	B01	82.00	9.00	77.54	143.01	XG	
* ARCTICAII (NP-7)	B01	86.00	296.00	82.10	177.23	XH	
ARECIBO	B01	18.50	293.17	29.96	2.89	AR	J19
ARGENTINE IS	B01	-65.20	295.70	-53.76	3.67	AI	J6N
ARKHANGELSK	B01	64.60	40.50	58.89	128.72	AZ	163
ASHKHABAD	B01	37.90	58.30	30.39	133.69	AS	237
ATHENS	B01	38.00	23.60	36.51	101.76	AT	138
AUCKLAND	B01	-37.00	175.00	-41.17	253.20	AU	63P
BADDOW	B01	51.70	.50	54.22	84.90	01	061
BAGNEUX	B01	48.80	2.30	51.11	85.22	55	039
BAGUIO	B01	16.40	120.60	5.10	189.70	BF	416
BAIE ST PAUL	B01	47.38	289.45	58.85	358.59	PL	J48
BAKER LAKE	B01	64.30	264.00	73.79	316.06	BL	964
BANDOENG	B01	-6.90	107.60	-18.36	176.94	02	40Q
BANGKOK	B01	13.83	100.58	2.52	170.33	BK	314
BANGUI	B01	4.60	18.60	4.89	89.03	BI	104
BARBADOS	B01	13.12	300.40	24.41	10.56	BS	J13
BARROW	B01	71.30	203.20	68.63	241.52	BW	771
BATAVIA	B01	39.40	275.90	50.42	342.16	03	939
BATON ROUGE	B01	30.50	258.80	41.04	334.98	04	930
BAUDOUIN	B01	-70.40	23.30	-67.89	62.90	BB	17V
BELGRANO	B01	-77.90	321.40	-67.29	16.18	GE	A7Q
BEOGRAD	B01	44.80	20.50	43.68	101.14	BE	145
BEVERIDGE	B01	-37.29	144.59	-46.46	220.30		
BILLERICA	B01	42.60	288.70	54.07	357.70	BC	J43
BOGOTA	B01	4.50	285.80	15.93	355.10	BG	905
BOMBAY	B01	19.00	72.80	9.81	144.04	BM	219
BOSTON	B01	42.60	288.70	54.07	357.70	56	J43
BOULDER	B01	40.00	254.70	48.89	317.00	BC	840
BRIBIE IS	B01	-27.30	153.00	-35.44	227.43		
BRISBANE	B01	-27.50	152.90	-35.65	227.36	BR	52P
BUDAPEST	B01	46.40	21.10	45.10	102.33	BU	147
BUENOS AIRES	B01	-34.50	301.50	-23.21	9.83	BA	J3M
BUNIA	B01	1.50	30.20	-.44	99.77	BN	102
BURGHEAD	B01	57.70	3.50	59.26	91.65	06	063
BYRD STATION	B01	-80.00	240.00	-70.59	336.21	BD	88V
CAIRO	B01	30.00	31.19	27.27	106.77	05	130
CALCUTTA	B01	23.00	88.60	12.30	159.40	CU	322
CAMPBELL IS	B01	-52.50	169.20	-57.19	253.66	CI	65K
CANBERRA	B01	-35.30	149.00	-43.90	224.80	CB	53N

* DRIFTING STATION

STATION NAME	OBS PROG	GEOGRAPHIC LAT	GEOGRAPHIC LONG EAST	GEOMAGNETIC LAT	GEOMAGNETIC LONG EAST	STA ID	COMPUTER CODE
CAPE HALLETT	B01	-72.30	170.20	-74.61	278.46	HT	67K
CAPE KENNEDY	B01	28.40	279.40	39.63	347.26	CC	929
CAPE PARRY	B01	70.17	234.37	73.63	269.60	CF	870
CAPE SCHMIDT	B01	68.90	179.50	62.70	227.11	CE	681
CAPE TOWN	B01	-34.10	18.30	-32.89	80.19	CT	13M
CAPE YORK	B01	-11.00	142.40	-20.66	213.64	07	51J
CAPE ZEVGARI	B01	34.60	33.00	31.41	109.66	CV	135
CASABLANCA	B01	33.60	352.40	38.35	69.49	CA	033
CASEY	B01	-66.28	110.53	-77.75	180.00	CW	460
CHICLAYO	B01	-6.80	280.20	4.49	349.71	CY	90P
CHIMBOTE	B01	-9.10	281.40	2.23	350.98	CM	90R
CHITA	B01	52.00	113.50	40.54	182.41	CX	452
CHRISTCHURCH	B01	-43.60	172.80	-47.98	253.24	GH	64L
CHRISTMAS IS	B01	1.90	202.70	2.29	271.75	08	701
CHUNGKING	B01	29.40	106.30	17.96	176.13	09	429
CHURCHILL	B01	58.80	265.80	68.73	323.32	CH	958
CLYDE	B01	70.50	291.40	81.97	2.08	CR	J70
COCOA	B01	28.20	279.40	39.43	347.28	10	928
COCOS IS	B01	-12.20	96.80	-23.33	165.37	CS	31K
COLLEGE	B01	64.90	212.20	64.76	256.98	CO	764
COLOMBO	B01	6.90	79.87	-2.99	149.54	11	306
CONCEPCION	B01	-36.60	287.00	-25.15	356.87	CP	J30
CUBA	B01	23.00	278.00	34.17	346.03	CD	923
DAIRAN	B01	39.00	121.60	27.71	189.70	12	439
DAKAR	B01	14.70	341.60	21.69	54.08	DK	A14
DE BILT	B01	52.10	5.20	53.67	89.79	DT	053
DECEPCION	B01	-63.00	299.30	-51.62	6.40	DE	J6L
DELHI	B01	28.60	77.16	18.86	149.31	DH	328
DIXON	B01	73.50	80.40	62.97	161.71	DI	373
DJIBOUTI	B01	11.50	42.80	6.98	113.99	DJ	111
DOMONT	B01	49.00	2.30	51.30	85.32	13	062
DOURBES	B01	50.10	4.60	51.89	88.15	DB	049
DUSHANBE	B01	38.57	68.78	29.67	143.19	DU	238
EGLIN AFB	B01	30.38	273.30	41.26	340.13	EG	931
EIGHTS	B01	-75.23	282.84	-63.82	355.57	EI	97N
EL ARENOSILLO	B01	37.10	353.27	41.59	71.44		
ELIZABETHVILLE	B01	-11.60	27.50	-12.75	94.50	EZ	11J
ELLSWORTH	B01	-77.72	318.90	-66.98	14.98	EL	A7P
ERIE	B01	40.01	254.70	48.90	316.99	ER	842
ERROL	B01	44.79	288.87	56.26	357.88		
EUREKA	B01	80.00	274.10	86.62	236.39	EU	980
FIJI	B01	-18.00	178.20	-22.01	251.60	14	61Q
FLETCHERS ICE	B01	75.90	235.70	78.07	254.46	XC	982
FORT ARCHAMBAULT	B01	9.20	18.35	9.45	89.71	FA	109
FORT CHIMO	B01	58.10	291.60	69.57	1.62	FC	J58
FORT MONMOUTH	B01	40.40	285.90	51.83	354.29	FM	940
FORT NORMAN	B01	64.90	234.50	69.17	278.44	FN	864
FORTALEZA	B01	-3.70	321.20	6.17	30.80	FZ	A0M
FRASERBURGH	B01	57.60	357.90	60.28	86.05	15	065
FREIBURG/BREISAC	B01	48.10	7.60	49.39	90.14	FR	048
FROBISHER BAY	B01	63.80	291.40	75.27	1.51	FB	J63
FUJI SHIP	B01	COORDINATES VARIABLE					
FUKAURA	B01	40.60	139.90	30.41	205.58	16	541
GARCHY	B01	47.30	3.10	49.52	85.33	GY	042

2. Alphabetical Listing (continued)

STATION NAME	OBS PROG	GEOGRAPHIC LAT	GEOGRAPHIC LONG EAST	GEOMAGNETIC LAT	GEOMAGNETIC LONG EAST	STA ID	COMPUTER CODE
GENOVA	B01	44.60	9.00	45.76	90.02	GV	044
GODHAVN	B01	69.30	306.50	79.85	33.49	GC	J69
GOOSE BAY	B01	53.32	299.16	64.61	12.07	GS	J53
GORKY	B01	56.15	44.28	50.29	127.06	GK	156
GRAHAMSTOWN	B01	-33.30	26.50	-33.73	88.35	GR	13L
GRAND BAHAMA	B01	26.60	281.80	37.92	350.09	GB	926
GRAZ	B01	47.10	15.50	46.87	97.33	GZ	146
GUAM	B01	13.50	144.87	3.96	213.36	17	513
HAIFA	B01	32.82	34.98	29.31	111.06	HA	132
HAINAN	B01	18.30	109.30	6.83	178.82	18	419
HALLEY BAY	B01	-75.50	333.40	-65.83	24.58	HB	A7N
HANKOW	B01	30.70	114.30	19.25	183.43	19	432
HANOVER	B01	43.70	287.80	55.16	356.55	HN	J44
HEISS IS	B01	80.60	58.00	71.28	156.18	BT	280
HERMANUS	B01	-34.42	19.23	-33.38	80.99	HE	13N
HIGHGATE SPGS	B01	45.01	286.91	56.45	355.37		
HIRAISO	B01	36.40	140.60	26.30	206.73	20	536
HIRATSUKA	B01	35.30	139.30	25.09	205.70	21	533
HOBART	B01	-42.90	147.30	-51.61	224.92	HC	54K
HOLLANDIA	B01	-2.50	140.80	-12.38	211.04	HL	50K
HONG KONG	B01	22.33	114.20	10.88	183.46	HK	423
HUANCAYO	B01	-12.00	284.70	-.59	354.30	HU	91K
HUNTSVILLE	B01	34.44	273.65	45.33	340.08	HV	934
HYDERABAD	B01	17.35	78.47	7.55	149.26	HY	317
IBADAN	B01	7.40	3.90	10.53	75.12	IB	007
ILO	B01	-17.40	288.80	-5.93	358.34	IL	J1P
INVERNESS	B01	57.40	355.80	60.51	83.78	IN	056
IRKUTSK	B01	52.47	104.03	41.06	174.75	IR	352
ISTANBUL	B01	41.13	29.03	38.50	107.85	IS	141
JAMAICA	B01	18.00	283.20	29.37	352.00	JA	918
JICAMARCA	B01	-11.95	283.14	-.57	352.77	JI	91J
JOHANNESBURG	B01	-26.10	28.10	-27.04	91.83	JO	120
JULIACA	B01	-15.50	289.80	-4.03	359.30	JU	J1N
JULIUSRUH/RUGEN	B01	54.60	13.40	54.40	99.06	JR	055
KALININGRAD	B01	54.70	20.62	53.10	105.77	KL	154
KAMINOGE	B01	35.60	139.60	25.41	205.94	22	532
KARAGANDA	B01	49.82	73.08	40.31	149.04	KR	250
KERGUELEN	B01	-49.40	70.30	-57.45	128.63	KG	24R
KERMADEC	B01	-29.20	182.10	-32.21	258.17	KC	62R
KHABAROVSK	B01	48.50	135.10	37.89	200.43	KB	548
KHARTOUM	B01	15.55	32.58	12.87	104.89	23	115
KIEV	B01	50.50	30.30	47.29	112.47	KV	151
KINSHASA-BINZA	B01	-4.50	15.20	-3.35	83.88	LB	10M
KIRUNA	B01	67.80	20.40	65.17	115.88	KI	167
KJELLER	B01	60.00	11.10	59.88	100.56	OS	059
KOCHEL	B01	47.70	11.40	48.25	93.66	24	064
KODAIKANAL	B01	10.20	77.50	.54	147.56	KO	310
KOKUBUNJI	B01	35.70	139.50	25.50	205.84	25	535
KWAJALEIN	B01	9.05	167.20	2.65	235.69	26	609
LA PAZ	B01	-16.50	291.90	-5.03	1.32	LP	J10
LA POSTA	B01	32.68	243.57	40.05	306.52	LT	833
LA QUIACA	B01	-22.10	294.40	-10.65	3.65	LQ	J2K
LANCASTER	B01	53.00	358.00	55.95	83.11		
LANCHOW	B01	36.10	103.80	24.70	174.02	27	336
LANNION	B01	48.45	356.73	51.87	79.41	LN	047
LEICESTER	B01	52.00	359.00	54.81	83.56		
LENINGRAD	B01	59.95	30.70	56.17	117.70	LD	160
LEYTE	B01	11.00	125.00	-.12	194.20	28	411
LINDAU	B01	51.60	10.10	52.22	94.28	LI	050
LITTLE AMERICA	B01	-78.20	197.80	-74.00	312.19	LA	77Q
LONGYEARBYEN	B01	78.20	15.70	74.31	131.11	LG	178
LOSHAN	B01	29.50	103.70	18.10	173.75	29	329
LULEA	B01	65.60	22.10	62.90	114.96	LU	165
LWIRO	B01	-2.30	28.80	-3.89	97.65	LW	10K
LYCKSELE	B01	64.70	18.80	62.70	111.37	LY	164
MACAU	B01	22.20	113.60	10.74	182.89	MC	422
MACQUARIE IS	B01	-54.50	159.00	-60.98	243.64	MQ	55M
MADRAS	B01	13.10	80.30	3.14	150.59	MD	313
MAGADAN	B01	60.00	151.00	50.63	210.77		
MAKASSAR	B01	5.20	119.50	-6.13	188.98	30	40N
MANILA	B01	14.70	121.10	3.41	190.24	MN	414
MARION IS	B01	-46.87	37.85	-49.09	94.76	MR	140
MAUI	B01	20.80	203.50	20.96	268.58	MA	720
MAWSON	B01	-67.60	62.90	-73.17	103.54	MW	26P
MAYNARD	B01	42.43	238.55	53.89	357.52	MY	J43
MEANOOK	B01	54.60	246.70	61.88	301.66	ME	855
MEGURO	B01	35.60	139.70	25.42	206.03	31	534
MEXICO CITY	B01	19.40	260.30	29.18	327.05	MX	919
MIEDZESZYN	B01	52.20	21.20	50.62	105.00	MZ	152
MILLSTONE HILL	B01	42.60	288.50	54.06	357.45	MH	J45
MIRNY	B01	-66.50	93.00	-77.00	147.73	MI	360
MOSCOW	B01	55.50	37.30	50.82	120.86	MO	155
MUNDARING	B01	-31.99	116.31	-43.39	186.75	MU	43K
MURMANSK	B01	69.00	33.00	64.10	126.77	MM	168
NAIROBI	B01	-1.28	36.83	-4.46	105.75	NR	10J
NANKING	B01	32.10	119.00	20.74	187.67	32	432
NARSSARSSUAQ	B01	61.20	314.60	71.14	37.42	NQ	J61
NATAL	B01	-5.70	324.80	3.80	34.16	NL	A0N
NHA TRANG	B01	12.25	109.20	.73	178.70	33	412
NORFOLK IS	B01	-29.00	168.00	-34.66	243.70	NI	63V
NORILSK	B01	69.40	88.10	58.50	165.11	NO	369
NOVOKAZALINSK	B01	45.50	62.00	37.35	138.65	NK	246
NOVOSIBIRSK	B01	54.60	83.20	44.15	158.25	NS	355
NURMIJARVI	B01	60.50	24.60	57.78	112.89	NU	159
OKINAWA	B01	26.30	127.80	15.30	196.02	OK	426
OTTAWA	B01	45.40	284.10	56.78	351.75	OT	945
OUAGADOUGOU	B01	12.40	358.50	16.46	70.74	OU	012
PALAU	B01	7.30	134.50	-3.20	203.80	34	407
PALMYRA ISLAND	B01	5.90	197.90	5.26	266.25	35	705
PANAMA	B01	9.40	280.10	20.67	349.00	PN	909
PARAMARIBO	B01	5.80	304.80	16.91	14.85	PM	J06
PARAMUSHIRO	B01	50.10	155.30	41.40	217.03	36	550
PARIS-SACLAY	B01	48.10	2.30	50.44	84.89	SC	047
PATRAS	B01	38.23	23.81	36.69	102.03		
PATRICK AFB	B01	28.20	279.40	39.43	347.28		
PEIPING	B01	39.90	116.40	28.48	185.12	37	440

2. Alphabetical Listing (continued)

STATION NAME	OBS PROG	GEOGRAPHIC LAT	GEOGRAPHIC LONG EAST	GEOMAGNETIC LAT	GEOMAGNETIC LONG EAST	STA ID	COMPUTER CODE
PENANG	B01	5.50	100.40	-5.79	169.87	38	305
PESHAWAR	B01	34.00	71.50	24.83	144.88	39	234
PETROPAVLOVSK	B01	53.02	158.65	44.67	219.03		
PITCAIRN	B01	-25.00	230.00	-19.00	303.44	40	82N
PLATTEVILLE	B01	40.01	254.70	48.90	316.99	PV	842
POINT ARGUELLO	B01	34.60	239.40	41.24	301.54	PA	836
POITIERS	B01	46.60	.30	49.40	82.20	PT	046
POPAYAN	B01	2.45	283.38	13.83	352.64	PP	902
PORT LOCKROY	B01	-64.80	296.50	-53.37	4.26		
PORT MORESBY	B01	-9.40	147.10	-18.52	218.31	PY	50R
PORT STANLEY	B01	-51.70	302.20	-40.42	9.48	PS	J5J
PORTAGELAPRAIRIE	B01	49.90	251.70	59.53	322.23	41	950
PRINCE RUPERT	B01	54.30	229.70	58.48	282.96	42	854
PROVIDENYA	B01	64.40	186.60	59.67	236.15	PD	664
PRUHONICE	B01	50.00	14.60	49.81	97.77	PQ	052
PUERTO RICO	B01	18.50	292.80	29.96	2.49	PR	J18
QUETTA	B01	30.20	67.00	21.61	140.19	QT	230
RABAT	B01	33.90	353.90	38.36	71.13	RT	034
RANGOON	B01	16.80	96.50	5.65	166.51	43	316
RAROTONGA	B01	-21.20	200.20	-20.82	274.09	RA	72J
RESOLUTE BAY	B01	74.70	265.10	83.07	290.20	RB	974
REYKJAVIK	B01	64.10	338.20	70.07	71.29	RK	A64
ROME	B01	41.90	12.52	42.46	92.42	RO	041
ROSTOV	B01	47.20	39.68	42.43	119.58	RV	149
SACHS HARBOR	B01	72.00	234.85	75.17	265.87	SH	872
SALEKHARD	B01	66.50	66.70	57.30	149.26	SD	266
SALISBURY	B01	-34.70	138.60	-44.60	212.91	SR	53M
SALISBURY (RHODE	B01	-17.80	31.00	-19.51	96.63	SY	11P
SAN JOSE	B01	-22.70	324.80	-13.09	32.23	BZ	J2L
SAN JUAN (ARG)	B01	-31.50	294.50	-20.05	3.60		
SAN SALVADOR	B01	24.10	285.50	35.52	354.36	SS	J24
SANAE	B01	-70.30	357.60	-63.71	44.50	QM	07V
SAO PAULO	B01	-23.50	313.50	-12.88	21.54	SP	J2L
SASKATOON	B01	52.10	253.40	60.54	311.06		
SCHWARZENBURG	B01	46.60	6.70	48.14	88.59	SZ	045
SCOTT BASE	B01	-77.90	166.80	-78.93	294.76	SB	67P
SDR STROMFJORD	B01	67.00	310.00	77.26	36.20	SM	J67
SEATTLE	B01	47.75	237.58	53.71	294.96	SE	847
SEOUL	B01	37.39	126.95	26.33	194.51	SU	437
SHIBATA	B01	37.90	139.30	27.67	205.39	44	537
SHIKUKA	B01	49.30	143.00	39.31	206.90	45	549
SIMFEROPOL	B01	44.80	34.10	41.10	113.74	SF	144
SINGAPORE	B01	1.30	103.80	-10.09	173.17	SI	301
SLOUGH	B01	51.50	359.43	54.25	83.72	SL	051
SLUTSK	B01	59.70	30.50	55.97	117.38	46	15I
SNAINTON	B01	54.20	0.00	56.68	85.85	47	050
SODANKYLA	B01	67.40	26.60	63.73	120.32	SC	166
SOFIA	B01	42.60	23.40	41.00	103.08	SQ	143
SOUTH GEORGIA	B01	-54.27	323.50	-44.28	26.35	SG	A5M
SOUTH POLE	B01	-90.00	0.00	-78.53	0.00	PO	09V
SOUTH UIST	B01	57.20	352.86	60.90	80.61		
SOYA SHIP	B01	COORDINATES VARIABLE				XD	
ST JOHN'S	B01	47.60	307.30	58.44	21.82	SJ	J47
STANFORD	B01	37.40	237.80	43.70	299.02	ST	837
SVERDLOVSK	B01	56.70	61.10	48.42	141.06	SV	256
SWAN RIVER	B01	52.10	258.80	61.31	317.70	48	952
SYOWA BASE	B01	-69.00	39.60	-69.75	78.17	SW	16R
TAHITI	B01	-17.70	210.70	-15.34	283.51	TT	71P
TAIPEI	B01	25.00	121.20	13.71	189.95	CL	424
TALARA	B01	-4.60	278.70	6.63	348.13	TA	90M
TAMANRASSET	B01	22.80	5.53	25.29	80.02	TN	022
TANANARIVE	B01	-18.80	47.50	-23.65	112.92	IV	21Q
TANGERANG	B01	-6.17	106.63	-17.62	175.93		
TASHKENT	B01	41.33	69.62	32.30	144.43	TQ	241
TBILISI	B01	41.70	44.80	36.22	122.47	TB	142
TEHRAN	B01	35.70	51.40	29.28	126.96	TE	236
TERRE ADELIE	B01	-66.70	140.00	-75.60	231.50	DU	560
THE PAS	B01	54.00	259.00	63.19	317.04	49	954
THULE/CAMP TUTO	B01	76.40	291.30	87.87	4.87	TH	J76
THULE/QANAQ	B01	77.50	290.80	88.97	3.26	TH	J77
THUMBA	B01	8.60	76.90	-.99	146.79	TC	309
TIRUCHIRAPALLI	B01	10.80	78.70	1.01	148.79	TI	311
TIXIE BAY	B01	71.60	128.90	60.50	191.65	TX	471
TOGO	B01	10.80	0.00	14.61	71.92	TG	011
TOKYO	B01	35.70	139.50	25.50	205.84	TO	535
TOMSK	B01	56.50	84.90	45.91	159.93	TK	356
TORTOSA	B01	40.80	.30	43.82	79.90	EB	040
TOWNSVILLE	B01	-19.30	146.70	-28.39	219.28	TV	51R
TOYOHARA	B01	46.90	142.80	36.92	207.15	50	546
TRELEW	B01	-43.20	294.70	-31.75	3.57	TW	J4L
TRINIDAD	B01	10.75	298.43	22.11	8.38	51	J10
TRIVANDRUM	B01	8.50	77.00	-1.10	146.88	TM	308
TROMSO	B01	69.70	19.00	67.07	117.10	TR	169
TSITSIHAR	B01	47.30	123.90	36.09	191.19	52	447
TSUMEB	B01	-19.20	17.70	-18.24	83.28	TS	11R
TUCUMAN	B01	-26.90	294.60	-15.45	3.77	TU	J20
TUNGUSKA	B01	61.60	90.00	50.67	164.74	TZ	362
UPPSALA	B01	59.80	17.60	58.44	106.28	UP	158
USHUAIA	B01	-54.80	291.70	-43.33	.93	UA	J5M
VANIMO	B01	-2.70	141.30	-12.53	211.57	VA	50L
VICTORIA	B01	48.40	236.60	54.16	293.59	VI	848
VICTORIA BEACH	B01	50.80	253.95	60.68	324.73	53	951
VOSTOK	B01	-78.45	106.87	-89.27	94.25	VO	47Q
WAKKANAI	B01	45.40	141.70	35.33	206.45	WK	545
WALLOPS IS	B01	37.90	284.50	49.30	352.70	WP	937
WASHINGTON	B01	38.70	282.90	50.05	350.71	WA	938
WATHEROO	B01	-30.30	115.90	-41.71	186.21	WT	43V
WHITE SANDS	B01	32.30	253.50	41.14	317.47	WS	832
WILKES	B01	-66.90	110.50	-78.37	179.94	WL	460
WINNIPEG	B01	49.80	265.60	59.88	327.17	WI	949
WOOMERA	B01	-31.00	136.30	-41.17	209.67	WO	53J
WUCHANG	B01	30.60	114.40	19.15	183.53	54	430
YAKUTSK	B01	62.00	129.60	50.99	194.10	YA	462
YAMAGAWA	B01	31.20	130.60	20.36	198.25	YG	431
YELLOWKNIFE	B01	62.40	245.60	69.02	293.93	YE	862
YUZHNO SAKHALI	B01	47.00	143.00	37.03	207.30	SA	547
ZARYA SHIP	B01	COORDINATES VARIABLE				XF	

3. LISTING BY GEOMAGNETIC LATITUDE

STATION NAME	OBS PROG	GEOGRAPHIC LAT	GEOGRAPHIC LONG EAST	GEOMAGNETIC LAT	GEOMAGNETIC LONG EAST	STA ID	COMPUTER CODE
FUJI SHIP	B01	COORDINATES VARIABLE					
ZARYA SHIP	B01	COORDINATES VARIABLE				XF	
SOYA SHIP	B01	COORDINATES VARIABLE				XO	
THULE/QANAQ	B01	77.50	290.80	88.97	3.26	TH	J77
THULE/CAMP TUTO	B01	76.40	291.30	87.87	4.87	TH	J76
EUREKA	B01	80.00	274.10	86.62	236.39	EU	980
ALERT	B01	82.60	297.40	85.78	167.91	AL	J82
RESOLUTE BAY	B01	74.70	265.10	83.07	290.20	RB	974
* ARCTICAII (NP-7)	B01	86.00	296.00	82.10	177.23	XH	
CLYDE	B01	70.50	291.40	81.97	2.08	CR	J70
GODHAVN	B01	69.30	306.50	79.85	33.49	GO	J69
FLETCHERS ICE	B01	75.90	235.70	78.07	254.46	XC	982
* ARCTICA I (NP-6)	B01	82.00	9.00	77.54	143.01	XG	
SDR STROMFJORD	B01	67.00	310.00	77.26	36.20	SM	J67
FROBISHER BAY	B01	63.80	291.40	75.27	1.51	FB	J63
SACHS HARBOR	B01	72.00	234.85	75.17	265.87	SH	872
LONGYEARBYEN	B01	78.20	15.70	74.31	131.11	LG	178
BAKER LAKE	B01	64.30	264.00	73.79	316.06	BL	964
CAPE PARRY	B01	70.17	234.37	73.63	269.60	CF	870
* ARCTICA (NP-13)	B01	81.00	155.00	71.78	204.03	XL	
HEISS IS	B01	80.60	58.00	71.28	156.18	BT	280
NARSSARSSUAQ	B01	61.20	314.60	71.14	37.42	NG	J61
* ARCTICA (NP-16)	B01	78.00	176.00	70.42	214.24	XM	676
REYKJAVIK	B01	64.10	338.20	70.07	71.29	RK	A64
* ARCTICA (NP-11)	B01	79.00	165.00	70.04	207.06	XK	
* ARCTICA (NP-8)	B01	80.00	165.00	70.00	205.00	XI	
FORT CHIMO	B01	58.10	291.60	69.57	1.62	FC	J58
FORT NORMAN	B01	64.90	234.50	69.17	278.44	FN	864
* ARCTICA (NP-10)	B01	78.00	165.00	69.16	208.40	XJ	
YELLOWKNIFE	B01	62.40	245.60	69.02	293.93	YE	862
CHURCHILL	B01	58.80	265.80	68.73	323.32	CH	958
BARROW	B01	71.30	203.20	68.63	241.52	BW	771
* ARCTICA (NP-19)	B01	78.00	150.00	67.92	200.59	XP	
TROMSO	B01	69.70	19.00	67.07	117.10	TR	169
KIRUNA	B01	67.80	20.40	65.17	115.88	KI	167
COLLEGE	B01	64.90	212.20	64.76	256.98	CO	764
GOOSE BAY	B01	53.32	299.16	64.61	12.07	GS	J53
MURMANSK	B01	69.00	33.00	64.10	126.77	MM	168
SODANKYLA	B01	67.40	26.60	63.73	120.32	SO	166
THE PAS	B01	54.00	259.00	63.19	317.04	49	954
DIXON	B01	73.50	80.40	62.97	161.71	DI	373
LULEA	B01	65.60	22.10	62.90	114.96	LU	165
LYCKSELE	B01	64.70	18.80	62.70	111.37	LY	164
CAPE SCHMIDT	B01	68.90	179.50	62.70	227.11	CE	681
MEANOOK	B01	54.60	246.70	61.88	301.66	ME	855
SWAN RIVER	B01	52.10	258.80	61.31	317.70	48	952
ANCHORAGE	B01	61.20	210.10	61.01	258.60	AN	761
SOUTH UIST	B01	57.20	352.86	60.90	80.61		
VICTORIA BEACH	B01	50.80	263.95	60.68	324.73	53	951
SASKATOON	B01	52.10	253.40	60.54	311.06		
INVERNESS	B01	57.40	355.80	60.51	83.78	IN	056
TIXIE BAY	B01	71.60	128.90	60.50	191.65	TX	471
FRASERBURGH	B01	57.60	357.90	60.28	86.05	15	065
WINNIPEG	B01	49.80	255.60	59.88	327.17	WI	949
KJELLER	B01	60.00	11.10	59.88	100.56	OS	059
PROVIDENYA	B01	64.40	186.60	59.67	236.15	PD	664
PORTAGELAPRAIRIE	B01	49.90	261.70	59.53	322.23	41	950
BURGHEAD	B01	57.70	3.50	59.26	91.65	06	063
ARKHANGELSK	B01	64.60	40.50	58.89	128.72	AZ	163
BAIE ST PAUL	B01	47.38	289.45	58.85	358.59	PL	J48
NORILSK	B01	69.40	88.10	58.50	165.11	NO	369
PRINCE RUPERT	B01	54.30	229.70	58.48	282.96	42	854
UPPSALA	B01	59.80	17.60	58.44	106.28	UP	158
ST JOHN'S	B01	47.60	307.30	58.44	21.82	SJ	J47
NURMIJARVI	B01	60.50	24.60	57.78	112.89	NU	159
SALEKHARD	B01	66.50	66.70	57.30	149.26	SD	266
OTTAWA	B01	45.40	284.10	56.78	351.75	OT	945
SNAINTON	B01	54.20	0.00	56.68	85.85	47	050
HIGHGATE SPGS	B01	45.01	286.91	56.45	355.37		
ERROL	B01	44.79	288.87	56.26	357.88		
LENINGRAD	B01	59.95	30.70	56.17	117.70	LD	160
SLUTSK	B01	59.70	30.50	55.97	117.38	46	151
LANCASTER	B01	53.00	358.00	55.95	83.11		
ABERYSTWYTH	B01	52.43	355.93	55.82	80.67		
HANOVER	B01	43.70	287.80	55.16	356.55	HN	J44
LEICESTER	B01	52.00	359.00	54.81	83.56		
JULIUSRUH/RUGEN	B01	54.60	13.40	54.40	99.06	JR	055
SLOUGH	B01	51.50	359.43	54.25	83.72	SL	051
BADDOW	B01	51.70	.50	54.22	84.90	01	061
VICTORIA	B01	48.40	236.60	54.16	293.59	VI	848
BOSTON	B01	42.60	288.70	54.07	357.70	56	J43
BILLERICA	B01	42.60	288.70	54.07	357.70	BO	J43
MILLSTONE HILL	B01	42.60	288.50	54.06	357.45	MH	J45
MAYNARD	B01	42.43	288.55	53.89	357.52	MY	J43
SEATTLE	B01	47.75	237.58	53.71	294.96	SE	847
DE BILT	B01	52.10	5.20	53.67	89.79	DT	053
KALININGRAD	B01	54.70	20.62	53.10	105.77	KL	154
LINDAU	B01	51.60	10.10	52.22	94.28	LI	050
DOURBES	B01	50.10	4.60	51.89	88.15	DB	049
LANNION	B01	48.45	356.73	51.87	79.41	LN	047
FORT MONMOUTH	B01	40.40	285.90	51.83	354.29	FM	940
DOMONT	B01	49.00	2.30	51.30	85.32	13	062
BAGNEUX	B01	48.80	2.30	51.11	85.22	55	039
YAKUTSK	B01	62.00	129.60	50.99	194.10	YA	462
MOSCOW	B01	55.50	37.30	50.82	120.86	MO	155
TUNGUSKA	B01	61.60	90.00	50.67	164.74	TZ	362
MAGADAN	B01	60.00	151.00	50.63	210.77		
MIEDZESZYN	B01	52.20	21.20	50.62	105.00	MZ	152
PARIS-SACLAY	B01	48.10	2.30	50.44	84.89	SC	047
BATAVIA	B01	39.40	275.90	50.42	342.16	03	939
GORKY	B01	56.15	44.28	50.29	127.06	GK	156
WASHINGTON	B01	38.70	282.90	50.05	350.71	WA	938
PRUHONICE	B01	50.00	14.60	49.81	97.77	PQ	052
GARCHY	B01	47.30	3.10	49.52	85.33	GY	042
POITIERS	B01	46.60	.30	49.40	82.20	PT	046
FREIBURG/BREISAC	B01	48.10	7.60	49.39	90.14	FR	048
WALLOPS IS	B01	37.90	284.50	49.30	352.70	WP	937
PLATTEVILLE	B01	40.01	254.70	48.90	316.99	PV	842

* DRIFTING STATION

3. Listing by Geomagnetic Latitude (continued)

STATION NAME	OBS PROG	GEOGRAPHIC LAT	GEOGRAPHIC LONG EAST	GEOMAGNETIC LAT	GEOMAGNETIC LONG EAST	STA ID	COMPUTER CODE
ERIE	B01	40.01	254.70	48.90	316.99	ER	842
BOULDER	B01	40.00	254.70	48.89	317.00	BC	840
SVERDLOVSK	B01	56.70	61.10	48.42	141.06	SV	256
KOCHEL	B01	47.70	11.40	48.25	93.66	24	064
SCHWARZENBURG	B01	46.60	6.70	48.14	88.59	SZ	045
ADAK	B01	51.90	183.40	47.31	240.43	AD	651
KIEV	B01	50.50	30.30	47.29	112.47	KV	151
GRAZ	B01	47.10	15.50	46.87	97.33	GZ	146
TOMSK	B01	56.50	84.90	45.91	159.93	TK	356
GENOVA	B01	44.60	9.00	45.76	90.02	GV	044
HUNTSVILLE	B01	34.44	273.65	45.33	340.08	HV	934
BUDAPEST	B01	46.40	21.10	45.10	102.33	BU	147
PETROPAVLOVSK	B01	53.02	158.65	44.67	219.03		
NOVOSIBIRSK	B01	54.60	83.20	44.15	158.25	NS	355
TORTOSA	B01	40.80	.30	43.82	79.90	EB	040
STANFORD	B01	37.40	237.80	43.70	299.02	ST	837
BEOGRAD	B01	44.80	20.50	43.68	101.14	BE	145
ROME	B01	41.90	12.52	42.46	92.42	RO	041
ROSTOV	B01	47.20	39.68	42.43	119.58	RV	149
EL ARENOSILLO	B01	37.10	353.27	41.59	71.44		
PARAMUSHIRO	B01	50.10	155.30	41.40	217.03	36	550
EGLIN AFB	B01	30.38	273.30	41.26	340.13	EG	931
POINT ARGUELLO	B01	34.60	239.40	41.24	301.54	PA	836
WHITE SANDS	B01	32.30	253.50	41.14	317.47	WS	832
SIMFEROPOL	B01	44.80	34.10	41.10	113.74	SF	144
IRKUTSK	B01	52.47	104.03	41.06	174.75	IR	352
BATON ROUGE	B01	30.50	268.80	41.04	334.98	04	930
SOFIA	B01	42.60	23.40	41.00	103.08	SQ	143
CHITA	B01	52.00	113.50	40.54	182.41	CX	452
KARAGANDA	B01	49.82	73.08	40.31	149.04	KR	250
LA POSTA	B01	32.68	243.57	40.05	306.52	LT	833
CAPE KENNEDY	B01	28.40	279.40	39.63	347.26	CC	929
COCOA	B01	28.20	279.40	39.43	347.28	10	928
PATRICK AFB	B01	28.20	279.40	39.43	347.28		
SHIKUKA	B01	49.30	143.00	39.31	206.90	45	549
ISTANBUL	B01	41.13	29.03	38.50	107.85	IS	141
RABAT	B01	33.90	353.90	38.36	71.13	RT	034
CASABLANCA	B01	33.60	352.40	38.35	69.49	CA	033
GRAND BAHAMA	B01	26.60	281.80	37.92	350.09	GB	926
KHABAROVSK	B01	48.50	135.10	37.89	200.43	KB	548
NOVOKAZALINSK	B01	45.50	62.00	37.35	138.65	NK	246
YUZHNO SAKHALI	B01	47.00	143.00	37.03	207.30	SA	547
TOYOHARA	B01	46.90	142.80	36.92	207.15	50	546
PATRAS	B01	38.23	23.81	36.69	102.03		
ATHENS	B01	38.00	23.60	36.51	101.76	AT	138
TBILISI	B01	41.70	44.80	36.22	122.47	TB	142
TSITSIHAR	B01	47.30	123.90	36.09	191.19	52	447
SAN SALVADOR	B01	24.10	285.50	35.52	354.36	SS	J24
WAKKANAI	B01	45.40	141.70	35.33	206.45	WK	545
CUBA	B01	23.00	278.00	34.17	346.03	CD	923
ALMA ATA	B01	43.25	76.92	33.42	151.11	AA	343
TASHKENT	B01	41.33	69.62	32.30	144.43	TQ	241
CAPE ZEVGARI	B01	34.60	33.00	31.41	109.66	CV	135
FUKAURA	B01	40.60	139.90	30.41	205.58	16	541
ASHKHABAD	B01	37.90	58.30	30.39	133.69	AS	237
ARECIBO	B01	18.50	293.17	29.96	2.89	AR	J19
PUERTO RICO	B01	18.50	292.80	29.96	2.49	PR	J18
DUSHANBE	B01	38.57	68.78	29.67	143.19	DU	238
AKITA	B01	39.70	140.10	29.53	205.87	AK	539
JAMAICA	B01	18.00	283.20	29.37	352.00	JA	918
HAIFA	B01	32.82	34.98	29.31	111.06	HA	132
TEHRAN	B01	35.70	51.40	29.28	126.96	TE	236
MEXICO CITY	B01	19.40	260.30	29.18	327.05	MX	919
PEIPING	B01	39.90	116.40	28.48	185.12	37	440
DAIRAN	B01	39.00	121.60	27.71	189.70	12	439
SHIBATA	B01	37.90	139.30	27.67	205.39	44	537
CAIRO	B01	30.00	31.19	27.27	106.77	05	130
SEOUL	B01	37.33	126.95	26.33	194.51	SU	437
HIRAISO	B01	36.40	140.60	26.30	206.73	20	536
KOKUBUNJI	B01	35.70	139.50	25.50	205.84	25	535
TOKYO	B01	35.70	139.50	25.50	205.84	TO	535
MEGURO	B01	35.60	139.70	25.42	206.03	31	534
KAMINOGE	B01	35.60	139.60	25.41	205.94	22	532
TAMANRASSET	B01	22.80	5.53	25.29	80.02	TN	022
HIRATSUKA	B01	35.30	139.30	25.09	205.70	21	533
PESHAWAR	B01	34.00	71.50	24.83	144.88	39	234
LANCHOW	B01	36.10	103.80	24.70	174.02	27	336
BARBADOS	B01	13.12	300.40	24.41	10.56	BS	J13
TRINIDAD	B01	10.75	298.43	22.11	8.38	51	J10
DAKAR	B01	14.70	341.60	21.69	54.08	DK	A14
QUETTA	B01	30.20	67.00	21.61	140.19	QT	230
MAUI	B01	20.80	203.50	20.96	268.58	MA	720
NANKING	B01	32.10	119.00	20.74	187.67	32	432
PANAMA	B01	9.40	280.10	20.67	349.00	PN	909
YAMAGAWA	B01	31.20	130.60	20.36	198.25	YG	431
HANKOW	B01	30.70	114.30	19.25	183.43	19	432
WUCHANG	B01	30.60	114.40	19.15	183.53	54	430
DELHI	B01	28.60	77.16	18.86	149.31	DH	328
LOSHAN	B01	29.50	103.70	18.10	173.75	29	329
CHUNGKING	B01	29.40	106.30	17.96	176.13	09	429
PARAMARIBO	B01	5.80	304.80	16.91	14.85	PM	J06
OUAGADOUGOU	B01	12.40	358.50	16.46	70.74	OU	012
BOGOTA	B01	4.50	285.80	15.93	355.10	BG	905
OKINAWA	B01	26.30	127.80	15.30	196.02	OK	426
TOGO	B01	10.80	0.00	14.61	71.92	TG	011
POPAYAN	B01	2.45	283.38	13.83	352.64	PP	902
AHMEDABAD	B01	23.02	72.60	13.82	144.37	AH	223
TAIPEI	B01	25.00	121.20	13.71	189.95	CL	424
KHARTOUM	B01	15.55	32.58	12.87	104.89	23	115
CALCUTTA	B01	23.00	88.60	12.30	159.40	CU	322
HONG KONG	B01	22.33	114.20	10.88	183.46	HK	423
MACAU	B01	22.20	113.60	10.74	182.89	MC	422
IBADAN	B01	7.40	3.90	10.53	75.12	IB	007
BOMBAY	B01	19.00	72.80	09.81	144.04	BM	219
ACCRA	B01	5.63	359.83	09.56	70.74	AG	005
FORT ARCHAMBAULT	B01	9.20	18.35	09.45	89.71	FA	109

3. Listing by Geomagnetic Latitude (continued)

STATION NAME	OBS PROG	GEOGRAPHIC LAT	GEOGRAPHIC LONG EAST	GEOMAGNETIC LAT	GEOMAGNETIC LONG EAST	STA ID	COMPUTER CODE
HYDERABAD	B01	17.35	78.47	07.55	149.26	HY	317
DJIBOUTI	B01	11.50	42.80	06.98	113.99	DJ	111
HAINAN	B01	18.30	109.30	06.83	178.82	18	419
TALARA	B01	-4.60	278.70	06.63	348.13	TA	90M
FORTALEZA	B01	-3.70	321.20	06.17	30.80	FZ	A0M
RANGOON	B01	16.80	96.50	05.65	166.51	43	316
PALMYRA ISLAND	B01	5.90	197.90	05.26	266.25	35	705
BAGUIO	B01	16.40	120.60	05.10	189.70	BF	416
BANGUI	B01	4.60	18.60	04.89	89.03	BI	104
CHICLAYO	B01	-6.80	280.20	04.49	349.71	CY	90P
GUAM	B01	13.50	144.87	03.96	213.36	17	513
NATAL	B01	-5.70	324.80	03.80	34.16	NL	A0N
MANILA	B01	14.70	121.10	03.41	190.24	MN	414
MADRAS	B01	13.10	80.30	03.14	150.59	MD	313
KWAJALEIN	B01	9.05	167.20	02.65	235.69	26	609
BANGKOK	B01	13.83	100.58	02.52	170.33	BK	314
CHRISTMAS IS	B01	1.90	202.70	02.29	271.75	08	701
CHIMBOTE	B01	-9.10	281.40	02.23	350.98	CM	90R
TIRUCHIRAPALLI	B01	10.80	78.70	01.01	148.79	TI	311
NHA TRANG	B01	12.25	109.20	00.78	178.70	33	412
KODAIKANAL	B01	10.20	77.50	00.54	147.56	KO	310
LEYTE	B01	11.00	125.00	-00.12	194.20	28	411
BUNIA	B01	1.50	30.20	-00.44	99.77	BN	102
JICAMARCA	B01	-11.95	283.14	-00.57	352.77	JI	91J
HUANCAYO	B01	-12.00	284.70	-00.59	354.30	HU	91K
THUMBA	B01	8.60	76.90	-00.99	146.79	TC	309
TRIVANDRUM	B01	8.50	77.00	-01.10	146.88	TM	308
COLOMBO	B01	6.90	79.87	-02.99	149.54	11	306
PALAU	B01	7.30	134.50	-03.20	203.80	34	407
KINSHASA-BINZA	B01	-4.50	15.20	-03.35	83.88	LB	10M
LWIRO	B01	-2.30	28.80	-03.89	97.65	LW	10K
JULIACA	B01	-15.50	289.80	-04.03	359.30	JU	J1N
NAIROBI	B01	-1.28	36.83	-04.46	105.75	NR	10J
LA PAZ	B01	-16.50	291.90	-05.03	1.32	LP	J10
PENANG	B01	5.50	100.40	-05.79	169.87	38	305
ILO	B01	-17.40	288.80	-05.93	358.34	IL	J1P
MAKASSAR	B01	5.20	119.50	-06.13	188.98	30	40N
SINGAPORE	B01	1.30	103.80	-10.09	173.17	SI	301
LA QUIACA	B01	-22.10	294.40	-10.65	3.65	LQ	J2K
HOLLANDIA	B01	-2.50	140.80	-12.38	211.04	HL	50K
VANIMO	B01	-2.70	141.30	-12.53	211.57	VA	50L
ELIZABETHVILLE	B01	-11.60	27.50	-12.75	94.50	EZ	11J
SAO PAULO	B01	-23.50	313.50	-12.88	21.54	SP	J2L
SAN JOSE	B01	-22.70	324.80	-13.09	32.23	BZ	J2L
TAHITI	B01	-17.70	210.70	-15.34	283.51	TT	71P
TUCUMAN	B01	-26.90	294.60	-15.45	3.77	TU	J20
TANGERANG	B01	-6.17	106.63	-17.62	175.93		
TSUMEB	B01	-19.20	17.70	-18.24	83.28	TS	11R
BANDOENG	B01	-6.90	107.60	-18.36	176.94	02	40Q
PORT MORESBY	B01	-9.40	147.10	-18.52	218.31	PY	50R
PITCAIRN	B01	-25.00	230.00	-19.00	303.44	40	82N
SALISBURY (RHODE	B01	-17.80	31.00	-19.51	96.63	SY	11P
SAN JUAN (ARG)	B01	-31.50	294.50	-20.05	3.60		
CAPE YORK	B01	-11.00	142.40	-20.66	213.64	07	51J
RAROTONGA	B01	-21.20	200.20	-20.82	274.09	RA	72J
FIJI	B01	-18.00	178.20	-22.01	251.60	14	61Q
BUENOS AIRES	B01	-34.50	301.50	-23.21	9.83	BA	J3M
COCOS IS	B01	-12.20	96.80	-23.33	165.37	CS	31K
TANANARIVE	B01	-18.80	47.50	-23.65	112.92	IV	21Q
CONCEPCION	B01	-36.60	287.00	-25.15	356.87	CP	J30
JOHANNESBURG	B01	-26.10	28.10	-27.04	91.83	JC	120
TOWNSVILLE	B01	-19.30	146.70	-28.39	219.28	TV	51R
TRELEW	B01	-43.20	294.70	-31.75	3.57	TW	J4L
KERMADEC	B01	-29.20	182.10	-32.21	258.17	KC	62R
CAPE TOWN	B01	-34.10	18.30	-32.89	80.19	CT	13M
HERMANUS	B01	-34.42	19.23	-33.38	80.99	HE	13N
GRAHAMSTOWN	B01	-33.30	26.50	-33.73	88.35	GR	13L
NORFOLK IS	B01	-29.00	168.00	-34.66	243.70	NI	63V
BRIBIE IS	B01	-27.30	153.00	-35.44	227.43		
BRISBANE	B01	-27.50	152.90	-35.65	227.36	BR	52P
PORT STANLEY	B01	-51.70	302.20	-40.42	9.48	PS	J5J
WOOMERA	B01	-31.00	136.30	-41.17	209.67	WO	53J
AUCKLAND	B01	-37.00	175.00	-41.17	253.20	AU	63P
WATHEROO	B01	-30.30	115.90	-41.71	186.21	WT	43V
USHUAIA	B01	-54.80	291.70	-43.33	.93	UA	J5M
MUNDARING	B01	-31.99	116.31	-43.39	186.75	MU	43K
CANBERRA	B01	-35.30	149.00	-43.90	224.80	CB	53N
SOUTH GEORGIA	B01	-54.27	323.50	-44.28	26.35	SG	A5M
SALISBURY	B01	-34.70	138.60	-44.60	212.91	SR	53M
BEVERIDGE	B01	-37.29	144.59	-46.46	220.30		
CHRISTCHURCH	B01	-43.60	172.80	-47.98	253.24	GH	64L
MARION IS	B01	-46.87	37.85	-49.09	94.76	MR	140
HOBART	B01	-42.90	147.30	-51.61	224.92	HO	54K
DECEPCION	B01	-63.00	299.30	-51.62	6.40	DE	J6L
PORT LOCKROY	B01	-64.80	296.50	-53.37	4.26		
ARGENTINE IS	B01	-65.20	295.70	-53.76	3.67	AI	J6N
CAMPBELL IS	B01	-52.50	169.20	-57.19	253.66	CI	65K
KERGUELEN	B01	-49.40	70.30	-57.45	128.63	KG	24R
MACQUARIE IS	B01	-54.50	159.00	-60.98	243.64	MQ	55M
SANAE	B01	-70.30	357.60	-63.71	44.50	QM	07V
EIGHTS	B01	-75.23	282.84	-63.82	355.57	EI	97N
HALLEY BAY	B01	-75.50	333.40	-65.83	24.58	HB	A7N
ELLSWORTH	B01	-77.72	318.90	-66.98	14.98	EL	A7P
BELGRANO	B01	-77.90	321.40	-67.29	16.18	GE	A7Q
BAUDOUIN	B01	-70.40	23.30	-67.89	62.90	BB	17V
SYOWA BASE	B01	-69.00	39.60	-69.75	78.17	SW	16R
BYRD STATION	B01	-80.00	240.00	-70.59	336.21	BD	88V
MAWSON	B01	-67.60	62.90	-73.17	103.54	MW	26P
LITTLE AMERICA	B01	-78.20	197.80	-74.00	312.19	LA	77Q
CAPE HALLETT	B01	-72.30	170.20	-74.61	278.46	HT	67K
TERRE ADELIE	B01	-66.70	140.00	-75.60	231.50	DU	560
MIRNY	B01	-66.50	93.00	-77.00	147.73	MI	360
CASEY	B01	-66.28	110.53	-77.75	180.00	CW	460
WILKES	B01	-66.90	110.50	-78.37	179.94	WL	460
SOUTH POLE	B01	-90.00	0.00	-78.53	0.00	PO	09V
SCOTT BASE	B01	-77.90	156.80	-78.93	294.76	SB	67P
VOSTOK	B01	-78.45	106.87	-89.27	94.25	VO	47Q

4. PAIRED OR GROUPED STATIONS

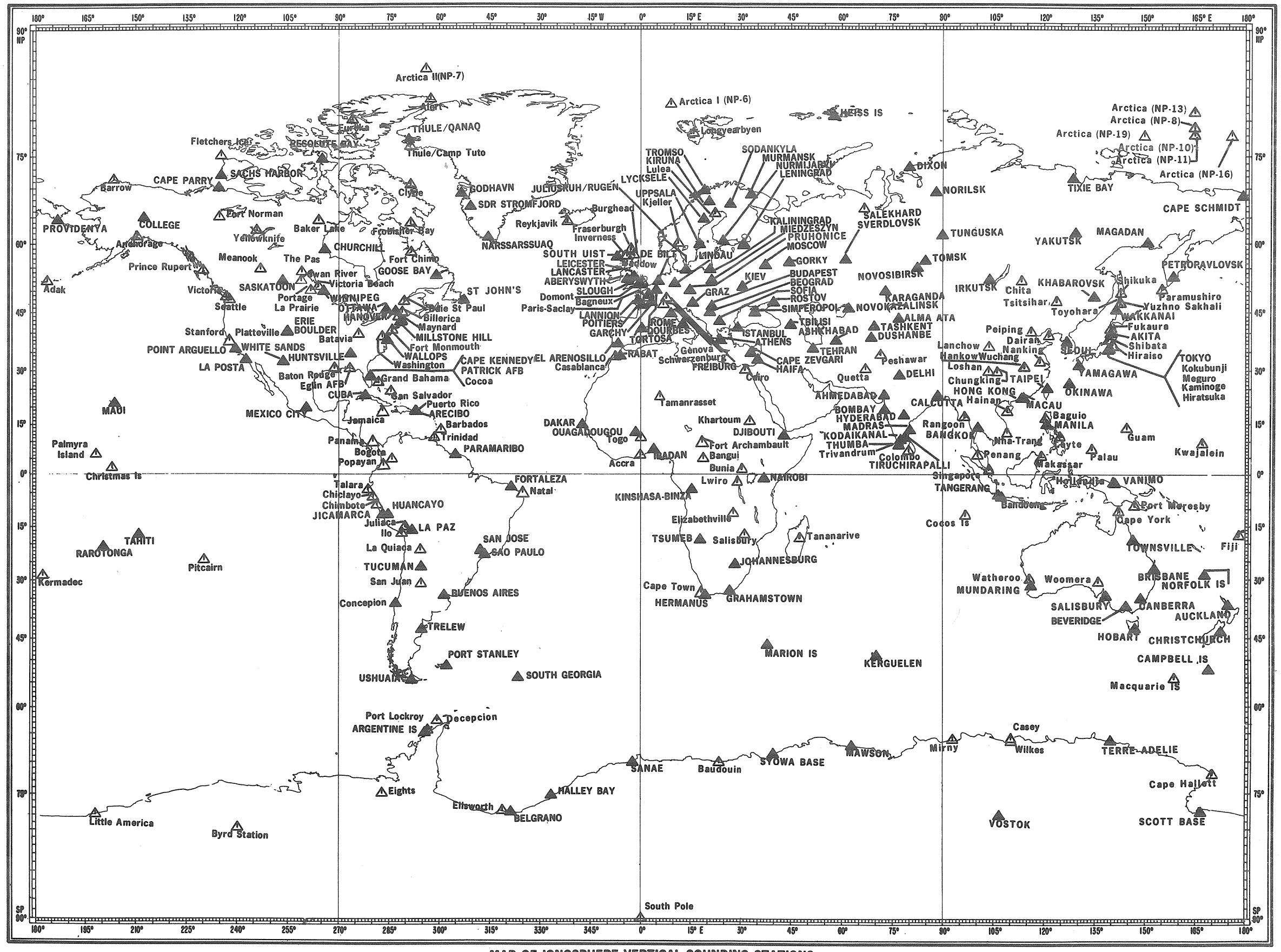
STATION NAME	GEOGRAPHIC LAT	GEOGRAPHIC LONG EAST	OPENING DATE	CLOSING DATE
Bekescaba	46.7	21.2	1/1964	
Budapest	47.4	19.2	1/1956	12/1959
Casey	-66.3	110.5	2/1969	12/1975
Wilkes	-66.9	110.5	7/1957	1/1969
Argentine Is.	-65.2	295.7	2/1962	
Port Lockroy	-64.8	296.9	5/1948	12/1961
Cape Kennedy	28.4	279.4	3/1964	10/1966
Cape Canaveral	28.4	279.4	3/1958	2/1964
Cocoa	28.2	279.4	1/1952	6/1952
Ft. Monmouth	40.4	285.9	8/1953	12/1965
Belmar	40.2	296.0	7/1950	8/1953
Hermanus	-34.4	19.2	6/1971	
Capetown	-34.1	18.3	9/1944	5/1971
La Paz	-16.5	291.9	12/1959	*
Juliaca	-15.5	289.8	3/1959	5/1959
La Paz	-16.5	291.9	10/1957	12/1958
Inverness	57.4	355.8	10/1951	6/1963
Fraserburg	57.6	357.9	3/1948	9/1951
Manila	14.7	121.1	1/1964	
Baguio	16.4	120.6	3/1952	12/1963
Manila (Nichols Field)	14.5	120.0	3/1944	5/1947

STATION NAME	GEOGRAPHIC LAT	GEOGRAPHIC LONG EAST	OPENING DATE	CLOSING DATE
Maynard	42.4	288.5	10/1970	6/1975
Billerica	42.6	288.7	11/1965	9/1970
Boston	42.6	288.7	3/1945	7/1951
Mundaring	-32.0	116.2	4/1959	
Watheroo	-30.3	115.9	1935	3/1959
Popayan	02.4	283.3	5/1970	
Bogota	04.5	285.8	8/1945	6/1967
Thumba	08.6	76.9	11/1964	
Trivandrum	08.5	77.0	1/1957	10/1964
Kenora	49.8	265.6	10/1963	
Winnipeg	49.9	262.9	4/1951	9/1963
Thule/Qanak	77.5	290.8	10/1968	
Thule/Tuto	76.4	291.3	8/1960	7/1966
Thule AFB	76.6	291.7	2/1956	7/1960
Wallops Is.	37.9	284.5	7/1963	
Ft. Belvoir	38.7	282.9	1949	9/1968
Sterling	39.0	282.5	8/1943	1949
Beltsville	39.1	283.9	3/1933	9/1943
Meadows	39.0	283.0	3/1933	2/1943
Kensington	39.1	282.8	12/1929	3/1933

* Equipment not operated after mid-1969, reopening planned June 1976.

5. SUPPLEMENT TO MASTER STATION LIST

STATION NAME	OBS PROG	GEOGRAPHIC LAT	GEOGRAPHIC LONG EAST	GEOMAGNETIC LAT	GEOMAGNETIC LONG EAST	GEOMAG CONJUGATE GEOGRAPHIC LAT	GEOMAG CONJUGATE GEOGRAPHIC LONG EAST	L-VALUE	INVAR LAT	GEOCENTRIC DIP	OPEN - CLOSE DATES
List I -- Changes (from UAG-38) in Open and Close Dates											
ASHKHABAD	B01	37.90	58.30	30.39	133.69	-20.71	63.31	1.35	30.55	55.75	(1956)
BADDOW	B01	51.70	.50	54.22	84.90	-44.77	25.02	2.41	49.88	67.00	11/1940 - 1/1946
BANDCENG	B01	-6.90	107.60	-18.36	176.94	24.54	107.86	1.01	5.27	-33.64	5/1943 - 9/1945
BARBADOS	B01	13.12	300.40	24.41	10.56	-36.59	308.84	1.29	28.23	40.62	1/1957 - 6/1967
BURGHEAD	B01	57.70	3.50	59.26	91.65	-52.71	36.44	3.16	55.77	71.23	1/1941 - 1/1947
CALCUTTA	B01	23.00	88.60	12.30	159.40	-3.60	89.16	.98	-1.00	30.39	7/1944 -
CASEY	B01	-66.28	110.53	-77.75	180.00	87.81	28.82	40.17	80.92	-82.13	2/1969 - 12/1975
CHITA	B01	52.00	113.50	40.54	182.41	-33.36	115.20	1.99	44.83	70.35	1/1946 ---5/1963
COCOS IS	B01	-12.20	96.80	-23.33	165.37	30.93	96.13	1.10	17.93	-45.03	11/1961 - 10/1974
FORT NORMAN	B01	64.90	234.50	69.17	278.44	-64.35	176.32	8.19	69.55	81.21	7/1957 - (10/1958)
FUKAURA	B01	40.60	139.90	30.41	205.58	-23.08	137.64	1.37	31.27	54.28	3/1941 - 12/1949
GENOVA	B01	44.60	9.00	45.76	90.02	-31.15	22.48	1.77	41.35	60.90	5/1956 - (1975)
HANKOW	B01	30.70	114.30	19.25	183.43	-13.46	114.22	1.11	18.38	44.88	9/1941 - 1/1945
HEISS IS	B01	80.60	58.00	71.28	156.18	-61.27	100.47	14.12	74.57	84.33	1/1938---
INVERNESS	B01	57.40	355.80	60.51	83.78	-54.95	31.45	3.26	56.37	71.12	/1951 - 6/1963
JAMAICA	B01	18.00	283.20	29.37	352.00	-43.65	277.42	1.37	31.38	48.68	4/1962 - (1974)
KAMINOGE	B01	35.60	139.60	25.41	205.94	-18.47	137.78	1.23	25.48	48.44	1/1945 - 8/1945
MIRNY	B01	-66.50	93.00	-77.00	147.73	81.37	14.27	20.75	77.32	-76.92	4/1956 - 1/1973
PALAU	B01	7.30	134.50	-3.20	203.80	9.16	134.55	.94	-1.00	-1.66	7/1939 - 6/1944
PENANG	B01	5.50	100.40	-5.79	169.87	5.44	100.40	.92	-1.00	-8.97	3/1944 - 8/1945
PORTAGELAPRAIRIE	B01	49.90	261.70	59.53	322.23	-66.52	222.84	4.10	60.41	76.80	9/1946 - 4/1951
RANGOON	B01	16.80	96.50	5.65	166.51	2.24	96.45	.93	-1.00	17.23	6/1943 - 12/1945
SALISBURY	B01	-34.70	138.60	-44.60	212.91	53.15	143.63	2.01	45.16	-66.90	10/1962 - 12/1973
SCHWARZENBURG	B01	46.60	6.70	48.14	88.59	-34.72	22.82	1.95	44.29	62.74	12/1950 - 11/1972
SHIKUKA	B01	49.30	143.00	39.31	206.90	-31.15	138.89	1.75	40.95	62.60	10/1940 - 12/1941
SOYA SHIP	B01			COORDINATES VARIABLE							1/1956 ---5/1962
ST JOHN'S	B01	47.60	307.30	58.44	21.82	-69.72	335.48	3.27	56.44	70.71	(5/1944)
TAMANRASSET	B01	22.80	5.53	25.29	80.02	-3.28	8.32	1.05	12.98	29.04	2/1956 - (1970)
WATHEROO	B01	-30.30	115.90	-41.71	186.21	48.67	114.63	1.76	41.03	-64.65	4/1935 - 3/1959
List II -- Corrections to Coordinates given in UAG-38											
HIRATSUKA	B01	35.30	139.30	25.09	205.70	-18.19	137.55	1.22	25.11	48.12	12/1940 - 5/1945
KIEV	B01	50.50	30.30	47.29	112.47	-37.29	45.61	2.09	46.25	66.98	1/1964 -
LA POSTA	B01	32.68	243.57	40.05	306.52	-43.01	224.82	1.64	38.75	58.27	/1973 -
MAGADAN	B01	60.00	151.00	50.63	210.77	-41.39	141.29	2.71	52.63	70.92	
NOVOKAZALINSK	B01	45.50	62.00	37.35	138.65	-28.64	69.99	1.67	39.24	64.09	3/1964 -
NOVOSIBIRSK	B01	54.60	83.20	44.15	158.25	-36.48	91.44	2.28	48.58	73.11	1/1969 -
POINT ARGUELLO	B01	34.60	239.40	41.24	301.54	-43.29	219.48	1.70	39.97	59.30	7/1963 -
SACHS HARBOR	B01	72.00	234.85	75.17	265.87	-67.29	160.79	17.40	76.13	84.93	NK
TERRE ADELIE	B01	-66.70	140.00	-75.60	231.50	80.59	223.09	36.89	80.52	-89.62	12/1949 ---
List III -- Additional Stations, not included in UAG-38											
ARCTICA (NP-8)	B01	80.00	155.00	70.00	205.00	-59.00	132.00	13.00	74.00	85.00	6/1960 - 11/1961
ARKHANGELSK	B01	64.60	40.50	58.89	128.72	-51.24	69.60	4.02	60.09	75.96	NK
CAPE PARRY	B01	70.17	234.37	73.63	269.60	-66.42	164.76	13.85	74.41	83.98	NK
FUJI SHIP	B01			COORDINATES VARIABLE							11/1965 - 4/1967
KOCHEL	B01	47.70	11.40	48.25	93.66	-35.62	27.36	1.99	44.80	63.87	1/1941 - 1946
NHA TRANG	B01	12.25	109.20	.78	178.70	4.97	109.06	.92	-1.00	8.43	(7/1951)-(4/1956)
PATRAS	B01	38.23	23.81	36.69	102.03	-21.05	29.82	1.40	32.43	54.70	1/1973 -
PLATTEVILLE	B01	40.01	254.70	48.90	316.99	-54.59	228.53	2.31	48.81	67.48	10/1970 - 8/1971
PRINCE RUPERT	B01	54.30	229.70	58.48	282.96	-55.85	190.95	3.56	58.01	73.24	6/1945 - 6/1954
SLUTSK	B01	59.70	30.50	55.97	117.38	-48.32	56.91	3.14	55.67	72.96	NK
SNAINTON	B01	54.20	0.00	56.68	85.85	-48.92	28.49	2.70	52.54	68.87	8/1944 - 9/1944
VICTORIA BEACH	B01	50.80	253.95	60.68	324.73	-68.33	223.93	4.44	61.68	77.77	7/1945 - 9/1945



6 MAP OF IONOSPHERE VERTICAL SOUNDING STATIONS

IV. Characteristics Scaled by Stations

Much of the data for Ionosphere Vertical Soundings is in the form of "characteristics" scaled from ionograms. In particular, the data of hourly values, monthly medians and f-plots are in this form. The standards and conventions for recording values of the characteristics are treated in great detail in other publications, most recently in the URSI "Handbooks" UAG Reports 23 and 50. These standards and conventions have become increasingly uniform in recent years, notably since the IGY, 1957-58.

However, in the past and even at the present time, the scaling practices at stations have varied widely. Some stations scale characteristics which are among the "optional" international recommendations; others omit for practical reasons some of the recommended characteristics. And in the earlier years the network was only very loosely coordinated as regards scaling practices.

As an aid to the data user, this Section gives information on which characteristics are or were scaled at which stations. It includes almost all the stations listed in this catalog -- the ones for which data are physically in the archives. The information given is usually for the latest data; for stations which have operated for many years, particularly the pre-IGY stations, the scaling practices will have varied over the period of operation.

The listing also gives the type of ionosonde used, usually that for taking the latest data in the archives. The data center may have information on some performance characteristics (frequency range, time of sweep, etc.) for some ionosondes, but this kind of information has never been comprehensively assembled.

In the main table is information on the characteristics in current use and those in widespread use in the past. The table in the short supplementary table which follows lists some of the usage of some other obsolete and "optional" characteristics.

The organization of the information is as follows:

Column 1 Station name
2 Type of Ionosonde (if known)
3 Reference to notes, given below
4 Code letter -- "S" if station closed before 1976.
5, etc. Information on each characteristic scaled:
- X scaled as of latest data available
- P scaled for pre-IGY data; characteristic now obsolete
- M scaled, but available as monthly medians only
- F scaled, but available as f-plots only
- Z scaling practice varies, consult WDC-A
- I scaled for IGY only (actually used only at Barrow)

The nomenclature used to identify most of the characteristics is either current practice or can be recognized by analogy. Two should be explained: Q(3000) is similar to M(3000), except derived from a slightly different transmission curve for early Japanese data. Further "N(h) Parameters" includes some or all of h(max) F2, etc., hpF2, hmF2, hc, hmF1, hmE and hpE; also ypF2, ymF2, yo, qc (quarter-thickness parameters); also yp/hp, yo/hm, hc/qc.

Key to Notes referenced in Column 3:

1 = Australian Stations - Beginning April 1975 they added reduction of: foF1, h'F, foE, h'E, h'Es and Es types and dropped fEs and M(3000)I.

2 = Barrow - I indicates characteristics reduced for IGY only.

3 = Boulder - Beginning dates for fmI, fxI not known, as 1969 data have not been completely reduced.

4 = College - Beginning 1968 they reduced foF2 and M(3000)F2 only on 6- hourly basis; in September 1969 they added f-min and h'F; in April 1970 they added foEs; September 1972 through June 1973 hourly reduction of foF2, M(3000)F2, fmI, fxI, h'F, fbEs, h'Es and f-min; January 1971 only hourly reductions of foF2, foEs, M(3000)F2 and f-min.

5 = Japanese Stations - Beginning January 1974 they added: fxI and h'E; Tokyo dropped hpF2.

6 = Juliusruh - Since 1975 they reduced foF2, foE, M(3000)F2 and Es types only.

7 = Lwiro - Also tabulated foF1s and h'F1s.

8 = Salisbury - h'F2 not tabulated from July 1965 until 1971; h'E and foEs not tabulated 1969 or 1972, but were tabulated in 1971.

9 = Stanford - Hourly values reduced through January 1959. Received only f-plots with the hourly foF2 afterwards until station closed.

NAME	IONOSONDE	See Notes	See Code	foF2	fxF2	foF1	foE	foEs	fEs	fbEs	foE2	M(3000)F2	MUF(3000)F2	MUF(3000)F1	MUF(3000)F1	h'F	h'F2	h'E	h'Es	h'E2	fMI	fxI	M(3000)I	f-min	Es Types	N(h) PARAMETERS	foF1.5	h'F1.5	h'F1	foF1	foT	M(4000)F2	M(3500)F2	M(2500)F2	M(2000)F2	M(1500)F2	M(1000)F2	M(500)F2	M(1500)F1	M(1000)E	MUF(3500)F2	MUF(2500)F2	MUF(2000)F2	MUF(1500)F2	MUF(1000)F2	MUF(500)F2	MUF(2000)E	MUF(1500)E	f-minF	f-minE	fmES
Adak	C 3/4		S	X		X	X	X	P	X		X	P	X		X	X	X	X				X	X			P				P							P														
Ahmedabad	C 4			X		X	X	X	P			X				X	X	X							X	Z	P																								
Akita	Type 8	5		X		X	X	X	P	X		X		X		X	X	X	X			X		X	X	P		P																					P	P		
Alert	Cossor		S	X		X	X		X							X	X	X						X																												
Alma Ata	AIS			X		X	X	X	P	X		X		X		X	X	X	X					X	X	X																										
Anchorage	C 3/4		S	X		X		X	P	X		X		X		Z	Z	X	X					X	X			P											P									P					
ARCTICA I(NP-6)			S	X		X	X	X		X		X		X		X	X		X					X	X																											
Arctica II (NP-7)			S	X		X	X	X		X		X		X		X	X		X					X	X																											
Arctica (NP-8)			S	X		X	X	X		X		X		X		X	X		X					X	X																											
Arctica (NP-10)			S	X		X	X	X		X		X		X		X	X		X					X	X																											
Arctica (NP-11)			S	X		X	X	X		X		X		X		X	X		X					X	X																											
Arctica (NP-13)			S	X		X	X	X		X		X		X		X	X		X					X	X																											
Arctica (NP-16)	Panoramic		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Arctica (NP-19)			S	X		X	X	X		X		X		X		X	X	X	X			Z		X	X																											
Arecibo	C 2/4			X		X		X																																												
Argentine Is.	Union Radio Mark II			X		X	X	X	P	X		X		X		X	X	X	X			X		X	X	P																										
Ashkhabad	AIS			X		X	X	X		X		X		X		X		X	X					X	X	X																										
Athens	Breisach II			X		X	X	X		X		X	X	X	X	X	X	X	X					X	X	X																										
Auckland	C 2/3			X		Z	Z	Z		Z	Z	X		Z		Z	Z	Z				X		X	Z	X																										
Baddow	249		S	P		P	P		P			P	P	P																	P			P					P														
Bagneux			S	P	P	P			P			P	P			P			P									P																								
Baguio	C 2		S	X		X	X	X	P	X		X		X		X	X	X	X					X	X														P									P				
Baker Lake	LG 17		S	X		X	X		X			X		X		X	X	X						X			P											P									P				P
Bandoeng	Manual		S		M											M	M									M																										
Bangkok	C 2/4			X		X	X	X		X		X		X		X	X	X	X		X	X		X	X	X																										
Bangui	SP 35/16		S	X		X	X	X		X				X		X	X	X	X					X	X																											
Barrow	C 3/4	2	S	X		I	I		P	X		X		I		I	I	I						X				P											P									P				
Batavia	C 2/3		S	P		P	P		P			P		P		P		P	P									P											P									P				
Baton Rouge	C 3		S	P		P			P			P	P	P	P	P		P	P									P			P								P									P				
Baudouin	C 4		S	X		X	X	X		X	X	X	Z	X	Z	X	X	X	X	X				X	Z																											
Belgrano	C 4			X		X	X	X		X		X		X		X	X	X	X					X	X																											
Beograd	IR 2			X		M	M	M		M		M		M		M	M	M	M					M																												
Billerica	C 4		S	X		X	X	X		X			X		X	X	X	X	X					X	X	X																										
Bogota	C 4		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Bombay	Manual			X					X			X							X							X						P	P	P	P	P	P															
Boston	OWN		S	P		P	P		P			P		P		p		p													P																					
Boulder	C 4	3		X		X	Z	Z		Z	Z	X		X		X	X	Z	Z	Z	X	X		X	Z	Z																										
Brisbane	IPS 3E	1		X		X	X	X	P	X	P	X	Z				X	X	X	P		X	Z	X	X	Z		P			P							P									P				
Budapest	IRX			X		X	X	X	P	X		X		X		X	X	X	X					X	X	X		P																								
Buenos Aires	C 4			X		X	X	X	P		X	X	X			X			X	X				X	X		Z	P			P																					
Bunia	Wadley		S	X		X	X		X		X	X	X			X			X	X		X				X	X	X																		X						
Burghead	Manual		S	P		P	P									P		P										P																								
Byrd	C 3/4		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Cairo			S	P		P	P					P																																								
Calcutta	C 2			X		X	X	X	P			X	P			X	X	X	X					X		P																										
Campbell Island	C 4			X		Z	Z	Z	P	Z	Z	X		Z		Z	Z	Z	Z	Z		X		X	Z	P		P																								
Canberra	IPS 3C	1		X		X	X	X	P	X		X		P			X	X	X			X	Z	X	X	P		P			P							P									P				
Cape Hallett	C 4		S	X		X	X	X		X	X	X		X		X	X	X	X				Z	X	X																											
Cape Kennedy	C 4		S	X		X	Z	X		X	X	X		Z		Z	Z	Z	X	X				X	X																											
Cape Schmidt			S	X		X	X	X		X		X					X	X	X					X	X																											

NAME	IONOSONDE	See Notes	See Code	foF2	fxF2	foF1	foE	foEs	fEs	fbEs	foEs2	M(3000)F2	MUF(3000)F2	M(3000)F1	MUF(3000)F1	h'F2	h'F	h'E	h'Es	h'Es2	fMI	fxI	M(3000)I	f-min	Es Types	Nih	foF1.5	h'F1.5	h'F1	foF1	foT	M(4000)F2	M(3500)F2	M(2500)F2	M(2000)F2	M(1500)F2	M(1000)F2	M(500)F2	M(1500)F1	M(1500)E	MUF(3500)F2	MUF(2500)F2	MUF(2000)F2	MUF(1500)F2	MUF(1000)F2	MUF(500)F2	MUF(2000)E	MUF(1500)E	f-minE	fmEs
Cape Town	Wadley		S	X		X	X	X	P	X		X				X	X	X	X					X	X	X					P			P																	
Cape York			S	P		P	P		P	P	P	P		P																	P			P				P		P	P											
Cape Zevgari	Union Radio Mark II			X		X	X	X		X		X		X		X	X	X	X					X	X																											
Casablanca	SP 35/16		S	X		X	X	X	X	X		X				X	X	X	X					X	X	P					P																					
Casey	IPS 3D		S	X		X	X		X	X		X		X			X	X	X					X	X																											
Chiclayo	C 3		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Chimbote	C 4		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Chita	AIS		S	X		X	X	X	X	X		X		X		X	X	X	X					X	X	X																										
Christchurch	P 2			X		X	X	X	P	X	P	X	P	Z			X	X	X	P		Z		X	Z	P					P																					
Christmas Island	Australian MK V		S	P		P	P		P			P	P			P		P						P							P			P																		
Chungking			S	P		P	P		P			P		P		P		P	P												P								P													
Churchill	LG 17			X		X	X	X	X	X		X		X		X	X					X		X	X	P					P			P					P	P	P		P			P					
Clyde	Cossor		S	X		X	X		X		P	P	P	P		X	X	X						X		P					P			P							P		P	P								
Cocoa	C 3		S	P		P	P		P							P		P													P								P													
Cocos Island	IPS 3D		S	X		Z	Z		X	X		X					Z	Z	X			Z	Z	X	X	Z																									
College	C 3/4	4		X		Z	Z	X	P	Z		Z	P	Z		Z	Z	Z	Z					X	P						P			P	P			P	P			P	P	P								
Colombo			S	P		P	P		P			P																			P																					
Concepcion	C 4			X		X	X	X		X	X	X		X		X	X	X	X	X	Z	Z		X	X																											
Cuba	AIS			X		X	X	X		X		X				X	X	X	X					X	X																											
Dairan			S	M																																																
Dakar	C 4			X		X	X	X	P	X		X	P	X	P	X	X	X	X			Z		X	X	P	P	P	P																							
De Bilt	Panoramic			X		X	X	X		X	X	X		X		X	X	X	X	X		Z		X	X	X												P			P											
Decepcion	Trio		S	X		X	X	X	P	X		X		X		X	X	X	X					X	X													P														
Delhi	C 4			X		X	X	X		X		X				X	X	X	X					X	X	Z						P	P	P	P	P	P														
Dixon	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X																											
Djibouti	C 4			X		X	X	X	P	X	P	X	P	X	P	X	X	X	X	P		Z		X	X	P		Z	P																							
Domont			S	P		P	P		P			P				P		P	P										P																							
Dourbes	Automatic			X		X	X	X		X		X	X	X	X	X	X	X	X					X	X	X																										
Dushanbe	SP-3			X		X	X	X		X		X		X		X	X	X	X					X	X	X																										
Eights	Cossor		S	X				X																X																												
Elizabethville	Wadley		S	X		X	X		X		X	X	X			X		X	X							X		X	X																	X						
Ellsworth	C 4		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Eureka	Cossor		S	X		X	X		X							X	X	X						X																												
Fiji			S	P		P	P	P	P	P	P					P		P	P	P									P																							
Fletchers Ice Island	C 2		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Ft. Archambault	SP 35/16		S	X		X	X	X		X		X		X		X	X	X	X			Z		X	X																											
Ft. Chimo	C 2		S	X		X	X		X							X	X	X						X																												
Ft. Monmouth	C 3/4		S	X		X	X	X	P	X	X	X	P	X		X	X	X	X					X	X													P			P	P			P			P					
Ft. Norman	Cossor		S	X		X	X		X							X	X	X						X																												
Fraserburg			S	P		M	M		P		M	M				M		M		M						P			M																							
Freiburg	Breisach II			X		X	X	X	P	X	X	X	X	X	X	X	X	X	X	P				X	X	X			P	P	Z																					
Frobisher Bay	Cossor		S	X		X	X		X							X	X	X						X																												
Fukaura	Manual		S	P		P	P		P			P				P		P								P			P																		P	P				
Garchy	SP 35/16			X		X	X	X		X		X		X		X	X	X	X			Z		X	X																											
Genova	Breisach II			X			X	X				Z	X				X																																			
Godhavn	J5W			X		X	X	X	P	X		X		X		X	X	X	X		Z	Z		X	X	X			P									P			P											
Goose Bay	Digisonde 128			X		X	X	X		X			X		X	X	X	X	X					X	X	X				X	X																						
Gorky	AIS			X		X		X		X		X		X		X			X					X																													
Grahamstown	Chirp		S	X		X	X	X		X						X		X	X					X																													
Grand Bahama	C 4		S	X		X	X	X		X	X	X		X		X	X	X	X	X	Z	Z		X	X	Z																											

NAME	IONOSONDE	See Notes	See Code	foF2	fxF2	foF1	foE	foEs	fEs	fbEs	foE2	M(3000)F2	MUF(3000)F2	M(3000)F1	MUF(3000)F1	hF2	hF	hF1	hEs	hE2	fM1	fxI	M(3000)I	f-min	Es Types	N(h)	PARAMETERS	foF1.5	hF1.5	hF1	foF1	foF	M(4000)F2	M(3500)F2	M(2500)F2	M(2000)F2	M(1500)F2	M(1000)F2	M(500)F2	M(1500)F1	M(1500)E	MUF(3500)F2	MUF(2500)F2	MUF(2000)F2	MUF(1500)F2	MUF(1000)F2	MUF(500)F2	MUF(2000)E	MUF(1500)E	f-minF	f-minE	fmEs
Graz	OWN			X		M	M	M	P							M	M	M									P																									
Guam	C 2		S	P		P	P		P			P	P	P		P		P	P								P																									
Haifa (f-plots only)	C 2		S	F																												P						P														
Hainan			S		M																																															
Halley Bay	Union Radio MK II			X		X	X	X		X		X		X		X	X	X	X			Z		X	X	M Z																									
Hankow	Mark 88 Typer 4		S	M		M	M									M		M																																P		
Heiss Island	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	Z																									
Hermanus	Wadley			X		X	X	X		X		X				X	X	X	X					X	X	X																									
Hiraiso	Automatic		S	M																																															
Hiratsuka			S	M												M										M																									
Hobart	IPS 3E	1		X		X	X	X	P	X	P	X		Z			X	X	X			Z	Z	X	X	P						P						P													
Hollandia	Panoramic		S	X		X	X	X	X			X		X		X	X	X	X					X																												
Hong Kong	C 2			X			X	X		X		X					X	X	X					X																												
Huancayo	C 4			X		X	X	X	P	X		X	P		P	X	X	X	X		Z	Z		X	X	X						P						P												P		
Hyderabad	OWN Automatic			X		X	X	X		X		X				X	X	X	X					X		X																										
Ibadan	C 4			X		X	X	X	P			X	X				X							X	X	Z	Z																									
Ilo	C 3		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Inverness	Union Radio MK II		S	X		X	X	X	P	X	P	X				X	X	X	X	P				X		P						P																				
Irkutsk	AIS and SP-3			X		X	X	X		X		X				X	X	X	X					X	X	X																										
Jamaica (f-plots only)	C 3/4		S	F		F	F			F														F																												
Johannesburg	OWN			X		X	X	X	P	X		X				X	X	X	X					X	X	X						P																				
Juliaca	C 4		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Juliusruh/Rugen	SP-3	6		X		Z	X	Z		Z		X		Z			Z		Z						X																												
Kaliningrad	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	X																										
Kaminoge			S	M												M																																				
Karaganda	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	X																										
Kerguelen	SP 35/16			X		X	X	X	P	X		X		X		X	X	X	X			Z		X	X																											
Kermadec	Cossor MK II		S	X					P			X	P											X		P						P																				
Khabarovsk	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	X																										
Khartoum			S	P		M	M		P			M				M		M								P						M																					
Kiev	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	X																										
Kinshasa-Binza	Wadley			X		X	X	X	P			X	X			X	X	X	X					X		X	X	X									P										Z					
Kiruna	OWN			X		X	X	X	P	X	Z	X	X		X	X	X	X	X	Z	Z	Z		X		Z																										
Kjeller			S	X	P	X	X	X		X		X				X	X	X	X					X																												
Kochel			S	P	P	P			P																																										
Kodaikanal	C 3			X		X	X	X	P	Z		X				X	X	X	Z					X								P																				
Kokubunji	Manual		S	P												P																																				
Kwajalein			S	P		P			P			P				P																P																				
La Paz	C 4		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
La Quiaca			S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Lanchow			S	P		P			P	P		P		P						P												P						P														
Lannion	LNR		S	X		X	X	X		X		X		X		X	X	X	X			X		X																												
Leningrad	AIS and SP-3			X		X	X	X		X		X		X		X	X	X	X					X	X	X																										
Leyte			S	P		P	P		P			P		P																	P																					
Lindau	DDA IV			X		X	X		X	X	X	X				X	X	X		X				X	X							P																				
Little America	C 4		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Longyearbyen	NPL MK II		S	X		X	X	X		X		X				X	X	X	X					X																												
Loshan			S	P		P	P		P			P	P			P		P						P								P																				
Lulea	Union Radio MK II		S	X		X	X	X	P	X		X		Z		X	X	X	X					X	X																											
Lwiro	Wadley	7	S	X		X	X	X	P	X		X	X	X	X	X	X	X	X					X	X	X	X	X		X	X																					

NAME	IONOSONDE	See Notes	See Code	foF2	fxF2	foF1	foE	foEs	fEs	fbEs	foE2	M(3000)F2	MUF(3000)F2	M(3000)F1	MUF(3000)F1	h'F2	h'F1	h'E	h'Es	h'E2	fMI	fxI	M(3000)I	f-min	Es Types	N(h) PARAMETERS	foF1.5	h'F1.5	h'F1	foI	foI	M(4000)F2	M(3500)F2	M(2500)F2	M(2000)F2	M(1500)F2	M(1000)F2	M(500)F2	M(500)F1	M(500)E	MUF(3500)F2	MUF(2500)F2	MUF(2000)F2	MUF(1500)F2	MUF(1000)F2	MUF(500)F2	MUF(2000)E	MUF(1500)E	f-minF	f-minE	fmEs
Lycksele	J 4			X		X	X	X	Z	X	Z	X				X	X	X	X	Z	Z	Z		X																										Z		
Macau	Cossor MK II		S	X		X	X		X	X		X		X		X	X	X	X					X		X																										
Macquarie Island	CSIRO J 28		S	X		X	X	X		X		X		X		X	X	X	X					X	X	P																										
Madras	Manual			X					X			X							X							X							P	P	P	P	P															
Makassar	Manual		S	M		M										M										M						M																				
Manila	C 3/4			X	M	X	X	X	P	X	X	X		X		X	X	X	X	X	Z	Z		X	X	X						P							P									P				
Marion Island	Wadley		S	X		X		X		X		X		X		X	X		X					X	X	X																										
Maui	C 4			X		X	X	X	P	X	X	X	P	X	P	X	X	X	X	X				X	X	X					P				P				P								P	P			P	
Mawson	Cossor MK II	1		X		X	X	X	Z	X		X		Z		Z	X	X	X					X	X	Z																										
Maynard	Digisonde 128		S	X		X	X	X		X			X		X	X	X	X	X					X	X	X			X	X																						
Meanook	Cossor		S	X		X	X		X			X		X		X	X	X						X																												
Meguro			S		M																																															
Mexico City	C 4			X		X	X	X		X	X	X		X		X	X	X	X	X	Z	Z		X	X	X																										
Miedzeszyn	AIC			X		X	X	X		X		X		X		X	X	X	X					X	X																											
Mirny	AIS		S	X		X	X	X		X		X		X		X	X	X	X					X	X																											
Moscow	AIS and SP-3			X		X	X	X	P	X		X		X		X	X	X	X					X	X	X																										
Mundaring	Cossor MK II	1		X		X	X	X	Z	X		X					X	X	X			X	Z	X	X	Z																										
Murmansk	SP-3			X		X	X	X		X		X				X	X	X	X					X	X	X																										
Nairobi	Union Radio MK II			X		X	X	X	P	X		X		X		X	X	X	X					X	X	X					P																					
Nanking			S	P		P	P		P			P		P		P		P	P												P							P									P					
Narssarssuaq	C 3/4			X		X	X	X	P	X		X		X		X	X	X	X					X	X	X					P							P									P					
Natal	C 4		S	X		X	X	X		X		X		X		X	X	X	X					X	X																												
Nha Trang	Krdse-22		S	P		P	P	P	P	P		P	P	P	P	P	P	P	P					P			P	P																									
Norfolk Island	IPS 3D	1		X					X	X		X					Z	Z				Z	Z	X	Z	Z																										
Norilsk	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	X																										
Novkazalinsk	AIS			X		X	X	X		X		X		X		X																																				
Novosibirsk	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	X																										
Nurmijarvi	Finn-Sounder			X		X	X	X		X		X		X			X		X			Z		X	X																											
Okinawa	C 3	5		X		X	X	X	P	X		X	P	X		X	X	X	X			X		X	X						P							P									P					
Ottawa	LG 17			X		X	X	X	X	X		X	P	X		X	X		Z					X	Z	P					P				P													P	P		P			P
Ouagadougou	SP 35/16			X		X	X	X		X		X		X		X	X	X	X			X		X	X																												
Palau	Manual		S	M		M										M										M					M																						
Palmyra Island	DTM-1		S	P		P	P		P			P		P		P		P	P												P							P									P					
Panama	C 3		S	X		X	X	X		X		X		X		X	X	X	X					X	X						P							P									P					
Paramaribo	Panoramic			X		X	X		X	X	X	X		X		X	X	X	X	X				X		Z																										
Paramushiro	Manual		S	M												M										M																										
Paris-Saclay	SP 35/16		S	X		X	X	X		X		X		X		X	X	X	X					X																												
Peiping			S	M								M																																								
Penang	Manual		S	M		M										M										M					M																						
Peshawar			S	M			M					M														M									M	M	P	M	M	P				P									
Pitcairn			S	P		P	P		P			P	P			P		P	P												P																						
Point Arguello	Granger			X		X	X	X		X	Z	Z	X	Z	X	X	X	X	X	Z	Z	Z		X	X	Z																										
Poitiers	SP 35/16			X	P	X	X	X	P	X		X				X	X	X	X			X		X	X						P																					
Popayan	C 4			X		X	X	X		X	X	X		X		X	X	X	X	X	Z	Z		X	X																											
Port Lockroy	Manual		S	X																																															
Port Moresby	IPS 3 C Mod.		S	X		Z	Z		X	X		X		Z			Z		Z			Z	Z	X	Z	Z																									
Port Stanley	Magnetic A/B			X		X	X	X	P	X		X		X		X	X	X	X			X		X	X	P					P																					
Portage La Prairie			S	P		P	P		P			P		P		P		P	P					P														P													P	
Prince Rupert	LG 17		S	P		P	P		P			P		P		P		P	P					P							P				P			P													P	
Providenya	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	X																										

NAME	IONOSONDE	See Notes	See Code	foF2	fxF2	foF1	foE	foEs	fEs	fbEs	foF2	M(3000)F2	MUF(3000)F2	M(3000)F1	MUF(3000)F1	h'F	h'F2	h'E	h'Es	hF2	fMI	fxI	M(3000)I	f-min	Es Types	N(h) PARAMETERS	foF1.5	h'F1.5	h'F1	foT	M(4000)F2	M(3500)F2	M(2500)F2	M(2000)F2	M(1500)F2	M(1000)F2	M(500)F2	M(1500)F1	M(1500)E	MUF(3500)F2	MUF(2500)F2	MUF(2000)F2	MUF(1500)F2	MUF(1000)F2	MUF(600)F2	MUF(2000)E	MUF(1500)E	f-minF	f-minE	fmEs
Pruhonice	AIS			X		X	X	Z	X						X	X	X	X					Z	X																										
Puerto Rico	C 3		S	X		X	X	P	X		X	P	X	P	X	X	X	X					X	X			P			P			P				P	P			P									
Quetta	Union Radio MK II		S	M		M	M	M		M		M		M	M	M	M	M					M																		P										
Rabat	SP 35/16		S	X		X	X	X		X		X		X	X	X	X	X					X																												
Rangoon	Manual		S		M									M											M		M																							
Rarotonga	P 2			X		X	X	X	P	X	Z	X	P	Z		X	X	X	Z		X		X	Z	P		P			P																				
Resolute Bay	1005 W			X		X	X	X	X	X		X		X	X	X	Z	P					X		P		P						P				P												P		
Reykjavik	C 2		S	X		X	X	X	P	X		X	P	X	X	X	X	X					X	X			P			P			P				P							P							
Rome	OWN			X		X	X	X	P	X		X			X	X	X	X						X			P																							
Rostov	AIS			X		X	X	X		X		X		X	X	X	X	X					X	X	X																										
Salekhard	AIS			X		X	X	X		X		X		X	X	X	X	X					X	X	X																										
Salisbury	Cossor MK II	1,8		X		Z	Z	Z	X	X					Z	X	Z	X			Z	Z	X	X																										
Salisbury (RHOD)	Cossor		S	X		X	X	X		X		X			X	X	X	X					X																												
San Salvador	C 4		S	X		X	X	X		X		X		X	X	X	X	X					X	X																											
Sanae	Cossor			X		X	X	X		X					X	X	X	X					X																												
Sao Paulo	C 3		S	X		X	X	X	P	X		X		X	X	X	X	X					X	X			P																								
Schwarzenburg	C 2		S	X		X	X	X	P			X			X	X	X	X					Z				P																							
Scott Base	P 2			X		Z	Z	Z		Z	Z	X		Z	Z	Z	Z	Z			X		X	Z																											
Seoul	NJZ-134			X		X	X	X		X		X		X	X	X		X					X	X																											
Shibata	Manual		S	P		P	P		P			P			P		P								P		P																				P	P			
Shikuka	Mark 88 Type 4		S	M		M									M										M		M																								
Simferopol			S	X		X	X	X				X			X	X							X		X																										
Singapore	Union Radio MK II		S	X	P	X	X	X	P	X		X		X	X	X	X	X					X	X	P	M																									
Slough	Union Radio MK II			X		X	X	X	P	X		X		X	X	X	X	X			X		X	X	P					P																					
Slutsk			S		P										P		P										P																							
Snainton			S	P																																														
Sodankyla	DDA III			X		X	X	X		X		X		X		X	X	X			Z		X	X																										
Sofia	IRX			X		X	X	X		X					X	X	X	X					X	X																											
South Georgia	Union Radio Mark II			X		X	X	X		X		X		X	X	X	X	X			X		X	X																											
South Pole	C 3/4		S	X		X	X	X		X		X		X	X	X	X	X					X	X																											
Soya	PIR-9		S	X		X	X	X							X	X	X	X					X																												
St. Johns	SI-1			X		X	X	X	X	X		X		X	X	X							X				P										P														
Stanford	C 3	9	S	X		X	X	X	P	X		X	P	X	P	X	X	X					X	X						P			P				P				P							P			
Sverdlovsk	AIS			X		X	X	X	P	X		X		X		X	X	X					X	X	X																										
Swan River			S	P		P	P					P		P		P		P					P				P											P													
Syowa Base	PIR-9			X		X	X			X		X			X	X		X					X	X																											
Tahiti	C 4			X		X	X	X		X		X		X	X	X	X	X			X		X	X																											
Taipei	C 2/4			X		X	X	X	P	X		X		X	X	X	X	X					X	X	Z		P						P			P	P														
Talara	C 3		S	X		X	X	X	P	X		X	P	X	P	X	X	X					X	X			P						P				P				P						P				
Tamanrasset	SP 35/16			X		X	X	X		X		X		X		X	X	X					X																												
Tananarive	SPIM Breisach I		S	X		X	X	X	P	X	P	X	P	X	P	X	X		X	P		X		X		P		P	P	P																					
Tashkent	AIS			X		X	X	X		X		X		X	X	X	X	X					X	X	X																										
Tbilisi	AIS and SP-3			X		X	X	X		X		X		X	X	X	X	X					X	X	X																										
Tehran				X		M	M	M				X			M	M	M						M																												
Terre Adelie	SP 35/16			X		X	X	X		X		X		X	X	X	X	X			X		X	X																											
The Pas	Manual		S	X																																														
Thule/Camp Tuto	C 4		S	X		X	X	X	P	X		X		X	X	X	X	X					X	X																											
Thule/Qanak	C 4			X		X	X	X		X		X		X	X	X	X	X		Z	Z		X	X																											
Thumba	C 4			X		X	X	X							X	X	X						X																												
Tiruchirapalli	Manual			X						X		X						X							X																										

NAME	IONOSONDE	See Notes	See Code	foF2	fxF2	foF1	foE	foEs	fEs	fbEs	foE2	M(3000)F2	MUF(3000)F2	M(3000)F1	MUF(3000)F1	h'F2	h'F	h'E	h'Es	h'E2	fMI	fxI	M(3000)I	f-min	Es Types	N(h) PARAMETERS	foF1.5	h'F1.5	h'F1	foT	M(4000)F2	M(3500)F2	M(2500)F2	M(2000)F2	M(1500)F2	M(1000)F2	M(500)F2	M(1500)E1	MUF(3500)E	MUF(2500)F2	MUF(2000)F2	MUF(1500)F2	MUF(1000)F2	MUF(500)F2	MUF(2000)E	MUF(1500)E	f-minF	f-minE	fmES
Tixie Bay	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	X																									
Togo	Breisach II		S	X		X	X	X		X	X	X	X	X	X	X	X	X	X					X	X	X																									
Tokyo	Type 8	5		X		X	X	X	P	X		X		X		X	X	X	X			X		X	X	Z			P																			P	P	
Tomsk	AIS			X		X	X	X		X		X				X	X	X	X					X	X																										
Tortosa	J 5			X		X	X	X		X		X				X	X	X	X					X	X	X																									
Townsville	IPS 3B	1		X		X	X	X	P	X	P	X					X	X	X			X		X	X	Z			P					P			P													
Toyohara			S	M												M																																		
Trelew	Trio-2			X		X	X	X		X		X		X		X	X	X	X					X			Z																							
Trinidad	DTM-3		S	P		P	P		P	P	P	P	P	P			P	P	P	P				P		P					P	P		P	P	P		P	P	P										
Trivandrum	C 4		S	X					X			X							X					X		X																									
Tromso	Union Radio MK II			X		X	X	X	P	X		X		X		X	X	X	X			X		X	X	X			P																						
Tsitsihar	Automatic		S	M		M	M									M	M	M																																	
Tsumeb	DDA IV			X		X	X		X	X	X	X				X	X	X		X					X																										
Tucuman	C 2			X		M	M					X				M	X	M						M																											
Tunguska	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	X																									
Uppsala	J 4			X		X	X	X	Z	X	Z	X		X		X	X	X	X	X	X	X		X	X				P																				Z		
Ushuaia	Trio-2			X		X	X	X		X		X		X		X	X	X	X					X	X																										
Vanimo	IPS-3D	1		X		X	X	X	Z	X		X					X	X	X				Z	X	X																										
Victoria	Cossor		S	X		X			X			Z		Z		X	X	X						X																											
Victoria Beach			S	P		P	P		P							P		P	P										P																						
Vostok	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X																										
Wakkanai	Type 8	5		X		X	X	X	P	X		X		X		X	X	X	X			X		X	X	P			P																			P	P	
Wallops Island	J5W			X		X	X	X		X	Z	X		X		X	X	X	X	Z	X	X		X	X	X																									
Washington	C 3		S	X		X	X	X	P	X		X		X		X	X	X	X					X	X	P			P		P	P		P			P	P	P		P										
Watheroo	CSIRO-2		S	X			X	X	P			X	P		P		X							X		P			P		P										P	P	P								
White Sands	C 3/4			X		X	X	X	P	X		X		X		X	X	X	X		Z	Z		X	X	Z			P					P			P														
Wilkes	C 4		S	X		X	X	X		X		X		Z		Z	X	X	X					X	X																										
Winnipeg	SI-1			X		X	X	X	X	X		X		X		X	X	Z	Z					X					P							P														P	
Woomera	Union Radio MK II		S	X		X	X	X		X	Z	X				Z	X	X	X	Z				X																											
Wuchang			S	P		P	P		P			P	P			P		P						P					P																						
Yakutsk	AIS			X		X	X	X		X		X		X		X	X	X	X					X	X	X																									
Yamagawa	Type 8	5		X		X	X	X	P	X		X		X		X	X	X	X			X		X	X	P			P																			P	P	
Yellowknife	Cossor		S	X		X			X							X	X							X																											
Yuzhno-Sakhali	AIS		S	X		X	X	X		X		X		X		X	X	X	X					X	X	X																									
Zarya Ship			S	X		X	X	X		X		X		X		X	X	X	X						X																										

Supplementary Table

NAME	See Code	fE2s	h'E2s	fbE2s	foFo	h'Fo	fxF1	faEs	faE2s	q(3000)
Bagneux	S	P					P			
Bandoeng	S						M			M
Bunia	S	P	P		P	P				
Brisbane		P	P							
Campbell Island		P	P	P						
Canberra		P	P							
Cape York	S	P	P	P						
Christchurch		P	P	P						
Churchill		P	P							
Clyde	S	P								
Dakar		P	P		P	P		P	P	
Djibouti		P	P							
Elizabethville	S	X	X		X	X				
Fraserburgh	S	M	M							
Freiburg		P	P		P	P		P		
Hainan	S									M
Hobart		P	P	P						
Inverness	S	P								
Kermadec	S	P								
Kinshasa-Binza		X	X		X	X				
Lwiro	S	P	P		Z			P	P	
Manila	S						M			
Ottawa		P	P							
Poitiers							P			
Port Stanley		P								
Rarotonga		P	P		P					
Sao Paulo	S	P	P							
Singapore	S	M					P			M
Slough		P								
Slutsk	S						P			
Tananarive	S	P	P							
Townsville		P	P		P					
Tsitsihar	S									M
Victoria Beach	S	P	P							

NOTE: In this Supplementary Table, Columns 2 and 3 are omitted.

V. Explanation of Data Formats

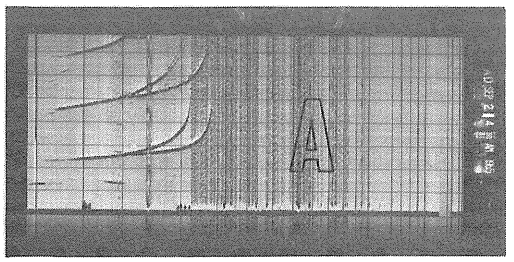
This Section includes samples of the data listed in this Catalog, Sections VI and VII and an explanation of the formats for computer-compatible data.

1. Ionograms

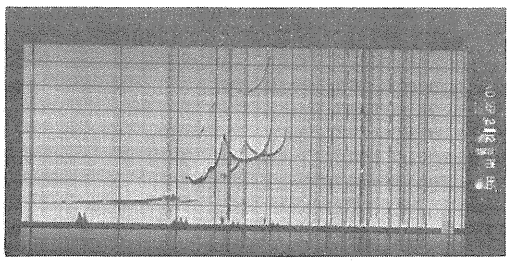
Almost all ionograms (originals and copies) are on 35 mm film. Observations are usually taken at quarter-hourly intervals. Many stations make extra soundings once an hour on low and high as well as medium receiver gain settings. Some stations make soundings only once per hour. Some stations make soundings at more frequent intervals (5 minutes, 1 minute, 1/2 minute) during special experiments, special phenomena or, in particular, on World Days marked on the International Geophysical Calendar. Typically, the length of film for data for one day is about 30 feet and for one month about 1000 feet; the lengths will vary with observing schedule and the probing frequency range of the ionosonde. Experience has shown most users need daily or monthly sequences of ionograms in order to make proper interpretation of the data. The date, time and station are recorded on each ionogram, as well as height and frequency markers. Examples of ionograms from many different ionosondes are included in Report UAG-10, *Atlas of Ionograms*.

S

IONOGRAMS 1.0-20.0 MHz



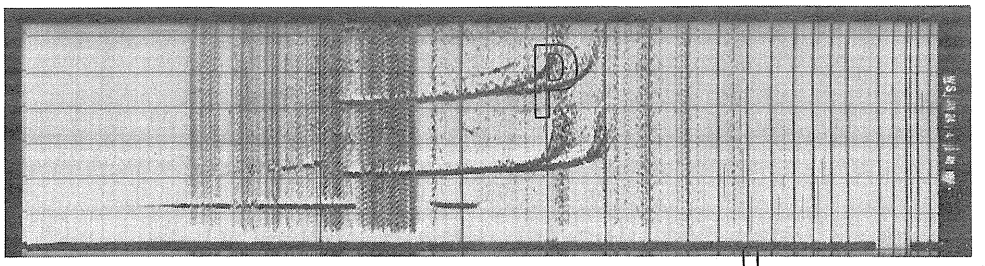
NIGHT



DAY

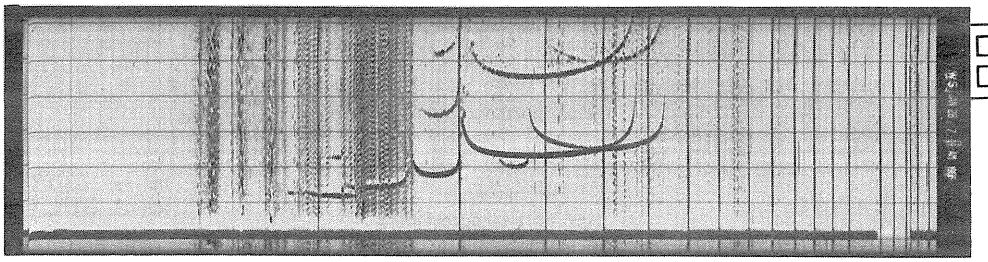
M

IONOGRAMS 0.25-20.0 MHz



NIGHT

L

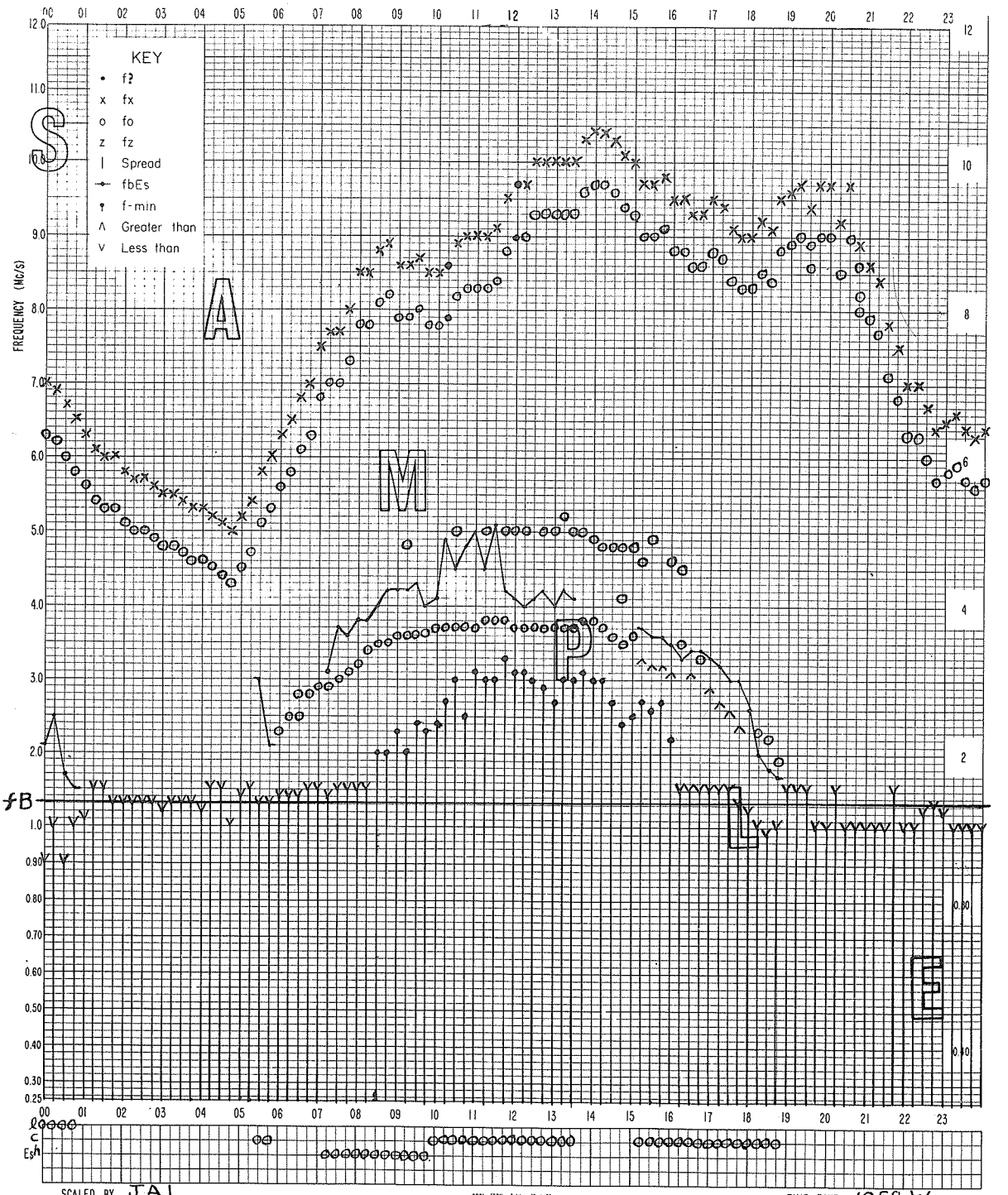


E

DAY

2. f-plots

The "f-plot" is a graph of characteristic frequencies read from the ionograms for a given day, usually at quarter-hourly intervals. It provides a visual picture (and accurate data) of ionospheric frequency variations which is not easy or possible from tables of hourly values. The construction of the f-plot and the conventions used are described in detail in Report UAG-23. Users may obtain f-plots as electrostatic copies of the original graphs made at the stations, or as microfilm copy for selected stations.



3. Tabulations by day of reduced characteristics

These have commonly been called "daily work sheets" or "7-E sheets". These give the hourly values of all scaled characteristics for each of the 24 hours of the day. These sheets are available as electrostatic copies, and in a few instances are also on 35 mm microfilm.

NOAA FORM 86 508
(11-73)

WDC-A FOR SOLAR-TERRESTRIAL PHYSICS
ENVIRONMENTAL DATA SERVICE, NOAA
BOULDER, COLORADO 80302 U.S.A.

SCALED BY SK-DT
CHECKED BY DT-SK

HOURLY VALUES IONOSPHERIC SOUNDINGS

DATE SEP 8 1975
STATION MAUI, HAWAII

	S-min			E REGION															F REGION																								
				SPORADIC E								NORMAL E						E2																		HEIGHTS								REMARKS
Hour	fo	QUA	DES	fbEs	foEs	QUA	DES	h'Es	QUA	DES	TYPE OF Es	foE	QUA	DES	h'E	QUA	DES	foE2	h'E2	foF1	F1 M3000	QUA	DES	foF2	F2 M3000	QUA	DES	fmI	fxI	QUA	DES	h'F	QUA	DES	h'F2	QUA	DES	hpF2	QUA	DES			
00	05			DS 005	005	DS		100			l													038	310	UF		033	044			260						319	UN				
01	06			008	010	DS		110		H	l													039	380	UF		033	044			300						377	UF				
02	04			009	009	DS		098			l													237	310	UF		035	042			261						320	UF				
03	04			012	014	UA		100			l													038	340						B	251						272					
04	09	ES		011	014			108			l													030	370						B	208						247					
05	06			010	010	DS		107			l^{Y}			A			A							021	340	UF		020	026			233	EA					265	UF				
06	04			DS 013	013	DS		105			l^{3}			A										028	330	UN		025	033			251						288	UN				
07	11	ES		022	022			164	EG		h_c^{Y}	220			115		H						L	051	325						B	222					L	290					
08	14	ES		029	029			139	EG		C	275	D	A	107		H						L	063	325						B	203		H			L	298					
09	15			034	034			184	EG		h_c	320		H	105		H	UA 340	190				L	069	305						B	210			302	U	L	323					
10	18			040	040			142	EG		$h_c^2 l$			A	105			350	EA 170	49	350	U	L	0[illegible]	280						B			A	350			375					
11	19	ES		045	045			130	UG		h_c^2			A	105	ES				47			A	0[illegible]	285						B			A	338			370					
12	20			044	045			129			$h^2 c$	355			105					49	380		A	098	285						B			A	352			383					
13	21	ES		039	040			132	EG		h_c	360			105					51	355	U	S	104	280	JS					B	214	EA		378			395					
14	20			038	038			132	EG		h_c	345	UR		105					48	380		H	115	285						B	190		A	356			375					
15	19			035	035			127	EG		h_c	330		H	105		H			46	365	U	L	128	315						B	207			399			321					
16	15			032	032			123	UG		C	295			109	E	A			42	370	U	L	126	330						B	[illegible]5			368			293					
17	11			031	031			115			$C^2 l$	240	D	A	109								L	117	340						B	239			253			275					
18	09	ES		036	037	UA		112			$C^3 l$			A	120								A	090	365						B			A	228			250					
19	04			DS 008	008	DS		099			l^2			S			A							058	335						B	218						278					
20	03			DS 005	005	DS		098		H	l^2			S			A							052	310						B	225						310					
21	04			013	013	DS		100			l^2													044	295						B	252						337					
22	04			DS 006	006	DS		099			$l^2 m$													042	290						B	280	US					358					
23	05			DS 008	008	DS		115			l													041	280						B	203						388					

4. Tabulations by month of daily/hourly values of a single characteristic and monthly medians

Each table gives the hourly values for a single characteristic for all hours and all days of a month. The tables usually also give the monthly median and the median count, and sometimes the upper and lower quartile (or occasionally decile) values. Most stations scale about 12 characteristics so there are about 12 of these tables per month per station. (Current practice calls typically for the following characteristics: foF2, foF1, foE, foEs, fbEs, fmin, fxI, h'F, h'Es, h'E, M(3000)F2 or MUF(3000)F2, and Es types.)

These tables are available as electrostatic copies or when so indicated in the catalog as microform copies. For the latter, one 100-foot roll of 35 mm microfilm may contain several years of data for one station (e.g., Huancayo for 1957-1964 is on one roll). One microfiche usually contains all of the tables for one month for a single station.

WALLOPS U.S.A. LAT. 37.8N LONG. 70.5W SWEEP 0.25 MC TO 20.0 MC IN 60 SEC. 75.0W TIME

YR-MO	C
1972 4	00

foF2

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1	039	035	F U F 029	027	027	029	042	051	054	054	053	059	063	065	C	067	067	U S 062	C	061	J S 063	061	053	055	1
2	052	050	050	049	040	034 C	043	054	060	065	071	079	080	078	080	082	079	U S 073	C	070	U S 061	053	049	C	2
3	045	041	041	040	036		049	058	064	068	069	071	075	081	088	086	085	081	080	079	J S 062	058	055	053	3
4	051	049	049	048	041	040	U S 054	060	069	071	079	083	094	096	098	096	090	087	085	U S 074		U S 064	061	057	4
5	057	052	049	053	050	040	060	079	088	081	092	104	098	105	105	100	102	102	099	091	079	057	052	054	5
6	053	051	049	046	040	038	055	067	068	076	083	088	091	096	096	094	093	095	094	085	U S 070	061	058	058	6
7	057	055	054	053	051	046	058	075	076	076	080	083	093	096	097	098	096	U S 095	096	U S 092	U S U S 078	U S 071	J S 067	U S 061	7
8	U S 058	U S 059	058	056	054	051	059	068	071	079	081	086	090	100	101	103	100	U S 099	097	U S 089	U S 073	063	062	065	8
9	063	061	058	054	051	050	061	068	081	080	080	085	090	096	095	096	095	091	092	090	081	069	066	064	9
10	061	059	058	055	054	055	064	075	082	083	U H 087	091	098	097	098	096	095	096	U S 098	092	078	071	061	060	10
11	060	059	058	056	055	054	064	078	079	089	093	097	101	102	100	096	097	095	096	096	U R 085	073	068	065	11
12	062	060	061	060	054	054	067	088	099	096	098	105	108	118	115	107	099	100	U S 097	102	090	078	068	070	12
13	068	U S 067	060	057	055	051	057	062	064	064	073	080	082	089	088	085	080	089	086	082	072	U S 062	057	055	13
14	054	055	053	052	050	045	054	U H 057	U H 061	061	068	073	081	081	083	079	077	074	076	072	U R 068	065	066	064	14
15	U R 060	057	F	U F 052	F	F	U F 054	065	U H 074	U H 072	U H 076	080	081	087	088	082	080	078	079	078	U S 073	U F 068	U S 061	U S 060	15
16	059	059	U R 058	U F 052	U F 049	U F 046	062	072	082	087	087	U H 087	089	088	085	085	082	086	085	082	071	U R 063	J R 065	061	16
17	061	060	056	052	050	051	060	066	073	U H 078	081	081	079	086	084	084	081	081	081	081	U R 070	J R 069	J R 063	050	17
18	057	061	058	055	045	042	051	059	067	066	067	069	069	068	071	076	076	078	083	079	068	057		F F	18
19	F	F	F	F	F	F	049	U F 052	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	19
20	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	094	U R 095	U R 095	087	078	078	R	20
21	066	U R 062	058	051	F	F U F	049	054	053	050	051	054	057	057	058	059	062	060	063	064	057	048	043	042	21
22	039	038	036	033	029	033	054	062	061	065	071	073	079	078	079	088	089	089	U R 098	U R 100	079	058	U F 048	U F 044	22
23	U F 043	U F 039	U F 039	F	F	F	054	061	071	065	U F 060	U F 070	U F 074	085	091	089	092	093	U R 093	U R 094	U R 082	U R 085	055	049	23
24	047	046	046	043	038	040	054	062	062	063	064	069	074	078	078	078	078	082	084	082	075	060	057	054	24
25	051	049	047	046	043	044	058	069	079	081	082	081	081	082	081	082	084	085	085	U R 088	080	068	059	054	25
26	050	049	046	044	043	045	061	074	078	082	080	074	076	079	078	079	081	082	081	083	077	J R 068	J R 063	U R 059	26
27	058	057	054	051	049	048	064	075	075	077	072	077	087	091	093	096	096	088	094	088	U S 084	076	068	R	27
28	U R 060	056	051	043	035	033	041	U H 050	R	U R 064	U R 057	U H 060	U R 065	061	066	064	061	061	059	058	056	050	047	045	28
29		U F 034	U F 032	F	F	F		045	C	C	C	C	C	C	C	054	055	057	077	076	073	056	052	047	29
30	046	042	039	035	026	032	042	U F 048	F	050	U R 054	050	054	057		C C	C	C 074	071		058	050	047	045	30

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
MED	57	55	51	52	47	45	55	62	71	H 72	H 76	80	81	86	88	85	84	87	85	82	S 73	R 63	60	55	MED
CNT	28	28	27	26	24	23	28	29	25	27	27	27	27	27	25	27	27	28	27	29	29	29	28	25	CNT
UQ	R 60	59	058	054	51	051	61	73	79	081	082	086	091	096	98	096	095	95	096	92	80	70	66	61	UQ
LQ	49	48	046	044	39	038	50	56	63	U R 064	067	U F 070	U F 074	078	80	079	078	78	080	75	68	58	53	50	LQ
UD	63	61	59	57	55	54	64	78	85	88	93	101	100	104	103	102	100	S 99	98	96	R 85	78	68	65	UD
LD	43	38	34	34	28	33	42	H 50	57	52	54	57	60	59	69	62	62	61	69	64	58	50	47	45	LD

1972 4 00
937

5. Individual N(h) Profiles

This is a common data product made from an ionogram and gives the electron density as a function of true or real (rather than virtual) height. The available data are Cataloged in Section VII, Special Data Holdings. Information on procedures and theoretical bases for obtaining "true-height" profiles of electron density from ionograms may be found in Report UAG-23, *URSI HANDBOOK OF IONOGRAM INTERPRETATION AND REDUCTION*, November 1972, and in the special issue of *Radio Science*, 2, 1119-1282, 1967, which was devoted to the "analysis of ionograms for electron density profiles". The basis for the system presently in use at NGSDC, is described by Howe and McKinnis, *Radio Science*, 2, 1135-1158, 1967. Most of the data shown in this Catalog has been derived at NGSDC. The output format can be either of the ones shown on this page or page 29, which can be copied electrostatically, or the same data can be supplied on punched cards or magnetic tape. Profiles can be produced for stations and times other than those indicated in the Catalog, as long as ionograms of suitable quality can be obtained.

```
                    BOULDER   64 03 17 0400
FOR 20128.    F=0.596000.    FH=1.520992.    SIN I=0.923900.
     FX LOG FN   H*       H          Z*          Z**       INTEGRAL    EL/CC
A102      9.1945 EXTRAP   90.00       0.000                            3.03710+002
          9.294  90 0     90.00       0.000        0.00       0.000    4.81348+002
          9.305  90 0     90.00       0.000        0.00       0.000    5.06092+002
          9.690  118 0   100.04      26.091       33.90       0.179    2.97796+003
          9.719  124 0   101.8       34.687      147.53       0.236    3.40557+003
          9.747  150 0   105.1       83.564      870.30       0.358    3.87570+003
          9.756  244 OV  109.1      395.968    18456.94       0.519    4.02973+003
          9.778  234 0   117.65     180.884  -000408.40       0.878    4.46508+003
          9.875  224 0   145.04     101.728  -000408.40       2.387    6.97669+003
          0.217  244 0   200.73      60.886  -000059.64      11.244    3.37672+004
          0.303  261 0   212.38      75.126       83.07      16.103    5.01094+004
          0.389  277 0   225.73      80.142       29.17      24.325    7.44490+004
          0.473  307 0   241.65     110.251      180.10      38.920    1.09406+005
          0.526  362 0   258.05     195.860      798.85      59.502    1.40025+005
          0.544  420 0   267.32     326.895     3695.54      73.066    1.51937+005
          0.553  521 0   275.56     631.978    17737.04      85.871    1.58075+005
  LOGFM=0.5561    HMAX=285.17   S= 38.487       SHMAX=     101.217    1.60539+005
```

line 1 -- Station, Year, Month, Day, Hour. Minute (local standard meridian time).

line 2 -- Project designator (FOR 20128), Geomagnetic field strengths at ground level in gauss (F), gyrofrequency at 200 km (2.552xF) in Megahertz (FH), the sine of the local geomagnetic dip angle (SIN I).

line 3 -- (gives the column headings) -- logarithm of the plasma-frequency (LOG FN), virtual height (H*), true height (H), slope of the profile (Z*), change in the slope (Z**), integrated electron density (N^{10} electrons/cm^2) (INTEGRAL), and the electron density with the exponents as shown (EL/CC).

line 4 -- The inversion start code (A102).

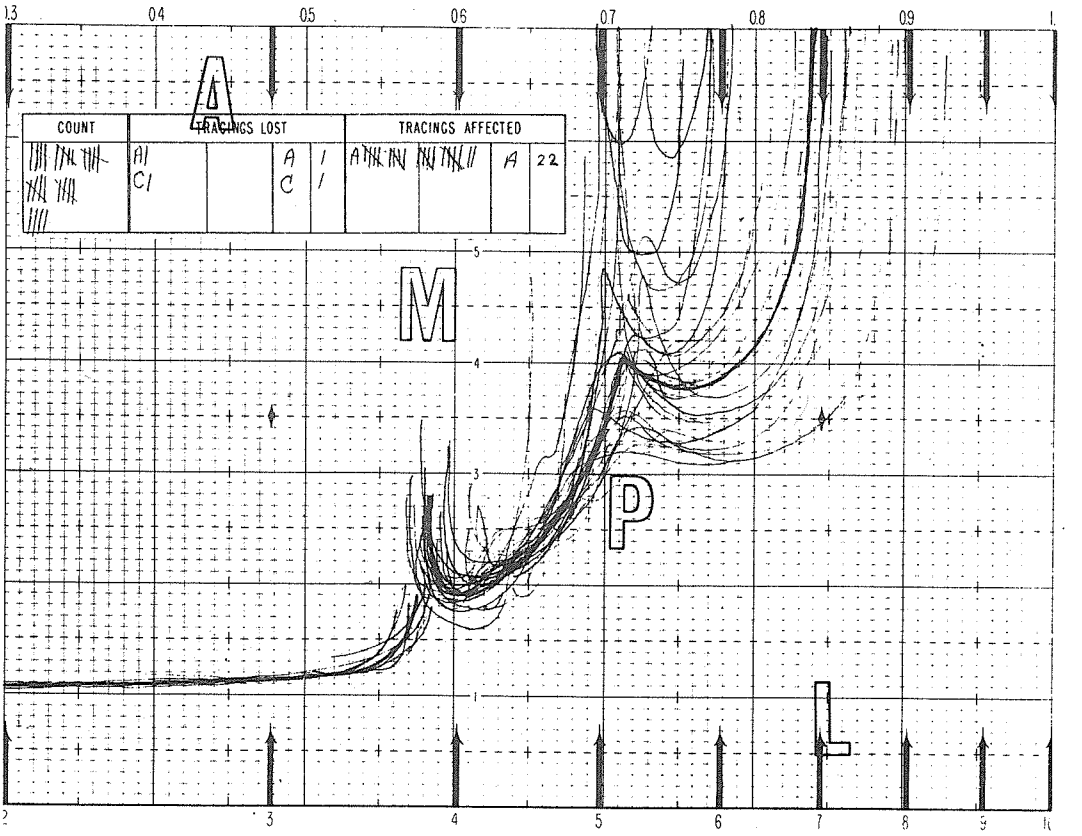
last line -- Logarithm of the maximum plasma frequency (LOG FM), height of the maximum plasma frequency (HMAX), the quarter thickness (S or sometimes SCAT), the integrated electron density up to HMAX (SHMAX), the electron density at HMAX.

6. N(h) Profiles for Monthly Medians of hourly h'f data

This data product is the profile of electron density vs real height for the monthly median h'f (virtual height vs frequency) trace for a given hour. It is the easiest and least expensive type of profile data for "climatological" studies. These are sometimes called "hourly composite profiles", or "Monthly N(h) Hourly Composites". To illustrate the procedure, consult the Figure on this page. This is a composite of the ordinary-wave h'f ionogram traces for each day of the month at the given hour. It is actually made on a single piece of tracing paper. The monthly median h'f trace is then derived and marked by a heavy line. This median h'f trace is then processed the same as for individual profiles. The standard output format is shown on page 29. The hourly composite profile is representative of monthly median ionospheric conditions for the given hour. Thus for "Hourly Composite Profiles" which have already been computed, as shown in the Catalog, Section VI, the data are available for the cost of electrostatic copies of existing tables. Composite profiles for other months and stations can be produced at WDC-A.

S

WALLOPS ISLAND 1200 (75° WMT) AUGUST 1968 COMPOSITE TRACING



E

TABLE OF INTERPOLATED COMPOSITE ELECTRON DENSITY PROFILES
(ELECTRON DENSITIES IN 1.0E03 EL/CC)

STATION:	WP	WP	WP	WP	WP	WP	WP	WP	WP
DATE:	68082	68082	68083	68082	68082	68082	68083	68082	68082
GRADE:									
TIME:	800	900	1000	1100	1200	1300	1400	1500	1600
H(KM)									
100									
110	0105	0138	0147	0118	0140	0133	0130	0125	
120	0127	0146	0165	0175	0180	0176	0176	0160	0136
130	0143	0165	0190	0205	0213	0194	0201	0180	0149
140	0168	0196	0228	0241	0249	0229	0232	0206	0171
150	0194	0230	0258	0269	0277	0261	0258	0233	0196
160	0219	0257	0281	0292	0299	0284	0282	0257	0219
170	0242	0279	0301	0310	0318	0303	0302	0278	0241
180	0263	0297	0319	0327	0334	0319	0319	0298	0263
190	0290	0323	0339	0347	0352	0339	0337	0318	0284
200	0329	0366	0366	0375	0375	0365	0361	0345	0310
210	0380	0430	0404	0412	0404	0400	0391	0381	0344
220	0437	0494	0443	0455	0437	0444	0428	0425	0389
230	0488	0542	0497	0494	0472	0491	0472	0473	0442
240	0524	0575	0539	0525	0505	0536	0516	0521	0500
250	0538	0589	0571	0545	0536	0574	0558	0564	0553
260	0543	0596	0595	0557	0562	0605	0592	0600	0598
270	0543	0597	0612	0562	0580	0627	0614	0628	0631
280			0622	0563	0592	0641	0628	0645	0648
290			0625		0596	0647	0634	0656	0658
300			0625		0596	0647	0634	0660	0658
310								0660	0659
320									
330									
340									
350									
360									
370									
380									
390									
SCAT	51.0	56.9	69.7	64.5	66.0	63.9	64.4	67.2	59.9
HMIN	108	105	106	108	107	108	108	107	111
HMAX	259	262	290	273	292	292	293	300	295
SHMAX	0465	0544	0719	0606	0719	0735	0726	0757	0678

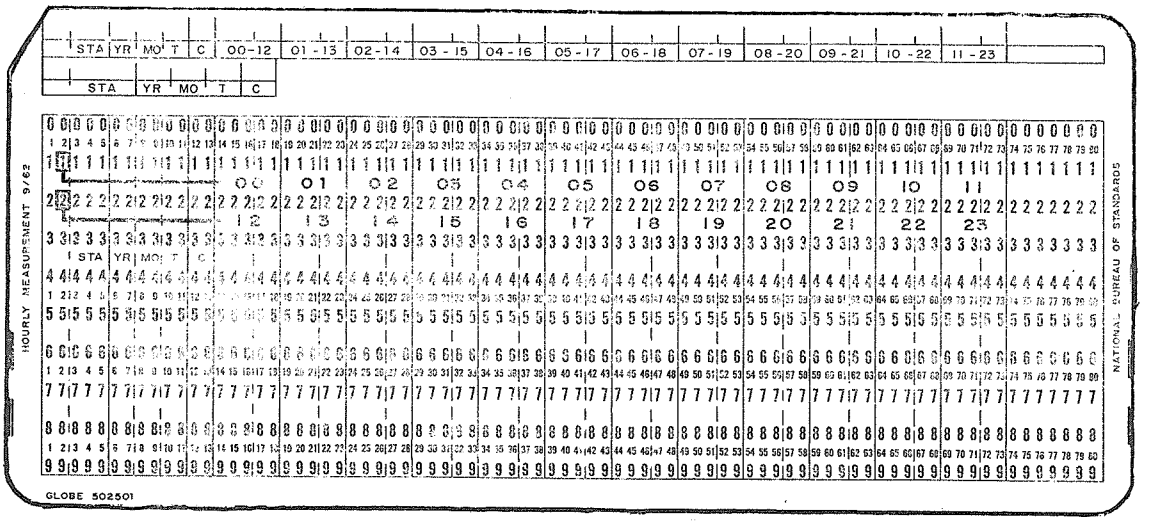
THE SCALE HEIGHT (SCAT), MINIMUM HEIGHT (HMIN), MAXIMUM HEIGHT (HMAX) ARE IN KM.
THE INTEGRAL TO THE MAXIMUM HEIGHT (SHMAX) IS IN 1.0E010. EL/CM2.

7. Numerical Data on Punch Cards and Magnetic Tape

Many of the hourly value and median data have been transcribed to punched cards or computer magnetic tapes. Where practical, the formats have been those recommended by URSI.

(A) Punch Card Format. A very detailed explanation of the URSI-recommended format is given on Pages 164 to 171 of Report UAG-23. The information below is an abridged version to illustrate the general scheme:

CARD COLUMN	DESCRIPTION	REMARKS
1	Card type	one punch - hourly values two punch - monthly summary values
2	Hour identification	one punch - hours 00 thru 11 two punch - hours 12 thru 23
3 - 5	Station code	See computer code in Station Listing, Section III
6 - 11	Date code	6 - 7 - year 8 - 9 - month 10 - 11 - for hourly measurements: Day for monthly summary: 40 = median 50 = median count 60 = upper quartile 70 = lower quartile 80 = quartile range 77 = upper decile 87 = lower decile
12 - 13	Characteristic code	See table on page 31.
14 - 73	Measurement or monthly summary for hour	Divided into five columns per hour First three columns - value fourth column - qualifying symbol fifth column - descriptive symbol
74 - 80	blank	



Codes of Characteristics, Card Columns 12 and 13
Characteristics normally interchanged are marked with an asterisk (*).

CHARACTERISTIC CODES USED FOR IONOSPHERIC MEASUREMENTS											Jan. 1970
		FREQUENCIES			PARAMETERS		HEIGHTS				
CARD COL 13 / CARD COL 12 / LAYER		0	1	2	3	4	5	6	7	8	9
F2	0	00 foF2*	01 fxF2	02 fzF2	03 M(3000)F2*	04 h'F2*	05 hpF2	06 h'Ox	07 MUF(3000)F2	08 hc	09 qc
F1	1	10 foF1*	11 fxF1		13 M(3000)F1*	14 h'F1		16 h'F*	17 MUF(3000)F1		
E	2	20 foE*		22 foE2		24 h'E*		26 h'E2			
Es	3	30 foEs*	31 fxEs	32 fbEs*	33 fEs	34 h'Es*		36 Type Es*			
Other	4	40 foF1.5		42 fmin*	43 M(3000)F1.5	44 h'F1.5			47 fm2	48 hm	49 fm3
Spread F and Oblique	5	50 foI	51 fxI*	52 fmI	53 M(3000)I	54 h'I			57 dfS		
N(h)	6	60 fh'F2	61 fh'F		63 h'mF1	64 h1	65 h2	66 h3	67 h4	68 h5	69 H
T.E.C.	7	70 I(2000)	71 I	72 I(xxxx)							79 T

(B) Magnetic Tape Format and Arrangement. Much of the data on punched cards have been written as card images on magnetic tape available with the following specifications:

556 BPI (Bits-Per-Inch);	BCD (Binary-Coded-Decimal) mode;	Even Parity, 7 track
800 BPI	BCD	Even Parity, 7 track
800 BPI	EBCDIC or ASCII	Odd Parity, 9 track
1600 (phase encoded)	EBCDIC or ASCII	Odd Parity, 9 track

In other cases the data remain on punched cards. Our Center should be contacted directly as to the availability of the actual data in magnetic tape format. The cost of obtaining these data from magnetic tape will vary considerably depending upon whether information is requested by all stations for a given time period or by specific station. These data on magnetic tapes can be made available on computer printouts.

Our ionospheric data tapes are sorted first by year, then by station, month, characteristic, and then by day and hour. One file on a tape contains one station-year's data. Each physical record contains one characteristic for one month and one station with the medians for that characteristic at the end of the record. Within each physical record there are 72 card images. The first 62 contain the hourly value data for that station-month characteristic. The last 10 contain the medians and related information for that station-month characteristic.

The diagram below illustrates how the data are blocked on the magnetic tape.

```
Beginning of tape

                                Station = A
  One                           Month   = January
  record*                       Characteristic code = 00 (foF2)
                    - End of record (EOR)

                                Station = A
                                Month   = January
                                Characteristic code = 01 (fxF2)
                    - EOR

One                             through Station = A,
year's                                  Month   = January
data                                    Characteristic code = 57 (dfS)
                    - EOR

                                Station = A
                                Month   = February
                                Characteristic code = 00 (foF2)
                    - EOR

                                through Station = A
                                        Month   = December
                                        Characteristic code = 57 (dfS)
                    - EOR


                                Next Station = B,
                                     followed by Station = C, etc.,
                                     through the last station for
                                     this year.  Normally 40 stations
                                     can be packed on one magnetic tape.

End of file.
```

* First part of each record contains hourly data, last part of record contains the medians for this station month and characteristic.

VI. Catalog Listing of Principal Data Types

This Section is the major catalog list. Some special data holdings are listed in Section VII.

The data types included in this Section are:

- Ionograms
- f-plots (on paper and microform)
- One-sheet-per-day of all Hourly Characteristics (on paper and microform)
- Table of daily/hourly values and median by characteristic (on paper and microform)
- Hourly-values and medians on punched cards
- Hourly-values and medians on magnetic tape
- Number of characteristics scaled
- Hourly composite profiles

The catalog is given in station blocks, ordered alphabetically by "catalog" station name (see Section III for alternate names and other information). The heading information includes (from left to right): geographic north latitude and east longitude; two-letter station code such as used to identify ionograms; alphanumeric computer identification code for the station; range of ionosonde probing frequencies in MHz.

Each block gives the available data by year and month, with symbols to indicate format, location of data, etc. The order is as follows:

1. Year.

2. Ionograms held listed under abbreviation for month (J = January, F = February, M = March ... , D = December). Letter symbols as given below.

3. f-plots held listed under abbreviation of month. "X" in MICRO column indicates data on microfilm and/or microfiche.

4. One sheet per day of all hourly characteristic tables listed under abbreviation of month. "X" in the MICRO column indicates data on microfilm and/or microfiche.

5. Tables of daily/hourly values and medians by characteristic (one to four sheets per characteristic scaled) listed under abbreviation of month. "X" in the MICRO column indicates data are on microfilm and/or microfiche, in the HR. VALUES column signifies hourly values on punched cards, in the MEDIANS column signifies monthly medians exist on punched cards, and in the MAG.TAPE column signifies that the hourly values and monthly median data are on magnetic tape. The number in the NO. CHAR. column represents the number of characteristics interpreted and reduced on the last data received from the station.

6. Hourly composites profiles held at WDC-A are listed under the abbreviation of that month.

The letter symbols used in the body of this Section of the catalog signify:

A = Complete month of data held.
B = Partial month of data held.
M = Only monthly medians held.
N = Not available at Data Center and/or no observations made.
Q = Not held at our Data Center but known to exist.
WDC-A will attempt to obtain these data from station upon request.
P = Ionograms for Priority Regular World Days only.
R = Ionograms traced but N(h) profiles not computed.
S = Station closed -- see Master Station List (UAG-38) for date of closure or List 5 in Section III.
U = Known to be unreliable.
W = Data only archived for Regular World Days and/or Special World Intervals (see Section IX).

There are a few footnotes at the end of certain stations which are self-explanatory indicating paired or grouped stations and the like.

ADAK (AD 651)

51.90 183.40 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1945																											
1946			AAA	AAA											AAA	AAA	AAA	AAA					12				
1947	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					12				
1948	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					12				
1949	ANN	NAA	AAA	AAA											ANN	NAA	NNN	AAA					12				
1950	AAA	AAA	AAA	BBB											AAA	AAA	AAA	AAA					12				
1951	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA		X			12				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					13				
1956	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					10				
1957	AAA	AAA	AAA	AAA			BAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AUU	UAA	AAA	AAA	AUU	UAA	X	AAA	AAA	AUU	UAA		AAA	AAA	AUU	UAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13		A	AAA	AAA
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13		AAA	AAA	AAA
1964	AAA	AAA	AAA	AAA	AAA	AAB	AAA	AAA	X	AAA	AAB	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13		AAA	AAA	AAA
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13		ARR	RRA	ARR
1966	S				S					S					S												

AHMEDABAD (AH 223)

23.00 72.60 — 0.6-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1955															AAA	AAA	AAA	AAA					9				
1956															AAA	AAA	AAA	AAA					9				
1957							WWW	WWW	X						AAA	AA	AAA	AAA	X		X		9				
1958					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	NAA	X		X	X	8				
1959					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		10				
1960															AAA	AAA	AAA	AAA	X		X	X	10				
1961					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		10				
1962					WW				X						AAA	AAA	AAA	AAA	X		X	X	9				
1963															AAA	AAA	AAA	AAA	X		X		9				
1964															AAA	AAA	AAA	AAA	X		X		9				
1965															AAA	AAA	AAA	AAA	X		X		9				
1966															AAA	AAA	AAA	AAA	X		X		9				
1967															AAA	AAA	AAA	AAA	X		X		9				
1968															AAA	AAA	AAA	AAA	X		X		9				
1969															AAA	AAA	AAA	AAA	X		X		9				
1970															AAA	AAA	AAA	AAA	X		X	X	9				
1971															AAA	BAA	AAA	AAA	X		X	X	9				
1972															AAA	AAA	AAA	AAA	X		X	X	9				
1973															AAA	NAA	AAA	AAA			X		9				
1974															AAA	AAA	AAA	AAA					9				
1975															B	A							9				

AKITA (AK 539)

39.70 140.10 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1949																		A			X		11				
1950															AAA	AAA	AAA	AAA			X		11				
1951															AAA	AAA	AAA	AAA					11				
1952															AAA	AAA	AAA	AAA					11				
1953															AAA	AAA	AAA	AAA					11				
1954															AAA	AAA	AAA	AAA					11				
1955															AAA	AA	A	AAA					4				
1956															AAA	AAA	AAA	AAA					3				
1957			WWW	WWW			AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1958	WWW	PWW	WPP	WWP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1959	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1960	WPP	WWW	WWW	WWW	ANN	NNA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1961	WWW	WWW	WWW	WWP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1962	WWW	WWW	WWW	WWB	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1963	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1966	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1967	PPP	PP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1968	P				AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1969	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1970	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X	12				
1971	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X	12				
1972	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1973	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
AKITA (Continued)																											
1974					AAA	AAA									AAA	AAA	AAA	AAA					14				
1975															AAA								14				

ALERT
(AL J82)

82.60 297.40 — 1.6-20.0MHZ

1957			WW	WWW			AA	AAA	X								AA	AAA	X				8				
1958	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X				8				

ALMA ATA
(AA 343)

43.20 76.90 — 1.0-18.0MHZ

1945															M	MMM	M	MM					6				
1946															MMM	MMM	MMM	M					7				
1956																M							8				
1957			WWW	WWW											M M	MMM	AAA	AAA	X		X		12				
1958	WWW	WWW	MWW	WWW	AAA	AAA	AAW	WW							AAA	AAA	AAA	AA	X		X	X	14				
1959	WWW	WWW	MWM	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X	14				
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1961	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1962	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1963	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1966	WW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1967	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1968	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1969	WWW	WWW	WWW	WWW	AAA	A	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1970	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1971	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1972	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1973	WWW	WW	WW	WWW	AAA	AAA	AAA	MAA	X						AAA	AAA	AAA	MAA	X		X		14				
1974	WW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X				14				
1975															AA				X				14				

ANCHORAGE
(AN 761)

61.20 210.10 — 0.25-20.0MHZ

1949		AAA	AAA	AAA												AAA	AAA	AAA		X			12				
1950	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1951	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1956	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					8				
1957	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	11				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	11				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	11				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	11				
1961	AAA	AAA	ABA	AAA	AAA	AAA	ABA	AAA		AAA	AAA	ABA	AAA		AAA	AAA	ABA	AAA	X	X	X	X	11				
1962	AAA	AUU	UAA	AAA	AAA	AUU	UAA	AAA		AAA	AUU	UAA	AAA		AAA	AUU	UAA	AAA	X	X	X	X	11			A	AAA
1963	AAA	AAA	AAA	AA	AAA	AAA	AAA	BAA		AAA	AAA	AAA	BAA		AAA	AAA	AAA	AA	X	X	X		11	AAA	AA	AAA	
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	11	RRA	RAR	RRR	RRR
1965	AAA	AAA	AAA	AAB	AAA	AAA	AAA	AAB		AAA	AAA	AAA	AAN		AAA	AAA	AAA	AAB	X	X	X	X	11	RR			
1966	S				S					S					S												

ARCTICA (NP-6)
(XG)

82.40 9.50 — 1.0-14.0MHZ

1957			WWW	WWW			WAA	AAA	X								BAA	AAA	X				12				
1958	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X				12				
1959	WWW	WWW	W	S	AAA	AAA	AA	S	X						AAA	AAA	AAB	S	X				12				

DRIFTING STATION

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
ARCTICA (NP-7) (XH)																											
86.40 296.60																								1.0-14.0MHZ			
1957			WWW	WWW			AAA	AAB	X								AAA	AAB	X				12				
1958	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAB	X						AAA	AAA	AAA	AAB	X				12				
1959	WWW	S			AAA	S			X						AAA	S			X				12				
DRIFTING STATION																											
ARCTICA (NP-8) (XI)																											
80.00 165.00																								1.0-14.0MHZ			
1960		W	WWW	WWW		B	AAA	AAA	X							B	AAA	AAA	X				7				
1961	WWW	WWW	NWW	WS	AAA	ABA	NAA	AS	X						AAA	ABA	NAA	AS	X				7				
DRIFTING STATION																											
ARCTICA (NP-10) (XJ)																											
78.00 165.00																								1.0-14.0MHZ			
1962				W				A	X									A	X				12				
1963	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1964	WWW	WS			AAA	BS			X						AAA	BS			X		X		12				
DRIFTING STATION																											
ARCTICA (NP-11) (XK)																											
79.00 165.00																								1.0-14.0MHZ			
1962			WWW	WS			AAA	AS	X								AAA	AS	X				12				
DRIFTING STATION																											
ARCTICA (NP-13) (XL)																											
81.00 165.00																								1.0-14.0MHZ			
1964			WWW	WWW			AAA	AAA	X								AAA	AAA	X		X		12				
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1966	WNW	WWW	WWW	S	BNA	AAA	AAB	S	X						BNA	AAA	AAA	S	X		X		12				
DRIFTING STATION																											
ARCTICA (NP-16) (XM)																											
78.00 176.48																								1.0-14.0MHZ			
1968						B	AAA	AAA	X							A	AAA	AAA					13				
1969					AAA	ABA	AAA	ABB							AAA	ABA	AAA	ABA					13				
DRIFTING STATION																											
ARCTICA (NP-19) (XP)																											
78.00 150.00																								0.8-13.0MHZ			
1970		W	WWW	W		A	AAA		X							A	AAA		X				13				
1971	WWW	WNW	WWW	W	AAA	AAA	AAA	AA	X						AAA	AAA	AAA	AA	X				13				
1972				S	A	AAA		S	X						A	AA		S	X				13				
DRIFTING STATION																											
ARECIBO (AR J19)																											
18.50 293.17																								0.5-20.0MHZ			
1966	BB	BBB	BBB	BBB																							
1967	BBB	BBB	BBB	BBB																							
1968	BBB	BBB	BBB	BBB																							
1969	BBB	BBB	BBB	BBB																							
1970	B	BB	BBB	BB																							
1973					BAA	AAA	AAA	AAB							BAA	AAA	AAA	AAB				X	3				

For symbols see page 33

ARGENTINE IS (AI J6M)

-65.20 295.70 — 0.67-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1948															AAA	AAA	A	ANA					1				
1952															A	AAA	AAA	AAA					4				
1953															AAA	AAA	AAA	AAA					4				
1954															AAA	AAA	AAA	AAA					4				
1955															AAA	AAA	AAA	AAA					4				
1956															ANN	AAA	AAA	AAA					4				
1957			WWW	WWW			AAA	AAA	X						AAN	AAA	AAA	AAA	X				6				
1958	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X				6				
1959	WW				A				X						AAA	AAA	AAA	AAA	X				6				
1960															AAA	BAA	AAA	AAA	X	X			6				
1961															AAA	AAA	AAA	AAA	X	X	X		6				
1962															NAA	AAA	AAA	AAA	X	X	X		6				
1963															AAA	AAA	AAA	AAA	X	X			6				
1964															AAA	AAB	AAA	AAA	X	X			6				
1965		A	A												AAA	AAA	AAA	AAA	X	X			13				
1966															AAA	AAA	AAA	AAA	X	X			13				
1967															AAA	BAA	AAA	AAA	X	X	X		13				
1968															AAA	AAA	AAA	AAA	X	X	X		12				
1969															AAA	AAA	AAA	AAA	X	X	X		13				
1970															AAA	AAA	AAA	AAA	X	X	X		13				
1971					AAA	AAA	AA								AAA	AAA	AAA	AAA		X			14				
1972															AAA	AAA	AAA	AAA		X			14				
1973															AAA	AAA	AA	AAA					14				
1974															AA								14				
1975															MMM								3				

ARKHANGELSK (AZ 163)

64.60 40.50

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1969	QQQ	QQQ	QQQ	QQW	QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ										
1970	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ										
1971	QQQ	QQC	QQQ	QQW	QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ										
1972	WWQ	WQQ		QQ	QQQ	QQQ		QQ							QQQ	QQQ		QQ										
1973	QQQ	Q			QQQ	Q									QCC	Q												

ASHKHABAD (AS 237)

37.90 58.30 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1956																M							8				
1957			WWW	WWW			WWW	WWW	X						MMM	M	AAA	AAA	X		X	X	13				
1958	WWW	WWW	WWW	WWW	WWA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1959	W	W	W W	W	AAA	AAA		A	X						AAA	AAA		A	X		X	X	14				
1960	WWW	WWW	WWW	WWW	AAA	BAA	AAA	AAA	X						AAA	AAA	A	AAA	X		X	X	14				
1961	WWW	WWW	WWW	WWW	AAA	AAA	BAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1962	WWW	WWW	WWW	WWW	ABA	AAA	AAA	ABA	X						ABA	AAA	AAA	AAA	X		X	X	14				
1963	WWW	WWW	NNN	WWW	AAA	AAA	NNN	AAA	X						AAA	AAA	NNN	AAA	X		X		14				
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1965	WWW	WWW	WWW	WWW	AAA	ABA	BAA	AAA	X						AAA	ABA	BAA	AAA	X		X	X	14				
1966	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1967	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1968	MWW	WWW	WWW	WWW	BAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1969	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1970	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1971	WWW	WWW	WWW	WWW	AAA	AAN	NNN	AAA	X						AAA	AAN	NNN	AAA	X		X		14				
1972	WWW	WWW	WW	WWW		AAA	AAA	AAA	X						MM	AAA	AAA	AAA	X		X		14				
1973		W	WWW	WW		AA	AAA	AAA	X						AAA	MAA	AAA	AAA	X				14				

ATHENS (AT 138)

38.00 23.60 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1960																		AA	X				16				
1961															AAA	AAA	AAA	AAA	X			X	16				
1962															AAA	AAA	AAA	AAA	X		X	X	16				
1963															AA		AAA	AAA	X			X	16				
1964					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				16				
1965						W										A							16				
1966															BA	AAA	BAA						4				
1967																AAA	BA	BB					3				
1968																	AA						16				
1969																												
1970															AAA	AAA	AAA	AAA		X			16				
1971																												

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
ATHENS (Continued)																											
1972																											
1973					WWW	WWW									AAA	AAA					X		16				

AUCKLAND
(AU 63P)

-37.00 175.00 — 0.75-25.0MHZ

1967															AAA	AAA	AAA	AAA	X		X		14				
1968															AAA	AAA	AAE	AAA	X		X		3				
1969															AAA	AAA	AAA	BAA	X		X		3				
1970															ABA	AAA	AAA	AAB	X		X	X	4				
1971															BAA	AAA	AAA	AAA	X		X	X	4				
1972															AAA	AAA	AAA	AAA	X		X		4				
1973															BAA	AAA	AAA	AAA			X		4				
1974															AAA	AAA	AAA						4				

BADDOW
(01 061)

51.70 .50

1940																					X		1				
1941																					X		1				
1942															MMM	MMM	MMM	MMM			X		6				
1943															MMM	MMM	MMM	MMM			X		6				
1944															AAA	AAA	AAA	AAA			X		7				
1945															AAA	AAA	AAA	AAA			X		8				
1946															AA	A					X		4				

CLOSED IN 1946

BAGNEUX
(55 039)

48.80 2.30 — 1.5-16.0MHZ

1947															A	AAN	AAA	AAA					10				
1948															AAA	AAA	AAA	AAA					10				
1949																AA	AAA	AAA					10				
1950															S												

REPLACED BY DOMONT

BAGUIO
(BF 416)

16.40 120.60 — 1.0-25.0MHZ

1952												AA	AAA	AAA		AA	AAA	AAA					13				
1953										AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					13				
1954										AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					13				
1955			B							AAA	AAA	AAA	AAA		AAA	AMA	AAA	AAA					13				
1956	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				11				
1957	AAA	AAA	AAA	AAA			A	AAA	AAA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X				13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				13				
1960	AAA	AAA	AAA	AAB	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				13				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				13				
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				13				
1964	S				S					S					S												

REPLACED BY MANILA

BAIE ST PAUL
(PL J48)

47.38 289.45 — 1.6-20.0MHZ

1961										BA																	
1962	ABS																										

BAKER LAKE
(BL 964)

64.30 264.00 — 1.0-20.0MHZ

1949				AA	AAA	AAA									AA	AAA	AAA	AAA	X				12				
1950	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					12				
1951	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					12				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
BAKER LAKE (Continued)																											
1952	A														AAA	AAA	AAA	AAA					12				
1953				A											AAA	AAA	AAA	AAA					10				
1954		A													AAA	AAA	AAA	AAA					10				
1955															AAA	AAA	AAA	AAA					10				
1956															AAA	AAA	AAA	AAA					10				
1957			AAA	AAA			AAA	AAA							AAA	AAA	AAA	AAA	X				10				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				10				
1959	W	S			AAS										AAS				X				10				
BANDOENG (02 400)																											
6.90 107.60																							1.0-16.0MHZ				
1943																BM	MMM	MMM					7				
1944															MMM	BNM	MMM	MB					5				
1945																	S										
BANGKOK (BK 314)																											
13.70 100.60																							1.0-25.0MHZ				
1963			BA	AAA			BA	X			BA	ABA				A	AAA	X			X		13				
1964	AAA	AAA	AAA	AAA	BAA	AAA	BBB	AAB	X	AAA	AAB	BAB	BAB		AAA	AAA	AAA	AAA	X		X		13				
1965	AAA	AAA	AAA	AAA	ABB	AAA	AAA	AAA		ABB	AAB	AAA	ABA		AAB	AAA	AAA	AAA	X		X		13				
1966	AAA	AAA	BAA	AAA	AAA	AAA	BBA	AMM		AAA	AAA	BBA	AMM		AAA	AAA	AAA	AAA	X		X		13				
1967	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X		X		13				
1968	ABB	AAA													ANB	AAA	AAA	AAA	X		X		13				
1969			AAA	AAA											AAA	AAA	AAA	AAA	X		X		13				
1970			B							MMM	AAA	AAA	AAA		BAA	AAA	AAA	AAA	X		X	X	13				
1971										AAA	AAA	BAA	AAA		A A	AAA	AAA	AAA			X		13				
1972										AAA	AAA	AAA	AAA		AAA	AAA	MA				X		13				
1973										AAA	AAA	AAA	AAA							X	X		13				
1974										AA	AAA	AAA	AAA										13				
1975										AAA													16				
BANGUI (BI 104)																											
4.60 18.60																							1.3-17.2MHZ				
1958															AA	AAA	AAA	AAA	X				12				
1959															AAA	AAA	AAA	AAA	X				12				
1960															AAB	BAB	S		X		X	X	12				
1964															BBB	BAA	BNN	AAB	X				12				
1965															BBB	BBB	BBB	BBB	X			X	12				
1966				A											BBB	NNN	NNS		X			X	12				
BARBADOS (BS J13)																											
13.12 300.40																							0.25-20.0MHZ				
1957	B		B																								
1964				B																							
1965			B		B		B																				
1966	B																										
1967	W		S																								

INTERMITTENT OPERATION

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
BARROW (BW 771)																											
71.30 203.20																							0.25-20.0MHZ				
1949				A														A		X			12				
1950	AAA	AAA	AAA	AAA							AA	AAA	AAA		AAA	A A	AAA	AAA		X			12				
1951	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AA	AAA	AAA	AA		X			12				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AA	AAA	AAA	AAA		X			12				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	A A	AAA	AAA					12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1956	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1957	AAA	AAA	BAB	AAB	AAA	AAA	BAB	AAB	X	AAA	AAA	BAB	AAB		AAA	AAA	AAA	AAA	X	X	X	X	11				
1958	AAB	AAA	BBA	AAA	AAB	AAA	BBA	AAA	X	AAB	AAA	BBA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	11				
1959	AAA	AAA	AAB	AAA	AAA	AAA	AAB	AAA	X	AAA	AAA	AAB	AAA		AAA	AAA	AAA	AAA	X	X	X	X	11				
1960	AAA	AAA	AAA	AAA	AAA	AAA	ABA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	7				

For symbols see page 33

BARROW (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	7				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	7				
1963	AAA	AAA	AAB	NNA	AAA	AAA	AAA	NN	X	AAA	AAA	AAA	NN		AAA	AAA	AAA	NN	X	X	X		7				
1964	AAA	AAA	AAA	BAA	AAA	AAA	AAA	BAA	X	AAA	AAA	AAA	BAA		AAA	AAA	AAA	AAA	X	X	X	X	11				
1965	AAA	AAA	AAA	AAS	AAA	AAA	AAA	AAS	X	AAA	AAA	AAA	AAS		AAA	AAA	AAA	AAS	X	X	X	X	11				

BATAVIA
(03 439)

39.40 275.90 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1951	B		B	A	BBA	AAB							A	AAA				A	AA				AA				
1952	B	A	AAA	AAA	AAA					AAA	AAA	AAA	AAA		AAA	AAA	AAA	S		X			AA				

BATON ROUGE
(04 930)

30.50 268.80 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1943																	EAA	AAA					10				
1944															AAA	AAA	ABA	AAA					11				
1945															AAA	AAN	AAA	AAA					11				
1946															AAA	AAA	AAA	AAA					12				
1947															AAA	AAA	AAA	AAA					11				
1948															AAA	AAA	AAA	AAA					11				
1949															AAA	AAA	AAA	AAA					10				
1950	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					10				
1951	AAA	AAA	AAA	AAA									AAA	AAA	AAA	AAA	AAA	AAA		X			12				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1953	AAA	AAA	AAS							AAA	AAA	AAS					AS			X			8				

BAUDOUIN
(BB 17v)

-70.40 23.30 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1958																BAA	AAA	AAA	X		X	X	15				
1959															A				X		X		15				
1964																BAA	AAA	AAA			X	X	15				
1965						WW	WWW	WWW	WWW						AAA	AAA	AAA	AAA			X		14				
1966					W										AAA	AAA	AAA	AAA			X	X	14				
1967					S										S												

BELGRANO
(GE A7Q)

-77.90 321.40 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1958																	MM						4				
1963							AAA										AAA				X	X	13				
1964			AAA	AAA			AAA	BAA									AAA	AAA			X		13				
1965	AAA	AAA	AAA	AAA	BAA	AAA									AAA	AAA					X	X	13				
1966	B	AAA	B	A	ABB																						
1968				AB	AAA																						
1969	B																										

BEOGRAD
(BE 145)

44.80 20.50 — 1.5-17.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1962																A	AA		A	X			1				
1963															AAA	AAA	AAA	AAA	X				1				
1964															AAA	AAA	AAA	AAA	X				2				
1965															AAA	AAA	AAA	AAA	X				2				
1966															NAA	AAA	AAA	AAA	X				2				
1967															AAA	AAA	AAA	AAA	X				2				
1968															AAA	AAA	AAA	AAA	X				2				
1969															AAA	AAA	AAA	AAA					2				
1970															AAA	AAA	AAA	AAA					2				
1971															AAA	ANA	AAA	AAA					2				
1972															AAA	AAA	AAA	AAA					2				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND

BILLERICA
(BO J43)

42.60 288.70 — 1.7-14.0MHZ

1965																		AA					14				
1966															AAA	AAA	AAA	ANN					14				
1967															NBA	AAA	AAA	AAA					14				
1968															AAA	AAA	AAA	AAA					14				
1969															AAA	AAA	AAA	AAA				X	14				
1970															AAA	AAA	AAA	S				X	14				

REPLACED BOSTON. REPLACED BY MAYNARD

BOGOTA
(BG J05)

4.50 285.80 — 0.25-20.0MHZ

1957			BAA	BNN			BAA	BNN	X			BAA	BNN				AAA	ANN	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	A	A	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	BAA	AAA	AAA			B		X			B					B		X	X	X	X	13				
1961	AAB	AAN	BAA	NNN		N		NNN			N		NNN			N		NNN			X						
1962	NBA	AAA	ABB	AAA	N	B		AAA	X	N	B		AAA		N	B		AAA	X	X	X	X	13				
1963	AAA	AAA	AAA	AAA	AAA	AAA	BAA	AAA	X	AAA	AAA	BAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	10	A	A R		
1964	AAA	AAA	BAA	AAA	AAA	AAA	BAA	AAA	X	AAA	AAA	BAA	AAA		AA	AAA	BAA	AAA	X	X	X	X	10	AA	AAA	AAA	AAA
1965	AAA	AAA	BAA	AAA	AAA	AAA	BAA	AAA	X	AAA	AAA	BAA	AAA		AAA	AAA	BAA	AAA	X	X	X	X	10	AAA	AAA	AAA	AAA
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		10	RRR	RRR	RRR	RAR
1967	AAA	AAA	S		AAA	AAA	S			AAA	AAA	S			AAA	AAA	S		X	X	X		10	RRR	RRR		

REPLACED BY POPAYAN

BOMBAY
(BM 219)

19.00 72.80 — 2.5-20.0MHZ

1945																	A	AAA					9				
1946															MMM	MMM	MMM	MMM									
1947															AAA	AAA	AAA	AAA					3				
1948															AAA	AAA	AAA	AAA					3				
1949															AAA	AAA	AAA	AAA					3				
1950															AAA	AAA	AAA	AAA					3				
1951															AAA	AAA	AAA	AAA					3				
1952															AAA	AAA	AAA	AAA					3				
1953															AAA	AAA	AAA	AAA					3				
1954															AAA	AAA	AA	AAA					3				
1955															AAA	AAA	AAA	AAA					3				
1956															AAA	AAA	AAA	AAA					3				
1957							W								AAA	AA	AAA	ABE	X		X	X	3				
1958					WWW	WWW	WWW	WWW							AAA	AAA	BAA	AAA	X		X		4				
1959					WWW	WWW	WW	WWW							AAA	AAA	EBA	AAA	X		X		7				
1960															AAA	ABE	EBB	BBB	X		X		7				
1961															BBE	BBN	AAB	BBB	X		X		7				
1962															BBA	AAA	ABA	BAA	X		X		7				
1963															AAA	AAA	AAA	AAE	X		X		5				
1964															AAA	AAA	AAA	AAB	X		X		5				
1965															AAB	EBE	BAA	BBB	X		X		5				
1966															BAE	BAE	AAA	BAB	X		X		5				
1967															BBB	BBB	B		X		X		5				
1968															NBA	BAA	AAB	AAA	X		X		5				
1969															AAA	AAA	AAA	AAA	X		X		5				
1970															AAA	AAA	AAA	AAA	X		X		5				
1971															AAA	AAA	AAA	AAA	X		X		5				
1972															BAA	AAA	AAA	AAA	X				5				
1973															AAA	AAA	MMM	MMM					5				
1974															MMM	MMM	M M	M					5				

BOSTON
(56 J43)

42.60 288.70 — 0.79-14.0MHZ

1945			B												A	AAA	AAA	AAA					11				
1946															AAA	AAA	AAA	AAA					11				
1947															AAA	AAA	AAA	AAA					10				
1948															AAA	AAA	AAA	AAA					10				
1949								AA							AAA	AAA	AAA	AAA					10				
1950	A														AAA	AAA	AAA	AAA					10				
1951															AAA	AAA	S						10				

REPLACED BY BILLERICA IN 1965

For symbols see page 33

BOULDER (BC 840)

40.00 254.70 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	f-PLOTS MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS OND	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC OND	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	HOURLY COMPOSITE PROFILES AMJ	HOURLY COMPOSITE PROFILES JAS	HOURLY COMPOSITE PROFILES OND
1955			A	AA				A																		
1956								A	A																	
1957		A	A				AA	BBB																		
1958	AAA	AAA	AAA	ABA			AA	B	X			BB	BA					AA	X		X	X	X	13		
1959	AAA	AAA	AAB	AAA		A	A B	B B	X	AAA	AAB	BAB	AAB		AAA	AAA	AA	AAA	X		X	X	X	13		
1960	AAA	AAA	BAA	AAA	B	AA	AAB	A	X	BAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	X	13		
1961	AAA	AAA	AAA	BAA	AAA	AAB		B	X	AAA	AAB				AAA	AAA			X		X	X	X	7		
1962	AAA	AAA	AAB	AAB																					AAA	RRR RRR
1963	AAA	AAA	AAA	AAA		AA	AAA	AAA	X		AA	AAA	AAA			AA	AAA	AAA	X		X	X	X	13		A A
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	X	13	AAA	AAA AAA AAA
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	X	13	RRR	RRR RRA RRR
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X		13	RRR	RRR RRA AAA
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X		13	AAA	AAA AAA AAA
1968	AAA	AAA	AAA	AAA	AAA	A		AA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X		13	AAA	A
1969	AAA	AAA	AAA	AAA	AAA					AAA	BBB	BBB	BBB		AAA						X	X		13		
1970	AAA	AAA	AAA	AAA						BBB	BBB	AAA	AAA				AAA	AAA	X		X	X		18		
1971	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X		18		
1972	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X		18		
1973	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA			AA	AA		X		X	X		18		
1974	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA								X	X		17		
1975	AAA	AAA								AAA	AAA													9		

BRISBANE (BR 52P)

-27.50 152.90 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	f-PLOTS MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS OND	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC OND	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	HOURLY COMPOSITE PROFILES AMJ	HOURLY COMPOSITE PROFILES JAS	HOURLY COMPOSITE PROFILES OND
1943																	A	AAA	AAA					11		
1944															AAA	AAA	AAA	AAA						15		
1945															AAA	AAA	AAA	AAA						18		
1946															AAA	AAA	AAA	AAA						18		
1947															AAA	AAA	AAA	AAA						18		
1948															AAA	AAA	AAA	AAA						18		
1949															AAA	AAA	AAA	AAA						17		
1950															AAA	AAA	AAA	AAA						10		
1951															AAA	AAA	AAA	AAA						12		
1952															AAA	AAA	AAA	AAA						13		
1953															AAA	AAA	AAA	AAA						13		
1954															AAA	AAA	AAA	AAA						12		
1955															AAA	AAA	AAA	AAA						12		
1956															AAA	AAA	AAA	AAA						9		
1957							WWW	WWW							AAA	AAA	AAA	AAA	X					14		
1958					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X					13		
1959	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X					6		
1960	WWW	WWW	WWW	WWW											AAA	ABA	AAA	AAA	X					6		
1961															AAB	AAA	AAA	AAA	X			X		3		
1962				A											AAA	AAA	AAA	AAA	X			X		3		
1963	B		A												AAA	AAA	AAA	AAA	X			X		3		
1964															AAA	AAA	AAA	AAA	X			X		12		
1965															AAA	AAA	AAA	AAA	X			X		12		
1966				A											AAA	AAA	AAA	AAA	X			X		5		
1967															AAA	AAA	AAA	AAA	X			X		5		
1968															AAA	AAA	AAA	AAA	X			X		5		
1969															AAA	AAA	AAA	AAA				X		7		
1970															AAA	AAA	AAA	AAA				X		7		
1971															AAA	AAA	AAA	AAA				X		6		
1972															AAA	AAA	AAA	AAA				X		6		
1973	B														AAA	AAA	AAA	AAA				X		6		
1974															AAA	AAA	AAA	AAA						6		
1975															AAA									6		

BUDAPEST (BU 147)

46.57 21.17 — 0.5-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	f-PLOTS MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS OND	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC OND	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	HOURLY COMPOSITE PROFILES AMJ	HOURLY COMPOSITE PROFILES JAS	HOURLY COMPOSITE PROFILES OND
1956															AAA	AAA	AAA	AA						7		
1957															AAA	AAA	AAA	AAA	X					7		
1958															AAA	AAA	AAA	AAB	X			X		10		
1959															BAA	AAA	BAA	AAA	X			X		11		
1964					WWW	WWW	WNN	WWW	X						AAA	AAB	ANN	AAA	X			X		14		
1965					WWW	WWW	WWW	WWW	X						ABB	AAA	AAA	AAA	X			X		14		
1966					WWN	NWW	WWW	BWW	X						AAB	NAA	AAA	AAA	X			X		14		
1967					WWW	BWW	WNB	WWW	X						AAB	BAA	ANB	AAA	X			X	X	14		
1968					WWW	WBW	WWW	WWW	X						AAA	AAA	AAA	AAA	X			X	X	14		
1969					WNN	NNN	NNN	NNN	X						ABN	NNN	NNN	NNN	X			X	X	14		
1971					NNN	WBW	WNN	NNN							NNN	AAA	ANN	NNN				X	X	14		
1972					BWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA				X	X	14		
1973					WNW	WWW	WWW	WWW							ANA	AAA	AAA	AAA				X		14		
1974					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA				X		14		

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND						JFM	AMJ	JAS	OND
BUDAPEST (Continued)																											
1975					W										A								14				

BUENOS AIRES
(BA J3M)

-34.50 301.50 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	AMJ	JAS	OND	f-PLOTS JFM	AMJ	JAS	OND	MICRO.	ONE SHEET PER DAY JFM	AMJ	JAS	OND	MICRO.	TABLES JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1950															AA	AAA	AAA	AAA					9				
1951															AAA	AAA	AAA	AAA					8				
1952															AAA	BBB	AAA	AAA					8				
1953															AAA	AAA	AAA	AAA					9				
1954															AAA	AAA	AAA	AAA					9				
1955															AAA	AAA	AAA	AAA					9				
1956															AAA	AAA	AAA	AAA					9				
1957								AA	X						AAA	ANN	NNN	NAA	X				12				
1958	AA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X				12				
1959	AAA	AAA	AAA	AAA	ABB	BBB	BBB	BBB	X						A A	AAA	AAA	AAA	X				12				
1960	AAA	AAA	AAA	AAA		AA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1963	ABA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	BAA	AAA	X		X		12				
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	A	X						AAA	AAA	AAA	AAA	X		X		12				
1965	BAA	AAA	AAA	AAA	BAA	BBA	AAA	AAA	X						BAA	AAA	AAA	AAA	X		X		12				
1966	AAA	AAA	AAA	AAA	AAA	BAA	BAA	AAA							AAA	BAA	AAA	AAA	X		X		12				
1967	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X		X	X	13				
1968	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X		X	X	13				
1969	AAA	ABA	AAA	AAA											AAA	AAA			X		X	X	13				
1970	AAA	AAA	AAA	AAA																							
1971	AAA	AAA	AAA	AAA																							
1972	AAA	AAA	AAA	AAA																							
1973															AAA	AAA	AAA	AAA			X		14				
1974															A								14				

BUNIA
(BN 102)

1.50 30.20 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	AMJ	JAS	OND	f-PLOTS JFM	AMJ	JAS	OND	MICRO.	ONE SHEET PER DAY JFM	AMJ	JAS	OND	MICRO.	TABLES JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957	BB																	AAA	X				15				
1958															AAA	AAA	AAA	AAA	X				20				
1959															AAA	AAA	BAA	AAA	X				20				
1960															AAA	ABB	ABA	BAS	X				20				

BURGHEAD
(06 063)

57.70 356.30 1.0-13.0MHZ

YEAR	IONOGRAMS JFM	AMJ	JAS	OND	f-PLOTS JFM	AMJ	JAS	OND	MICRO.	ONE SHEET PER DAY JFM	AMJ	JAS	OND	MICRO.	TABLES JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1941															BAB	BNB	BNB	BNA	X				6				
1942															AAA	AAB	AAA	AAA	X				6				
1943															AAA	AAA	AAA	AAA	X				6				
1944															AAA	AAA	AAA	AAA	X				6				
1945															AAA	AAA	AAA	AAA	X				6				
1946															AAA	AAA	AAA	AAA	X				1				
1947															S												

BYRD STATION
(BD 88v)

-80.00 240.00 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	AMJ	JAS	OND	f-PLOTS JFM	AMJ	JAS	OND	MICRO.	ONE SHEET PER DAY JFM	AMJ	JAS	OND	MICRO.	TABLES JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957		AA	AAA	AAA			AAA	AAA	X			AAA	AAA				AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAB	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1962	BNN	AAA	AAA	AAA	BNN	AAA	AAA	AAA	X	BNN	AAA	AAA	AAA		BNN	AAA	AAA	AAA	X	X	X	X	13				
1963	BAA	AAA	AAA	AAA	BAA	AAA	AAA	AAB	X	BAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1964	AAA	AAA	AAA	AAA	BBB	BBA	AAA	BAB	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1965	AAA	AAA	AAA	AAB	AAA	AAA	AAA	AAB	X	AAA	AAA	AAA	AAB		AAA	AAA	AAA	AAA	X	X	X		13				
1966	AAA	AAA	AAA	AAA	AA	AAA	AAA	A		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		7				
1967	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA					X	X		7				
1968	AAA	AAA	AAA	AAA		B				AAA	A		AAA										7				
1969	AAB	ABA	BBB	BBB						BAB	AA	B											7				
1970	AAA	AAA	AAA	ANA																							
1971	S				S					S					S												

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
CAIRO (05 130)																											
30.00 31.19																											
1945																		AA					4				
1946															AAA	AAA	AAS						4				
CALCUTTA (CU 322)																											
23.00 88.60																							1.0-25.0MHZ				
1944																	AAA	AAA					6				
1945															AAA	AAA	AAA	AAA					6				
1946															AAA	AAA	AAA	AAA					6				
1947															AAA	AAA	AAA	NAA					6				
1948															AAA	AAA	AAA	AAA					6				
1949															AAA	AAA	AAA	AAA					7				
1950															AAA	AAA	AAA	AAA					6				
1951															AAA	AAA	AAA	AAA					8				
1952															AAA	AAA	AAA	AAA					8				
1953															AAA	AAA	AAA	AAA					8				
1954															AAA	AAA	AA	AAA					6				
1955															AAA	AAA	AAA	AAA					9				
1957							WWW	WWW							ABA	AAA	AAA	AAA	X		X	X	9				
1958					WWW	WWW	WWW	WWW							AAA	BBB	BAS	AAA	X		X	X	9				
1959					WWW	NNN	NWW	WWW							AAA	NNN	NBB	BAA	X		X		9				
1960															AAB	S			X		X		9				
1964																BB	AAA	ABB	X		X		9				
1965															ABA	BBB	BBA	ABB	X		X		9				
1966															NAA	ABA	AAA	BAA	X		X		9				
1967															AAA	BAA	AAB	BBB	X		X		9				
1968															AAA	BAA	AAA	AAA	X		X		10				
1969															AAB	AAB	ABA	AAA	X		X	X	10				
1970															AAA	AAA	BAA	AAB	X		X	X	10				
1971															ABA	AAB	BAA	BAA	X		X		10				
1972															BAA	BBA	BAA	AAA	X				10				
1973															AAA	A							10				
1974																MM											
CAMPBELL IS (CI 65K)																											
-52.50 169.20																							1.0-25.0MHZ				
1944																AAA	AAA	AAA					9				
1945															ANN	NAA	AAA	AAA					12				
1946															AAA	AAA	NNN	NNN					10				
1947															NAA	AAA	AAA	AAA					12				
1948															AAA	AAA	AAA	AAA					12				
1949															AAA	AAA	AAA	AAA					13				
1950															AAA	AAA	AAA	AAA					13				
1951															AAA	AAA	AAA	AAA					16				
1952															AAA	AAA	AAA	AAA					16				
1953															AAA	AAA	AAA	AAA					15				
1954															AAA	AAA	AAA	AAA					15				
1955						WWW	WWW	WWW	WWW						AAA	AAA	AAA	AAA					14				
1956															AAA	AAA	AAA	AAA					14				
1957				B	AA	WWW	WWN	WWW	WWW	X					AAA	AAN	ABA	AAA	X				13				
1958	AWW	BWA	AAA	W	W	WWN	WWW	WWW	WWW	X					AAN	BAA	AAA	AAA	X				13				
1959	WW			W	WW	WWW	WWW	WWW	WWW	X					AAA	AAA	AAA	AAA	X		X		7				
1960						WWW	WWN	NWW	WWW	X					AAA	AAN	NAA	AAA	X		X	X	7				
1961						WWW	WWW	WWW	WWW	X					AAA	AAA	AAA	AAA	X		X	X	7				
1962			B		B	WWW	WWW	WWW	WWW	X					AAA	AAA	AAA	AAA	X		X	X	8				
1963						WWW	WWW	WWW	WWW	X					AAA	AAA	AAA	AAA	X		X		8				
1964						WWW	WWW	WWW	WWW						AAA	AAA	AAA	AAA	X		X		14				
1965						WWW	WWW	WWB	WWW						AAA	AAA	AAA	AAA	X		X		14				
1966															AAA	AAA	AAA	AAA	X		X		14				
1967															AAA	AAA	AAA	AAA	X		X		14				
1968															AAA	AAA	AAA	AAA	X		X		3				
1969															AAA	AAA	AAA	AAB			X		4				
1970															AAA	AAA	AAA	AAA			X	X	4				
1971															AAA	AAA	AAA	AAA			X	X	4				
1972															AAA	AAA	AAA	AAA			X		4				
1973															AAA	AAA	AAA	AAA			X		4				
1974															AAA	AAA	AAA						4				

For symbols see page 33

CANBERRA (CB 53N)

-35.30 149.00 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1937															A	AAA	AAA	AAA			X		6				
1938															AAA	AAA	AAA	AAA			X		6				
1939															AAA	AAA	AAA	AAA			X		6				
1940															AAA	AAA	AAA	AAA			X		6				
1941															AAA	AAA	AAA	AAA			X		10				
1942															AAA	AAA	AAA	AAA			X		10				
1943															AAA	AAA	AAA	AAA			X		10				
1944															AAA	AAA	AAA	AAA			X		13				
1945															AAA	AAA	AAA	AAA			X		11				
1946															AAA	NAA	AAA	NNA			X		12				
1947															AAA	AAA	AAA	AAA			X		15				
1948															AAA	AAA	AAA	AAA					15				
1949															AAA	AAA	AAA	AAA					15				
1950															AAA	AAA	AAA	AAA					9				
1951															AAA	AAA	AAA	AAA					11				
1952															ABA	NNN	AAA	AAA					11				
1953															AAA	AAA	AAA	AAA					11				
1954															AAA	AAA	AAA	AAA					10				
1955															AAA	AAA	AAA	AAA					10				
1956															AAA	AAA	AAA	NAA					9				
1957			WWW	WWW			WWW	WWW							AAA	AAA	AAA	AAA	X				13				
1958	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				13				
1959	WWW	WWW	WWW	WWW	WWW	WWW	W W	WWW							AAA	AAA	AAA	AAA	X				8				
1960		WW	WWW	WW											NNN	AAA	AAA	AAA	X		X	X	6				
1961															AAA	ANN	AAA	AAA	X		X		3				
1962															AAA	AAA	AAA	AAA	X		X		3				
1963															AAA	AAA	AAA	AAA	X		X		3				
1964	BB		B	B											AAA	AAA	AAA	AAA	X		X		11				
1965	BB		B												AAA	ABA	AAA	AAA	X		X		11				
1966		B	BB	B											AAA	AAA	AAA	AAA	X		X		5				
1967		BB	BBB												AAA	AAA	AAA	AAA	X		X		5				
1968	B	B		B											AAA	AAA	AAA	AAA	X		X		5				
1969			BB												AAA	AAA	AAA	AAA	X		X		7				
1970															AAA	AAA	AAA	AAA	X		X	X	7				
1971															AAA	AAA	AAA	AAA	X		X	X	7				
1972															AAA	AAA	AAA	AAA			X	X	7				
1973															AAA	AAA	AAA	AAA			X		6				
1974															AAA	AAA	AAA	AAA					6				
1975															AAA								6				

CAPE HALLETT (HT 67K)

-72.30 170.20 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957		AA	AAA	AAA			WWW	WWW	X								AAA	AAA	X				13				
1958	AAA	AAA	ABA	AAB	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				13				
1959					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		13				
1960					WWW	BWW	WWW	WBW	X						AAA	AAA	AAA	AAA	X		X		7				
1961					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	7				
1962					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	8				
1963					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		14				
1964					WWS										AAS				X		X		14				

CAPE KENNEDY (CC 929)

28.40 279.40 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1958	A	AAA	AAA	AAA	A	ABA	AAA	AAA	X	A	AAA	AAA	AAA		A	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	AAA	BAA	AAA	AAA	X	BS													13				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X														7				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAB	AAB	X														7				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X														7				
1963	BBA	AAA	AAA	AAA	BBA	AAA	AAA	AAA	X														7				
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	B	AAA	AAA	AAA							X	X		8	B	AAR	RRR	RRR
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA							X	X		8	AAA	AAA	AAA	AAA
1966	AAA	AAA	AAA	B	AAA	AAA	ABB	B	X	AAA	AAA	ABB	B							X	X		8	RRR	RRR	RRR	R
1967	B	BS																										

CAPE CANAVERAL RENAMED CAPE KENNEDY MARCH 1964

CAPE SCHMIDT (CE 669)

68.90 179.50 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1961	WWW	WWW	WWW	W W	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1962	W	WW			NAA	AAA	AAA	ANA	X						NAA	AAA	AAA	ANA	X		X		14				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND

CAPE SCHMIDT (Continued)

1963								AA	X									AA	X		X		14				
1964					AA				X						AA				X		X		14				
1968					A	A	AAA	AAA	X						A	A	AAA	AAA	X		X		14				
1969					AA	AAA	AAA	AAA	X						AA	AAA	AAA	AAA	X				14				
1970					AA				X						AA				X				14				

CAPETOWN
(CT 13M)

-34.10 18.30 1.0-15.0MHZ

1944															AAA	AAA	BBA	AAA			X		4				
1945															A A	AA	AAN	NAA					4				
1946															AA								4				
1948																	ANA	AAA					10				
1949															AAA	AAA	AAA	AAA					10				
1950															AAA	AAA	AAA	AAA					10				
1951															AAA	AAA	AAA	AAA					10				
1952															AAA	AAA	AAA	AAA					10				
1953															AAA	AAA	AAA	AAA					10				
1954															AAA	AAA	AAA	AAA					10				
1955															AAA	AAA	AAA	AAA					10				
1956															AAA	AAA	AAA	AAA					10				
1957								WWW	WWW	X							AAA	AAA	X				13				
1958					WWW	WWW	W W	WWW	X						AAA	AAB	ABA	AAA	X				13				
1959			BA	AAB	WWW	W		WW	WWW	X					AAA	BAA	AAA	AAA	X				13				
1960			BA	AAB											AAA	AAA	AAA	BAA	X				13				
1961			A	AA															X		X		13				
1962															AAA	A B	NNB		X		X		10				
1963															AAA	AAA	ABA	AAA	X		X		10				
1964					WWW	WWW	BNN	NNN	X						AAA	AAA	ANN	NNN	X		X		10				
1965								WWW	WWW	X																	
1967															BAA	ABA	ABN	AAA	X		X		8				
1968															AAA	AAA	ABA	BAA	X		X		13				
1969					WWW	W		WW	W						AAA	AAA	AAA	AAA			X	X	13				
1970					W										AAA	AAB	AAA	AAA			X	X	13				
1971															AAA	BAS					X	X	13				

REPLACED BY HERMANUS

CAPE YORK
(07 51J)

-11.00 142.40 1.0-13.0MHZ

1944																		A					18				
1945															AAA	AAA	AAA	AAA					20				
1946															AAN	NNN	NAA	AS					20				

CAPE ZEVGARI
(CV 135)

34.60 32.90 0.65-25.0MHZ

1964						AAA	AA		X					A	X		AAA	AAA	AAN	X		X		12				
1965					BAA	AAA		AAA	X	AAA	AAA		AAA	X	AAA	AAA		AAA	X		X		12				
1966					AAA	AAA	AAA	ANA	X	AAA	AAA	AAA	ANA	X	AAA	AAA	AAA	ANA	X		X		12				
1967					AAB	AAB	AB		X	AAB	AAB	AAA	AAA	X	AAA	AAA	AAA	AAA	X		X		12				
1968										A				X	A				X				12				
1970															AAA	AAA	AAA	AAA			X	X	12				
1971															ANA	AAA	AAA	AAA			X	X	12				
1972															AAA	AAA	AAA	A			X	X	13				

CASABLANCA
(CA 033)

33.60 352.40 1.6-16.0MHZ

1951																	A	AAA					9				
1952															AAA	AAA	ANN	AAA					9				
1953															AAA	AAA	AAA	AAA					9				
1954															AAA	AAA	AAA	AAA					9				
1955															AAA	AAA	ANA	AAA					10				
1956															AAA	AAA	AAA	AAA					10				
1957								WWW	WWW	X					AAA	AAA	AAB	AAA	X				12				
1958					WS					X					AS				X				12				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
CASEY (CW 460)																											
-66.28 110.53																								1.0-20.0MHZ			
1969															A	AAA	AAA	AAA			X	X	11				
1970															AAA	AAA	AAA	AAA			X	X	11				
1971															AAA	AAA	AAA	AAA			X	X	12				
1972															AAA	AAA	AAA	AAA			X		12				
1973															AAA	AAA	AAA	AAA					12				
1974															A								12				

REPLACED WILKES. CLOSED, DEC. 1975

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
CHICLAYO (CY 90P)																											
-6.80 280.20																								1.0-25.0MHZ			
1957			BAA	AAB			BAA	AAB	X			BAA	AAB				BAA	AAB	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	BS				BS				X	BS					BS				X	X	X		13				

REPLACED BY ILO

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
CHIMBOTE (CM 90R)																											
-9.10 281.40																								1.0-25.0MHZ			
1957			AAA	AAA			AAA	AAA	X			AAA	AAA				AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAS			AAA	AAS			X	AAA	AAS				AAA	AAS			X	X	X	X	13				

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
CHITA (CX 452)																											
52.00 113.50																								1.0-18.0MHZ			
1946															MMM	MMM	MMM						2				
1956																MM							7				
1957							W		X						M	MM	AAA	ABB	X		X	X	13				
1958															AAA	AAA	BAA	AAA	X		X	X	3				
1959					WWW	WWW	WWW	NWW	X						AAA	AAA	AAA	BAA	X		X	X	13				
1960					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	13				
1961					WWW	WWW	WWW	WWW	X						AAA	AAA	ABA	AAA	X		X	X	13				
1962					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	13				
1963					WNW	WS			X						BNA	AS			X		X	X	12				

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
CHRISTCHURCH (GH 64L)																											
-43.60 172.80																								1.0-22.0MHZ			
1939															MMM	MMM	MMM	MMM					6				
1940															MMM	MMM	MMM	MMM					6				
1941															MMM	MMM							6				
1942																	AA	AAA			X		8				
1943															AAA	ANN	AAA	AAA			X		8				
1944															AAA	AAA	AAA	AAA					10				
1945															AAA	AAA	AAA	AAA					12				
1946															AAA	AAA	AAA	AAA					12				
1947															AAA	AAA	AAA	AAA					12				
1948															AAA	AAA	AAA	AAA					12				
1949															AAA	AAA	AAA	AAA			X		12				
1950															AAA	AAA	AAA	AAA			X		12				
1951															AAA	AAA	AAA	AAA			X		14				
1952															AAA	AAA	AAA	AAA					14				
1953															AAA	AAA	AAA	AAA					14				
1954															AAA	AAA	AAA	AAA					13				
1955															AAA	ANN	NBA	AAA					13				
1956															AAA	AAA	AAA	AAB					13				
1957			WWW	WWW			WWW	WWW	X						AAB	ABA	AAA	AAA	X				14				
1958	WW	WWW	WWW	WWW	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				14				
1959	WWW	W W	WWW	WWW	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				13				
1960	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X			X	13				
1961					WWW	WWW	WWW	WWW	X						AAA	BAA	AAA	AAA	X		X		13				
1962			BAA	ABA	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		13				
1963	B	A			WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		14				
1964					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		14				
1965		A			WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		14				
1966					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		14				
1967					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		14				
1968					WWW	WWW	WWW	WWW							BBB	AAA	BBB	AAA	X		X		14				
1969															AAA	AAA	AAA	AAA	X		X		14				

For symbols see page 33

CHRISTCHURCH (Continued)

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1970									BAA AAA	BAA AAA	X		X	X	11		
1971									AAA AAA	AAA AAA	X		X	X	11		
1972									AAA AAA	AAA AAA	X		X		11		
1973									AAA AAA	AAA AAA			X		11		
1974									AAA AAA	AA					11		

CHRISTMAS IS
(08 701)

1.90 202.70 — 1.5-13.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1944										A					10		
1945		AAA AAA	AAA						AAA AAA	AAA AAA					11		
1946	A								AAA AAA	S					11		

CHUNGKING
(09 429)

29.40 106.30 — 1.7-20.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1945										AA AAA					4		
1946									AAA AAA	AAA AAA					11		
1947									AAA AAA	AAA AAA					12		
1948									AAA AAA	AAA AAA					12		
1949									AAA AAA	AAA AS					12		

CHURCHILL
(CH 958)

58.80 265.80 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1943										AA AAA			X		13		
1944									AAA AAA	AAA AAA			X		12		
1945									AAA AAA	AAA AAA			X		13		
1946									AAA AAA	AAA AAA			X		13		
1947									A A	A AAA			X		15		
1948									AAA AAA	AAA AAA			X		15		
1949									AAA	AAA AAA	X		X		13		
1950									AAA AAA	AAA AAA	X		X		14		
1951		A							AAA AAA	AAA AAA	X		X		14		
1952									AAA AAA	AAA AAA			X		13		
1953									AAA AAA	AAA AAA					11		
1954									AAA AAA	AAA AAA					11		
1955									AAA AAA	AAA AAA					11		
1956									AAA AAA	AAA AAA					9		
1957		AAA AAA	AAA AAA	AAA AAA					AAA AAA	AAA AAA	X				10		
1958	AAA AAA	AAA AAA	AAA AAA	AAA AAA					AAA AAA	AAA AAA	X				10		
1959	AAA AAA	AAA AAA	AAA ABA	AAA AAB					AAA AAA	AAA AAA	X				10		
1960	AAA AAA	AAA AAA	AAA AAA	AAA AAA					AAA AAA	AAA AAA	X		X		11		
1961	AAA AAA	AAA AAB	AAA AAA	AAA AAB					AAA AAA	AAA AAB	X		X		10		
1962	AAA AAA	ABA AAA	AAA AAA	ABA AAA					AAA AAA	ABA AAA	X		X		11		
1963	BAB AAA	AAA AAA	BAB AAA	AAA AAA					AAB AAA	AAA AAA	X		X		11		
1964	AAA AAA	AAA AAA	AAA AAA	AAA AAA					AAA AAA	AAA AAA	X		X		11		
1965	AAA AAA	AAA AAA	AAA AAA	AAA AAA					AAA AAA	AAA AAA	X		X		11		
1966	AAA AAA	AAA AAA	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X		11		
1967	AAA AAA	AAA AAA	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	11		
1968	AAA AAA	AAA AAA	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	11		
1969	AAA AAA	AAA AAA	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA			X	X	11		
1970	AAB AAA	AAA AAA	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA			X	X	12		
1971	AAA AAA	AAA ABA	AAA AAA	AAA ABA	X				AAA AAA	AAA AAA			X	X	12		
1972	AAA AAA	AAB BAA	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA			X	X	12		
1973	AAA AAA	AAA AAA	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA			X		12		
1974	AAA		AAA AAA	AAA AAA					AAA AAA	AAA AAA			X		12		
1975			AA						AAA				X		12		

CLYDE RIVER
(CR J70)

70.50 291.40 — 1.6-20.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1943										AAA					11		
1944									AAA AAA	AAA AAA					20		
1945									AAA AAA	AAA AA					18		
1946									AAA AAA	AAA AAA					10		
1947									AAA AAA	AAA AAA					10		
1948									AAA AAA	AAA AAA					10		
1949									AAA AAA	AA AAA					10		
1950									AAA AAA	A					12		
1957		WW WWA	WWW	AAA	X					AAA	X				8		

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
CLYDE RIVER (Continued)																											
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	A	X						AAA	AAA	AAA	A	X				8				

COCOA
(10 928)

28.20 279.40 — 1.0-25.0MHZ

1952	AAA	AAS								AAA	AAS									X			11				

COCOS IS
(CS 31K)

-12.20 96.80 — 1.6-20.0MHZ

1961																			BB	X			2				
1962				B											BBB	BAB	BAA	AAA	X		X		7				
1963															AAA	BNE	BAA	AAA	X		X		6				
1964															ANN	BAA	AAA	AAA	X		X		11				
1965															AAA	AAE	AAA	AAA	X		X		11				
1966				BA											AAA	AAA	AAA	ABA	X		X		5				
1967															AAB	AAA	AAA	AAA	X		X		5				
1968															AAA	AAA	AAA	AAA	X		X		5				
1969															AAA	AAA	AAA	AAA			X		7				
1970															AAA	AAA	AAA	AAA			X	X	7				
1971															AAA	AAA	AAA	AAA			X	X	7				
1972															AAA	AAA	AAB	BAA			X	X	7				
1973															AAA	AAA	AAA	AAA			X		6				
1974															AAA	AAA	AAA	S					6				

COLLEGE
(CO 764)

64.90 212.20 — 0.25-20.0MHZ

1941				AA	AAA												AAA	AAA		X			9				
1942	AAA	AAA	AAA		AA										AAA	AAA	AAA	AAA		X			18				
1943	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA		X			18				
1944	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA		X			18				
1945	AAA	AAA	AAA		AA										AAA	AAA	AAA	AAA		X			10				
1946	BAA	AAA		AA	AAA										AAA	AAA	AAA	AAA		X			9				
1947	AAA	AAA	AA		AAA										AAA	AAA	AAA	AAA		X			9				
1948	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA		X			9				
1949	AA	AAA	AAA	AAA											AAA	AAA	AAA	AAA		X			9				
1950		AA	AAA	AAA	AAA										AAA	AAA	AAA	AAA					9				
1951	AAA	AAA	AAA	AAA								AA	AAA	AUA	AAA	AAA	AUA	AAA		X			13				
1952	AAA	AAA	AAA	AAA								AAA	AAA	AAA	AAA	AAA	AAA	AAA		X			13				
1953	AAA	AAA	AAA	AAA								AAA	AAA	AAA	AAA	AAA	AA	AAA					13				
1954	AAA	AAA	AAA	AAA								AAA	AAA	AAA	AAA	A	A	AAA					13				
1955	AAA	AAA	AAA	AAA								AAA	AAA	AAA	AAA	AAA	AAA	AAA					13				
1956	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	AAA	AAA	AAA					8				
1957	AAA	AAA	AAA	AAA		AAA		AA	AAA	AAA	X		AAA	AAA	AAA		AAA	AAA	X	X	X	X	13				
1958	AAB	AAB	AAA	AAA		AAB	AAA	AAA	AAB	X		AAB	AAA	AAA	AAB	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA		AAA	AAA	ABB	AAA	X		AAA	AAA	ABB	AAA	AAA	AAA	AAA	X	X	X	X	11				
1960	AAA	AAA	AAA	AAB		AAA	AAB	AAA	AAA	X		AAA	AAB	AAA	AAA	AAA	AAA	AAA	X	X	X	X	7				
1961	AAA	AAA	AAA	AAA		AAA	AAA	ABA	AAA	X		AAA	AAA	ABA	AAA	AAA	AAA	AAA	X	X	X	X	7				
1962	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	X	X	X	13				
1963	AAA	AAA	AAA	ANA		AAA	AAA	BUU	UNA	X		AAA	AAA	BUU	UNA	AAA	AAA	B	NA	X	X		7				
1964	AAA	AAA	AAA	AAA		ABA	AAA	BAA	BAA	X		ABA	AAA	BAA	ABA	AAA	AAA	BAA	AAA	X	X	X	10				
1965	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	X	X	13				
1966	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	X		13				
1967	AAA	AAA	AAA	AAA		AAA	AAA	ABA	AAA			AAA	AAA	ABA	AAA	AAA	AAA	AAA	AAA	X	X		13				
1968	AAA	AAA	AAA	AAA								BBB	BBB	BBB	BBB								2				
1969	AAA	AAA	BNB	AAB								BBB	BBB	BNB	BBB								2				
1970	BBB	BAA	AAA	AAA								BBB	BBB	BBB	BBB								2				
1971	AAA	AAA	AAA	AAA								AAB	BAB	BBB	BBB								4				
1972	AAA	AAA	AAA	AAA								BBB	BBB	BBA	AAA								6				
1973	AAA	BAA	BBN	NBB								AAA	BAA	AAA	AAA								4				
1974	A	A	ABB	BAA	AAA							AAA	AAA	AAA	AAA								4				
1975	A											AAA	AA										4				

COLOMBO
(11 306)

6.90 79.87 — 2.0-16.0MHZ

1945																	A	AAA	AA				6				
1946																A	AAA						3				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND						JFM	AMJ	JAS	OND
CONCEPCION (CP J30)																											
-36.60 287.00																											0.25-20.0MHZ
1957				AAA				BAA	X				BAA					AA	X	X	X	X	13				
1958	BBA	AAN	BAA	AAA	BBA	AAA	AAA	ABA	X	BBA	AAA	AAA	ABA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAB	BBB	BBA	AAA	AAA	X	BBB	BAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	BAA	AAA	AAA	AAA	AAA	AAA	ABA	X	AAA	AAA	AAA	ABA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	BAA	BAB	BAA	AAA	X	BAA	BAB	BAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1962	AA			A	AA			B	X	AA			B		AA			B	X	X	X	X	11				
1963	AAA	AAA	AAA	AAA	AAB	ABA	ABB	AAA	X	AAB	ABA	ABB	AAA		AAA	AAA	AAA	AAA	X	X	X	X	10				
1964	AAA	AAA	AAB	BAA	AAA	AAB	AAB	BAA	X	AAA	AAB	AAB	BAA		AAA	AAA	AAA	BAA	X	X	X	X	10				
1965	AAA	ABN	AAA	AAA	BAA	ABN	BBA	BAA	X	BAA	ABN	BBA	BAA		AAA	AAN	AAA	AAA	X	X	X	X	10				
1966	AAA	AAB	AAA	AAA	ABA	ABB	AAA	AAA	X	ABA	ABB	AAA	AAA		AAA	AAB	AA	A	X	X	X		10				
1967	AAA	AAA	AAA	AAA		AAA	ABB	BBB			AAA	AAA	AAA					A		X	X		10				
1968										ABA	AAA	AAB	AAA							X	X		12				
1969					AAA	ABA	AAA	ABA		AAA	ABA	AAA	ABA		AAA			AA	X	X	X		15				
1970					AAA	AAB	AAA	AAA		AAA	AAB	AAA	AAA		AAA			AAA	X	X	X		13				
1971					AA	B		B		AA	B		B		AAA		A	AAA	X	X	X		16				
1972			B		AAA	AAA				AAA	AA				AAA				X	X	X		16				
CUBA (CD 923)																											
23.00 278.00																											1.0-18.0MHZ
1964			AA	AAA			AA	AAA	X								AA	AAA	X		X		4				
1965	AAA	AAA	AAN	AAA	AAA	AAA	AA		X						AAA	BAA	AB		X		X		11				
1966	AAA	ANA	AAA	AAB																							
1968	AAA	W W	AAA	WWW	AAA				X						AAA	ABA	AAA		X		X		12				
1969	W				AA										AA				X		X		12				
DAIREN (12 439)																											
39.00 121.60																											
1944																		M					1				
1945															MM								2				
DAKAR (DK A14)																											
14.70 342.58																											1.0-20.0MHZ
1949																AB	AAA	AAA					11				
1950															AAA	AAA	AAA	AAA					13				
1951															AAA	AAA	AAA	AAA					20				
1952															AAA	AAA	AAA	AAA					23				
1953															AAA	AAA	AAA	AAA					28				
1954															AAA	AAA	AAA	AAA					18				
1955															AAA	AAA	AAA	AAA					18				
1956															AAA	AAA	AAA	AAA					12				
1957							W	WW	X						AAA	AAA	AAA	AAA	X				12				
1958					WW				X						AAA	ABA	AAA	AAA	X				12				
1959															AAA	AAA	AAA	AAA	X				12				
1960															AAA	AAA	AAA	AAA	X		X		12				
1961		B	ABB	B											AAA	AAA	AAA	AAA	X		X	X	12				
1962															AAA	AAA	AAA	AAA	X		X	X	12				
1963															AAA	AAA	AAA	AAA	X		X		12				
1964															AAA	AAA	AAA	AAA	X		X		12				
1965		B	B												AAA	AAA	AAA	AAA	X		X		12				
1966				A											AAA	AAA	AAA	AAA	X		X	X	12				
1967															AAA	AAA	AAA	AAA	X		X	X	12				
1968															AAA	AAA	AAA	AAA	X		X	X	12				
1969															AAA	AAA	AAA	AAA			X	X	12				
1970															AAA	AAA	AAA	AAA			X		12				
1971															AAA	AAA	AAA	AAA			X		14				
1972															AAA	AAA	NAA	AAA			X		14				
1973															AAA	AAA	AAA	AAA			X		14				
1974															AAA	AAA							14				
DE BILT (DT 053)																											
52.10 5.20																											1.8-18.0MHZ
1949															AAA	AAA	AA	AAA					9				
1950															AAA	AAA	NAA	AAA					11				
1951															AAA	AAA	AAA	AAA					14				

For symbols see page 33

DE BILT (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1952															NAA	AAA	AAA	AAA					13				
1953															AAA	AAA	AAA	AAA					13				
1954															AAA	AAA	AAA	AAA					13				
1955															AAA	AAA	AAA	AAA					12				
1956															AAA	AAA	AAA	AAA					16				
1957							WWW	WWW							AAA	AAA	AAA	AAA	X				15				
1958					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				14				
1959															AAA	AAA	AAA	AAA	X		X		17				
1960															AAA	AAA	AAA	AAA	X		X		17				
1961															AAA	AAA	AAA	AAA	X		X		16				
1962															AAA	AAA	AAA	AAA	X		X	X	16				
1963															AAA	AAA	AAA	AAA	X		X		16				
1964					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		16				
1965					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		16				
1966					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		16				
1967															AAN	NNN	NNN	NAA	X		X		16				
1968							W								ABA	AAA	ABA	AAA	X		X		16				
1969															AAA	AAA	AAA	AAA	X		X		16				
1970															AAA	AAA	AAA	AAA	X		X	X	16				
1971															AAA	AAA	AAA	AAA	X		X	X	16				
1972															AAA	AAA	AAA	AAA			X		18				
1973															AAA	AAA	AAA	AAA			X		18				
1974															AAA	A							18				

DECEPCION
(DE J6L)

-63.00 299.30 1.3-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1951																	MMM	MMM										
1952															AA	AAA	AAA	AAA					6				
1953															AAA	AAA	AAA	AAA					4				
1954															AAA	AAA	AAA	AAA					7				
1955															AAA	AAA	AAA	AAN					7				
1956															NAA	AAA	AAA	AAA					7				
1957							AAA	A									AAA	AA	X				12				
1958					BBB	BBA	BAA	ABB							BBA	ABA	AAA	ABB	X				12				
1962																		B			X		13				
1963															AAA						X		13				

DELHI
(DH 328)

28.60 77.16 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1942																												
1943															MMM	MMM	MMM	MMM			X		1				
1944															AAA	AAA	AAA	AAA			X		1				
1945															AAA	AAB	BBA	AAA			X		10				
1946															AAA	AAA	AAA	AAA			X		9				
1947															AAA	AAA	AAA	AAA			X		3				
1948															AAA	AAA	AAA	AAA					3				
1949															AAA	AAA	AAA	AAA					3				
1950															AAA	AAA	AAA	AAA					3				
1951															AAA	AAA	AAA	AAA					3				
1952															AAA	AAA	AAA	AAA					3				
1953															AAA	AAA	AAA	AAA					3				
1954															AAA	AAA	AAA	AAA					3				
1955															AAA	AAA	AAA	AAA					4				
1956															AAA	AAA	AAA	AAA					3				
1957															AAA	AAA	AAA	AAA	X		X	X	3				
1958															AAA	AAA	AAA	AAA	X		X	X	7				
1959															AAA	AAA	AAA	AAA	X		X		7				
1960															AAA	AAA	BAB	AAA	X		X	X	7				
1961															AAA	AAA	AAA	AAA	X		X	X	7				
1962															AAA	AAA	AAA	AAA	X		X	X	7				
1963															AAA	AAA	AAA	AAA	X		X		11				
1964															ABB	BBA	AAB	ABA	X		X		12				
1965															AAA	AAA	AAA	AAA	X		X		12				
1966															AAA	AAA	AAA	AAA	X		X		12				
1967															AAA	BBA	AAA	AAB	X		X		12				
1968															AAA	AAB	AAA	AAA	X		X	X	12				
1969															AAA	AAA	ABB	AAA	X		X	X	12				
1970															AAA	AAA	BAA	AAB	X		X	X	12				
1971															AAA	ABA	AAA	AAA	X		X		12				
1972															AAA	BAA	AAB	BAA	X				12				
1973															AAA	AAA	MMM	MAA					12				
1974															MMA	AAA	MM		X				5				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND						JFM	AMJ	JAS	OND

DIXON
(DI 373)

73.50 80.40 — 1.0-10.0MHZ

1957			WWW	WWW			AAA	AAA	X								AAA	AAA	X		X	X	12				
1958		WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	BAA	AAA	X		X	X	13				
1959	WWW	WWW	WWW	WWW	ABA	AAA	NAA	AAA	X						ABA	AAA	NAA	AAA	X		X	X	13				
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	NBA	X						AAA	AAA	AAA	NBA	X		X		13				
1961	WWW	WWW	WWW	NNN	ABA	AAA	AAA	NNN	X						ABA	AAA	AAA	NNN	X		X		13				
1962	NNN	NNN	NNN	NNN	NNN	NNN	NNN	NNN							NNN	NNN	NNN	NNN									
1963	WWW	WWW	WWW	WWW	NAA	AAA	AAA	AAA	X						NAA	AAA	AAA	AAA	X		X		13				
1964	WWW	W W	WWW	NW	AAA	AAA	AAA	ANA	X						AAA	AAA	AAA	ANA	X		X		13				
1965	WWW	WW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		13				
1966	WWN	WWW	WWW	WWW	AAA	BBA	ABA	AAA	X						AAA	BBA	ABA	AAA	X		X		13				
1967	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		13				
1968	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		13				
1969	WWW	WWW	WWW	W	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		13				
1970	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		13				

DJIBOUTI
(DJ 111)

11.50 42.80 — 1.25-20.0MHZ

1951																		AAA					19				
1952															AAA	AAA	AAA	AAA					22				
1953															AAA	AAA	AAA	AAA					22				
1954															AAA	AAA	AAA	A A					9				
1955															AAA	A A	AAA	A A					9				
1956															AAA	AAA	AAA	A					12				
1957							WW	W	X						AAA	AAA	AAA	AAA	X				12				
1958															AAA	AAN	NNA	AAA	X				12				
1959															AAA	AAA	AAA	AAA	X				12				
1960															AAA	AAA	AAA	AAA	X		X		12				
1961															AAA	AAA	AAA	AAA	X		X	X	12				
1962															AAA	AAA	AAA	AAA	X		X	X	12				
1963															AAA	AAA	AAA	AAN	X		X		12				
1964															BAA	AAA	AAA	AAA	X		X		12				
1965		B	B												AAA	AAA	AAA	AAA	X		X	X	12				
1966				A											AAA	AAA	AAA	AAA	X		X	X	12				
1967															AAA	AAA	AAA	AAA	X		X	X	12				
1968															AAA	AAA	AAA	AAA			X	X	12				
1969															AAA	AAA	AAA	AAA			X	X	12				
1970															AAA	AAA	AAA	AAA			X		12				
1971															AAA	AAA	AAA	AAA			X		14				
1972															AAA	AAB	AAB	AAA			X		14				
1973															AAB	AAA	AAA	AAA			X		14				

DOMONT
(13 062)

49.00 2.30 — 1.5-16.0MHZ

1950																MMM	MMM	MMM					8				
1951															MMM	MMM	MMM	MMM					8				
1952															MMM	S							4				

REPLACED BAGNEUX

DOURBES
(DB 049)

50.10 4.60 — 1.0-20.0MHZ

1957																	AAA	AAA	X				15				
1958															AAA	AAA	AAA	AAA	X				16				
1959															AAA	AAA	AAA	AAA	X				16				
1960															AAA	BAA	AAA	AAA	X		X		16				
1961															AAA	AAA	AAA	AAA	X		X		16				
1962															AAA	AAA	AAA	AAA	X		X		16				
1963															AAA	AAA	AAA	AAA	X		X		16				
1964															AAA	AAA	AAA	AAA	X		X		16				
1965															AAA	AAA	AAA	AAA	X		X		16				
1966															AAA	AAA	AAA	AAA	X		X		16				
1967															AAA	AAA	ABA	AAA	X		X		15				
1968															AAA	AAA	AAA	AAA	X		X		15				
1969															AAA	BAA	AAA	AAA			X		15				
1970															AAA	AAA	AAA	AAA			X	X	16				
1971															AAA	AAA	AAA	AAA			X	X	16				
1972															AAA	AAA	AAA	AAA			X		16				
1973															AAA	AAE	AAA	AAA			X		16				
1974															AAA	AAA	AAA	AA					16				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND

DUSHANBE
(DS 238)

38.57 68.78 — 0.5-20.0MHZ

1971													B			X	MMM	MMM	MMM	MMM		X		8				

EGLIN AFB
(EG 930)

30.38 273.30 — 0.25-20.0MHZ

1964			B			B		BB																			
1965		B																									
1966		B																									
1967	B																										
1969	AS																										

INTERMITTENT OPERATION

EIGHTS
(EI 97N)

-75.23 282.84 — 0.5-12.0MHZ

1961								B								B						B					
1962										AB										A							
1964	AA																										
1965	BAA	AAA	AAA	AB		B	AAA	AAB	S													S					

ELIZABETHVILLE
(EZ 11J)

-11.60 27.50 — 1.0-20.0MHZ

1955																M	MMM	MMM	MMM					8			
1956																AAA	AAA	AAA	AAA					20			
1957																MMM	MMM	AAA	AAA	X				21			
1958																AAA	AAA	AAA	AAA	X				21			
1959																AAA	AAA	AAA	AAA	X							
1960																AAA	AAA	S		X							

ELLSWORTH
(EL A7P)

-77.72 318.90 — 1.0-25.0MHZ

1957				BA	BAA	AAA						BAA	AAA	X				BAA	AAA					AAA	AAA	X	X	X	X	13	
1958		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	X	X	X	13	
1959								A	NBA	AAA	AAA										AAA	NAA	AAA	AAA	X			X	13	
1960							AAA	AAA													AAA	AAA	AAA	AAA	X			X	13	
1961	AAA	AAA	AAA	AAA																	AAA	BAA	AAA	AAA	X			X	13	
1962	AAA	AAA	AAA	AAS						BAA	AAS										AAA	NNN	BAA	AAS				X		

ERIE
(ER 842)

40.01 254.70 — 1.5-20.0MHZ

1970			BB		BBB	BBB																					
1971		BB	BBB	BB		BBB																					
1972	BBB	BBB	BBB	BBB																							
1973	BB					BBB																					

INTERMITTENT OPERATION

EUREKA
(EU 980)

80.00 274.10 — 1.6-20.0MHZ

1957					AAA	AWW				B		AAA				B		AAA				B		AAA	X			8	
1958	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X					8	
1959							AS						AS						AS				X					4	

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND						JFM	AMJ	JAS	OND
FIJI (14 61Q)																											
-18.00 178.20 — UPPER LIMIT OF 13.0 MHZ																											
1946																AAA	AAA	AA					11				
1947															AAA	AAA	AAA	AAA					11				
1948															ANA	S							11				
FLETCHERS ICE (XC 982)																											
820.00 -0.00 — 1.0-25.0MHZ																											
1957			AAA	AAA			AAA	AAA	X			AAA	AAA				AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	S				S					S					S												
DRIFTING STATION																											
FORT ARCHAMBAULT (FA 109)																											
9.20 18.35 — 1.2-17.0MHZ																											
1969															BAB	NAA	AAA	AAA			X	X	12				
1970															AAA	AAA	AAA	AAA			X	X	13				
1971															AAA	AAA	AAA	AAA			X	X	14				
1972															AAA	ABA	BBA	AAB			X		14				
1973															BAA	AAA	AA						14				
1974															S												
FORT CHIMO (FC J58)																											
58.10 291.60 — 1.6-20.0MHZ																											
1949		BA	AAA	AAA												A	A	AAA	AAA	X			13				
1950	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X				13				
1951	AA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X				13				
1952															AAA	AAA	AAA	AAA					12				
1953															AAA	AAA	AAA	AAA					10				
1954															AAA	AAA							10				
1957			W	W	WWW																						
1958	WWA	AAA	AAA	AAA		A	AAA	BNB	BAB		A	AAB	NB	BAA				A	AA	X	X		8				
1959	S				S					S					S												
FORT MONMOUTH (FM J40)																											
40.40 285.90 — 1.0-25.0MHZ																											
1950				A																							
1951	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1952	AA	AAA	AAA	AAA						AA	BAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					13				
1956	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					10				
1957	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	12				
1958	AAA	AAA	AAA	AAA	BAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	12				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	12				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAB	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	NNB	AAA	AAA	AAA	NNB	AAA	X	AAA	AAA	NNB	AAA		AAA	AAA	NNN	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13	R	A	R	AAA AAA
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13	AAA	AAA	AAA	AAA
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13	AAA	AAA	AAA	AAA
1965	AAA	AAA	AAA	AAA	AAA	AAA	BAA	AAA	X	AAA	AAA	BAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13	AAR	RRA	ARA	RRR
1966	S				S					S					S												
FORT NORMAN (FN 864)																											
64.90 234.50 — 1.6 - 20.0 MHZ																											
1957			AW		W		A	A				A					A			X			8				
1958			AAA																								

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND

FRASERBURGH
(15 065)

57.60 357.90 — 0.67-15.0MHZ

1948																A	AAA	AAA	AAA				4				
1949																AAA	AAA	AAA	AAA				4				
1950																AAA	AAA	AAA	AAA				4				
1951																AAA	AAA	AAE	S				4				

REPLACED BY INVERNESS

FREIBURG
(FR 048)

48.10 7.60 — 1.0-20.0MHZ

1946																	AAA	AAA					16				
1947																AAA	AAA	AAA	AAA				15				
1948																AAA	AAA	AAA	AAA				14				
1949																AAA	AAA	AAA	AAA				14				
1950																AAA	AAA	AAA	AAA				14				
1951																AAA	AAA	AAA	AAA				18				
1952																AAA	AAA	AAA	AAA				20				
1953																AAA	AAA	AAA	AAA				26				
1954																AAA	AAA	AAA	AAA				22				
1955																AAA	AAA	AAA	AAA				22				
1956																AAA	AAA	AAA	AAA				19				
1957			W	WWW	WWW					WWW	WW					AAA	AAA	AAA	AAA	X			19				
1958	WWW	WWW	WWW	WWW												AAA	AAA	AAA	AAA	X			18				
1959																AAA	AAA	AAA	ABA	X		X	18				
1960																AAA	AAA	AAA	AAA	X		X	18	X			
1961																AAA	AAA	AAA	AAA	X		X	18	X			
1962																AAA	AAA	AAA	AAA	X		X	18	X			
1963																AAA	AAA	AAA	AAB	X		X	18				
1964		B	B													AAA	AAA	AAA	AAA	X		X	18				
1965																AAA	AAA	AAA	AAA	X		X	18				
1966																AAA	AAA	AAA	AAA	X		X	18				
1967																AAA	AAA	AAA	AAA	X		X	18				
1968																AAA	AAA	AAA	AAA	X		X	18				
1969																AAA	AAA	AAA	AAA	X		X	18				
1970																AAA	AAA	AAA	AAA	X		X	18	X			
1971																AAA	AAA	AAA	AAA	X		X	18	X			
1972																AAA	AAA	AAA	AAA	X		X	18	X			
1973																AAA	AAA	AAA	AAA			X	18				
1974																AAA	AAA						18				

FROBISHER BAY
(FB J63)

63.80 291.40 — 1.6-20.0MHZ

1957				W	WW						B	BA					B	BA					8				
1958			AAA	A	A	AAA				B	BNA	BAA			B	BNA	BAA						8				
1959									AS					AS						AS		X	6				

FUKAURA
(16 541)

40.60 139.90 — 1.0-17.0MHZ

1947																B	BBB	AAA	AAA			X	8				
1948																AAA	AAA	AAA	AAA			X	9				
1949																AAA	AAA	AAA	S			X	9				

GARCHY
(GY 042)

47.30 3.10 — 0.25-20.0MHZ

1959												WWW	X						AAA	X			6				
1960																AAA	AAA	AAA	NNN	X		X	12	X			
1961											WW	WWW	X			AAA	AAA	AAA	AAA	X		X	12	X			
1962									WWW				X			AAA	AAA	AAA	AAA	X		X	12	X			
1963																AAA	AAA	AAA	AAA	X		X	12	X			
1964																AAA	AAA	AAA	AAA	X		X	12				
1965																AAA	AAA	AAA	AAA	X		X	12				
1966																AAA	AAA	AAA	AAA	X		X	12				
1967																AAA	AAA	AAB	BBA	X		X	12				
1968																AAB	BAA	AAB	BBB			X	12	X			
1969																ABB	BAB	AA	BAA			X	12				
1970																ABA	AAA	AAA	BAA			X	12	X			
1971																AAA	BBA	ABA	BAA			X	14	X			

For symbols see page 33

GARCHY (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1972															AAA	AAA	AAA	AAA			X		14				
1973															AAA	AAA	AAA	AA					14				

GENOVA
(GV 044)

44.60 9.00 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1956																AA	AAA	AAA					2				
1957															AAA	AAA	AAA	AAA	X		X		2				
1958															AAA	AAA	AAA	AAA	X		X	X	3				
1959															AAA	AAA	AAA	AAA	X		X		3				
1960															AAA	AAA	AAA	AAA	X		X		5				
1961															AAA	AAA	AAA	AAA	X		X		5				
1962															AAA	AAA	AAA	AAA	X		X		5				
1963															NNN	BAA	AAA	AAA	X		X		5				
1964															AAA	AAA	AAA	AAA	X		X		5				
1965															AAA	AAA	AAA	AAA	X		X		5				
1966															AAA	AAA	AAA	AAA	X		X		5				
1967															AAA	AAA	AAA	AAA	X		X		5				
1968															AAA	AAA	AAA	AAA	X		X		5				
1969															AAA	AAA	AAA	AAA			X		5				
1970															BBA	AAA	AAA	AAA			X	X	5				
1971															AAA	AAA	AAA	AAA			X		5				
1972															BBA	AAA	AAA	AAA			X		5				
1973															AAA	AAA	AAA	AAB					5				

CLOSED, 1975

GODHAVN
(GO J69)

69.30 306.50 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1951				AA									AA										5				
1952	AAA	AAA	BNA	AAA						AAA	AAA	ANA	AAA										12				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA										12				
1954	AAA	AAA	ABN	NNA						AAA	AAA	ABN	NNA										12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA										12				
1956	AAA	AAA	AAB	NAA			A A	AA		AAA	AAA	AAA	AA										8				
1957	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA				AAA	AAA	X	X	X	X	11				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	10				
1959	AAA	AAA	AAA	BNN	AAA	AAA	AAA	BNN	X	AAA	AAA	AAA	BNN		AAA	AAA	AAA	BNN	X	X	X	X	11				
1960	BAA	AAA	AAA	AAA	BAA	AAA	AAA	AAA	X	BAA	AAA	AAA	AAA		BAA	AAA	AAA	AAA	X	X	X	X	11				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	11				AA
1962	AAA	AAA	AAA	AAB	AAA	AAA	AAA	AAB	X	AAA	AAA	AAA	AAB		AAA	AAA	AAA	AAB	X	X	X	X	11	AAA	AAA	AAA	A
1963	ANB	AAA	AAA	ABB	ANB	AAA	AAA	ABB	X	ANB	AAA	AAA	ABB		ANB	AAA	AAA	ABB	X	X	X		11	AAA	AAA	AAA	AAA
1964	UAA	AAA	AAA	AAA	UAA	AAA	BBB	AAA	X	UAA	AAA	BBB	AAA		UAA	AAA	BBB	AAA	X	X	X	X	6	AAA	AAA		AR
1965	AAA	AAA	AAA	ABA	AAA	AAA	AAA	ABA	X	AAA	AAA	AAA	ABA		AAA	AAA	AAA	AAA	X	X	X	X	6	AAA	AAA	AAA	AAA
1966	BAB	AAA	AAA	AAA	BAB	AAA	AAA	AAA	X	BAB	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		6	AAA	AAA	AAA	AAA
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		6	AAA	RRR	RRR	RRR
1968	AAA	AAA	ABA	AAA	AAA	AAA	ABA	AAA	X	AAA	AAA	ABA	AAA		AAA	AAA	AAA	AAA	X	X	X		6	RRR			
1969	AAA	AAA	AAA	AAA	AAA	ABA	AAA	AAA	X	AAA	ABA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		6				
1970	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		7				
1971	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X						X	X		7				
1972	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X						X	X		17				
1973	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X						X	X		18				
1974	A				AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X						X	X		16				
1975					AA				X	AA				X						X	X		12				

GOOSE BAY
(GS J53)

54.30 299.67 0.0-16.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1972																AA	AAA	AAA			X		17				
1973															AAA	AAA	AAA	AAA			X		17				
1974															AAA	AAA	AAA	AA					17				

GORKY
(GK 156)

56.15 44.28 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1958	A	AAA	AAA	AAA	A	AAA	AAA	AAA							A	AAA	AAA	AAA	X		X	X	14				
1959	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X	3				
1960	WWW	WWW	WNW	WWW		ABA	ANA	AAA	X		ABA	ANA	AAA	X		ABA	ANA	AAA	X		X		14				
1961	WWW	WWW	WWW	WWW	ABA	AAA	BBA	AAA	X	ABA	AAA	BBA	AAA	X	AAA	AAA	BBA	AAA	X		X	X	14				
1962	WWW	WWW	WWW	WWW	AAA	BBB	AAB	BBA	X	AAA	BBB	AAB	BBA	X	AAA	BBB	AAB	BBA	X		X	X	14				
1963	WWW	WWW	NWW	WWW	BBA	AAA	BBA	AAA	X	BBA	AAA	BBA	AAA	X	BBA	AAA	BBA	AAA	X		X		14				
1964	WWW	WWW	WWW	WWW	AAA	AAA	BBA	ABA	X	AAA	AAA	BBA	ABS	X	AAA	AAA	BBA	AAA	X		X		14				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
GORKY (Continued)																											
1965	WWW	WWW	WWW	WWW	AAB	BBA	AAA	BAA	X						AAB	BBA	AAA	BAA	X		X	X	14				
1966	WWW	WWW	WWW	WWW	AAA	ABA	AAA	AAA	X						AAA	ABA	AAA	AAA	X		X	X	14				
1967	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1968	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1969	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1970	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1971	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		9				
1972	WWW	WWW	WWW	WWW	AAA	AAA	BBA	AAA	X						AAA	AAA	BBA	AAA	X		X		9				
1973	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		9				
1974	W	WWW	WWW	WW	AAA	AAA	AAA	AA	X						AAA	AAA	AAA	AA	X				9				

GRAHAMSTOWN
(GR 13L)

-33.30 26.50 — 0.5-15.0MHZ

1958															B	BBA	AAA	AAA	X		X		6				
1959															AS				X				6				
1965															NAB	NAA	AAA	AAB			X		10				
1972																	AAA	AAB			X		13				

GRAND BAHAMA
(GB 926)

26.60 281.80 — 1.0-25.0MHZ

1957			AAA	AAA			AAA	AAA	X			AAA	AAA				AAA	AAA	X	X	X	X	15				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	15				
1959	AAA	AAA	AAA	B	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	15				
1960	AAA	AAA	AAA	AAU	AAA	AAA	AAA	AAU	X	AAA	AAA	AAA	AAU		AAA	AAA	AAA	AAU	X	X	X	X	15				
1961	UUA	AAB	UUU	AAA	UUA	ABA	UUU	AAA	X	UUA	ABA	UUU	AAA		A	ABA		AAA	X	X	X	X	15				
1962	AAA	AAA	UAA	AAA	AAA	AAA	UAA	AAA	X	AAA	AAA	UAA	AAA		AAA	AAA	AA	AAA	X	X	X	X	15	A	A R	AA	AAA
1963	AAB	AAA	AAA	AAA	AAB	AAA	AAA	AAA	X	AAB	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	15	AAA	ABA	AAA	AAA
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	15	ABA	AAA	AAA	AAA
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	15	AAA	AAA	AA	AAA
1966	AAA	AAA	ABA	BBA	AAA	AAA	ABA	BBA	X	AAA	AAA	ABA	BBA	X	AAA	AAA	AAA	AAA	X	X	X		15	RRR	RRR	RRR	RRR
1967	AAA	ABA	AAA	ABB	AAA	ABA	AAA	ABB	X	AAA	ABA	AAA	ABB	X	AAA	AAA	AAA	A	X	X	X		15	RRR	RRR	RRR	RRR
1968	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	AAA	AAA			X	X	X		15	RRR			
1969	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X						X	X		15				
1970	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X						X	X		18				
1971	AAA	AAB	S		AAA	AAB	S			AAA	AAB	S		X	AA	A	S		X	X	X		18				

GRAZ
(GZ 146)

47.10 15.50 — 2.0-13.0MHZ

1947															MMM	MMM	MMM	MMM					5				
1948															AAA	AAA	AAA	AAA					4				
1949															MMM	MMM	MM	M					1				
1950															A	AA	AA	A					2				
1951															AAA	AAA	AAA	AAA					2				
1952															AAA	AAA	AAA	AAA					2				
1953															AAA	AAA	AAA	AAA					2				
1954															AAA	AAA	AAA	AAA					2				
1955															AAA	AAA	AAA	AAA					2				
1956															AAA	AAA	AAA	AAA					2				
1957															AAA	AAA	AAN	AAA	X				2				
1958															AAA	AAA	AAA	AAA	X				1				
1959					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				2				
1960					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				2				
1961					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				2				
1962					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				2				
1963					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA					2				
1964					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA					2				
1965					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA					1				
1966					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				1				
1967					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				1				
1968					WWW	WWW	WWW	WWW	X							AA	AAA	AAA	X				1				
1969					WWW	WWW	WWW	WWW	X						AAA	BAA	AAA	AAA					1				
1970					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA					1				
1971					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA					1				
1972					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA					1				
1973															AA	AAA	AAA	AAA					1				
1974					WWW	WWW	WWW	WWW	X						AAA	AAA	AA	AAA					1				
1975															AA								1				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
GUAM (17 513)																											
13.50 144.87																											1.0-25.0MHZ
1944																		B									
1945	BNN	NNN	NNN	NNA											BNN	NNN	NNN	NNA	X				7				
1946	AA														AAA	AAA	AAA	AAA	X				7				
1947	A	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X				9				
1948	AAA	AAA	BA	AB											AAA	AAA	AAA	AAA	X				12				
1949	NNN	AAA	AAA	AAA						NNN	NAA	AAA	AAA		NNN	NAA	AAA	AAA	X				12				
1950	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X			12				
1951	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X			12				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X			12				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				12				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X				12				
1956	AAA	AS								AAA	AS				AAA	AS			X				10				
HAIFA (HA 132)																											
32.82 34.98																											1.0-25.0MHZ
1960			B	B				B	BBB																		
1961					BBB	BBB	BB																				
HAINAN IS (18 419)																											
18.30 109.30																											
1942																M	MMM	MMM					2				
1943															MMM	MMM	S						2				
HALLEY BAY (HB A70)																											
-75.50 333.40																											0.65-25.0MHZ
1957			WWW	WWW				AAA	AAA								AAA	AAA	X		X		14				
1958	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				14				
1960																A	AAA	AAA	X		X	X	14				
1961															AAA	AAA	AAA	AAA	X		X	X	14				
1962				A		B	AAA	AAA	AAA						A	A	AAA	AAA	X		X	X	14				
1963					ABA	AAB	AAA	AAA							ABA	AAB	AAA	AAA	X		X	X	14				
1964					AAN	AAA	AAA	AAA							AAN	AAA	AAA	AAA	X		X	X	15				
1965					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		15				
1966					AAB	AAA	AAA	AAA							AAB	AAA	AAA	AAA	X		X	X	15				
1967					BAA	AAA	AAA	ANN							BAA	AAA	AAA	ANN	X		X	X	13				
1968					NNN	NAA	AAB	A A							NNN	NAA	AAA	AAA	X		X	X	13				
1969					AAB	AAA	AAA	BAA							AAA	AAA	AAA	AAA	X		X	X	13				
1970					AA	B	AAA	AAA							AA	AAA	AAA	AAA			X	X	14				
1971					AAA	AAA	AAA	AA							AAA	AAA	AAA	AAA			X		14				
1972					AAA	AAA	AA	AAA							AAA	AAA	AAA	AAA			X		14				
1973															AAA	AA	AM	A M					14				
1974																		MMM					3				
1975															MMM								3				
HANKOW (19 432)																											
30.70 114.30																											1.0-16.0MHZ
1941																	B	NBB					2				
1943															MMM	MMM	MMM	BMM					6				
1944															MMM	MMM	MMB	BMM					2				
HANOVER (HN J44)																											
43.70 287.80																											2.0-20.0MHZ
1968				QQQ																							
1969	QQQ	QQQ	QQQ	QQQ																							
1970	QQQ	QQQ	QQQ	QQQ																							
1971	QQQ		Q	QQQ	QQQ																						
1972	QQQ	QQQ	Q																								

For symbols see page 33

HEISS IS (BT 280)

80.60 58.00 — 1.0-10.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1938												MMM	MMM	MMM	MMM						
1939												MMM	MMM	MMM	MMM						
1940												MMM	MMM	MMM	MMM						
1941												MMM	MMM	MMM	MMM						
1942												MMM	MMM	MMM	MMM						
1943												MMM	MMM	MMM	MMM				4		
1944												MMM	MMM	MMM	MMM				4		
1945												AAA	AAA	AAA	AAA				4		
1946												AAA	AAA	AAA	A A						
1957			WW	WWW			AAA	AAA	X					AAA	AAA	X	X	X	12		
1958	WWW	WWW	WWW	WWW	AAA	AAA	AAW	WWW	X			AAA	AAA	AAA	AAA	X	X	X	12		
1959	WWW	WWW	WWW	WWW	WWW	WWW	NWW	WAA	X			AAA	AAA	NAA	AAA	X	X	X	12		
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAB	X			AAA	ABA	AAA	AAA	X	X		13		
1961	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X	X		13		
1962	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X	X		13		
1963	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X	X		13		
1964	WWW	WWW	WNW	WW	AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X	X		13		
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X	X		13		
1966					AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X	X		13		
1967	WWW	WWW	WW	WWW	AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X	X		13		
1968	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X	X		13		
1969	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X	X		13		
1970	WWW	WWW	WWW	WWW	AAA	NAA	AAA	AAA	X			AAA	NAA	AAA	AAA	X	X		13		
1971	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X	X		13		
1972	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X			AA	AAA			X			13		

HERMANUS (HE 13M)

-34.42 19.23 — 1.0-15.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1971														BNA	AAA		X			13	
1972												AAA	AAA	AAA	AAA		X			13	
1973												AAA	AAA	AAA	AAA		X			13	
1974												AAA	A		A	AMM				13	
1975												M									

REPLACED CAPETOWN

HIRAISO (20 536)

36.40 140.60 — 1.0-16.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1936													M	MMM	MMM					1	
1937												MMM	MMM	MMM	MMM					1	
1938												MMM	MMM	MMM	MMM					1	
1940												NNN	NMM	MNN	NNN					1	
1941												MNM	MMM	BNN	NNN					1	
1942												NNM	MMN	NNM	MMN					1	
1943												NNN	NNN	NMM	MMM					1	
1944												BBN	MMM	MMM	MMM					1	
1945												MMM	MMB	BS						1	

HIRATSUKA (21 533)

35.30 139.30

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1940															M					3	
1941												MBM	MMM	MMM	MMM					3	
1942												MMM	MMM	MMM	MMM					3	
1943												MMM	MMM	MMM	MMM					3	
1944												MMM	MMB	BMM	MMM					3	
1945												MMM	MS							3	

HOBART (HO 54K)

-42.90 147.30 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1945															A					18	
1946												AAA	AAA	AAA	AAA					18	
1947												AAA	AAA	AAA	AAA					17	
1948												AAA	AAA	AAA	AAA					15	
1949												AAA	AAA	AAA	AAA					14	
1950												AAA	AAA	AAA	AAA					9	
1951												AAA	AAA	AAA	AAA					11	

For symbols see page 33

HOBART (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1952															AAA	AAA	AAA	AAA					11				
1953															AAA	AAA	AAA	AAA					11				
1954															AAA	AAA	AAA	AAA					10				
1955															AAA	AAA	AAA	AAA					10				
1956															AAA	AAA	AAA	AAA					8				
1957				WW			WWW	WWW									AAA	AAA	X				13				
1958	WWW	WWW	WWW	W	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				13				
1959					WWW										AAB	S			X				8				
1961																AAA	AAA	AAA	X		X		3				
1962				AAA											AAA	AAA	BBA	BAB	X		X		3				
1963	AAA	AAA													BBB	AAA	AAB	AAA	X		X		3				
1964															AAA	AAA	AAA	AAA	X		X		11				
1965															ABB	AAA	AAA	AAA	X		X		11				
1966				A											AAA	AAA	AAA	AAA	X		X		5				
1967															ABA	AAA	AAA	AAA			X		5				
1968				B											AAA	AAA	ABA	AAA			X		5				
1969		B													AAA	AAA	AAA	AAA			X		5				
1970															AAA	AAA	AAA	AAA			X	X	7				
1971															AAA	AAA	AAA	AAA			X	X	7				
1972															AAA	AAA	AAA	AAA			X	X	6				
1973															AAA	AAA	AAA	AAA			X		6				
1974															AAA	AAA	AAA	AAA					6				
1975															AAA								6				

HOLLANDIA (HL 50K)

-2.50 140.80 — 1.4-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1945	A	AA						W								AA							10				
1957																			A	X			10				
1958															AAA	AAA	AAA	ABB	X				11				
1959															AAS				X				12				

HONG KONG (HK 423)

22.33 114.20 — 1.0-22.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1969	AAA	ABB		BAA	WWW	WWW	WWW	WWW							ABA	ABB	AAA	BAB			X	X	9				
1970	A	AAA	AAA	AAA	WWW	WWW	WWW	WWN							AAA	AAA	AAA	AAN			X	X	9				
1971	AAA	AAA	ABB	AAA											AA						X		11				
1972	AAA	AAA	AAA	AAA																							
1973	AAA	AAA	AAA																								

HUANCAYO (HU 91K)

-12.00 284.70 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1938															AAA	AAA	AAA	AAA					6				
1939															AAA	AAA	AAA	AAA					6				
1940															AAA	AAA	AAA	AAA					6				
1941															AAA	AAA	AAA	AAA					6				
1942															AAA	AAA	AAA	AAA					6				
1943		B		B											AAA	AAA	AAA	AAA					6				
1944															AAA	AAA	AAA	AAA					6				
1945															AAA	AAA	AAA	AAA					6				
1946															AAA	AAA	AAA	AAA		X			6				
1947		A	AAA	AAA											AAA	AAA	AAA	AAA		X			6				
1948	AAA	A B	AA	AAA											AAA	AAA	AAA	AAA					9				
1949	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA		X			9				
1950	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA		X			13				
1951	AAA	AAA	AA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			13				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			17				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					17				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					17				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					17				
1956	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1957	AAA	AAA	AAA	AAA			AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	ABN	BAA	AAA	AAA	ABN	BBA	AAA	AAA	X	ABN	BAA	AAA	AAA		ABN	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1963	AAA	AAA	AAA	BAA	AAA	AAA	AAA	BAA	X	AAA	AAA	AAA	BAA		AAA	AAA	AAA	BAA	X	X	X	X	13				
1964	AAA	ABA	AAA	AAA	AAA	ABA	AAA	AAA	X	AAA	ABA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	10	AAA	AAA	AAA	AAA
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	10	AAA	AAA	AAA	AAA
1966	AAA	AAA	ABB	AAA	AAA	AAA	ABB	AAA	X	AAA	AAA	ABB	AAA		AAA	AAA	AAB	AAA	X	X	X		10	AAA	AAA	AAA	AAA
1967	BBA	ABA	AAB	AAA	BBA	ABA	AAB	AAA	X	BBA	ABA	AAB	AAA		ABA	AAA	AAA	AAA	X	X	X		10	AAA	AAA	AAA	RRR
1968	AAB	ABA	AAA	ABA	AAB	ABA	AAA	ABA	X	AAB	ABA	AAA	ABA		AAA	AAA	AAA	AAA	X	X	X		11	AAA	RAR	RRR	RRR

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND						JFM	AMJ	JAS	OND
HUANCAYO (Continued)																											
1969	BAA	BAA	AAA	AAA	BAA	BAA	AAA	AAA	X	BAA	BAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		10	AAA	AAA	AAA	AAA
1970	AAA	AAB	AAA	AAA	AAA	AAB	AAA	AAA	X	AAA	AAB	AAA	AAA	X	AAA	AAE	AAA	AAA	X	X	X		13	RRR	RRR	RRR	R R
1971	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAE	AAA	AAA	X	X	X		14	RRR	RRR	RRR	RRR
1972	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA			X	X	X		14	RRR	RRR	RRR	RRR
1973	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA			AAA	AA		X	X	X		14	RRR	RRR	RRR	RRR
1974	AAA	AAA	AAA	AA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA							X	X		14	RRR	RRR	RRR	RR
1975					AAA	A				AAA	A									X	X		14	RRR			

HYDERABAD
(HY 317)

17.35 78.47 1.5-25.0MHZ

1963																AA	AAA	AAA	X		X		5				
1964															AAA	AAA	AAA	AAA	X		X		5				
1965															AAA	AAA	AAA	AAA	X		X		5				
1966															AAA	AAA	AAA	AAA	X		X		5				
1967															AAA	AAA	AAA	NBA	X		X	X	12				
1968															AAA	AAE	AAA	ABA	X		X	X	12				
1969															AAA	AAE	NNA	AAA	X		X	X	12				
1970															AAA	BNN	NAA	ABA	X		X	X	12				
1971															BAA	AAE	AAN	NAN	X		X		12				
1972															ANN	NNN	NNN	NNN					12				
1973															NNN	NNN	NNN	NNN									
1974																											

IBADAN
(IB 007)

7.40 3.90 0.67-25.0MHZ

1951																		A					4				
1952															ANN	AAA	ABB	BAA					4				
1953															ANN	ABN	AMN	NBA					4				
1954															AAA	AAE	AAA	AAA					4				
1955															AAA	AAA	AAA	AAA					4				
1956															AAA	AAA	AAA	AAA					4				
1957			WWW	WWW			WWW	WWW							AAA	AAA	AAA	AAA	X				13				
1958	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				11				
1959	WWW				W	W									AAA	AAA	AAA	AAA	X				7				
1960															AAA	AAA	AAA	AAA	X		X		10				
1961															AAA	AAA	AAA	AAA	X		X		10				
1962				A											AAA	AAA	AAA	AAA	X		X	X	10				
1963	B	A	B												AAA	AAA	AAA	AAA	X		X		10				
1964															AAA	AAA	AAA	AAA	X		X		12				
1965															AAA	AAA	AAA	AAA	X		X		12				
1966															AAA	AAA	AAA	AAA	X		X		12				
1967															AAA	AAA	AAA	AAA			X	X	12				
1968															AAN	AAA	AAA	AAA			X	X	12				
1969															AAA	BAA	AAA	AAA			X	X	12				
1970															AAA	AAA	AAA	AAA			X	X	12				
1971															AAA	AAA	AAA	AAN			X	X	12				
1972															AAA	AAA	ABA	AAE			X		12				
1973																A	BB	AA					12				

ILC
(IL J1P)

-17.40 288.80 1.0-25.0MHZ

1959	BB	AAS			BB	AAS			X	BB	AAS				BB	AAS			X	X	X	X	13				

REPLACED CHICLAYO

INVERNESS
(IN 056)

57.40 355.80 0.67-25.0MHZ

1951																		BAA					4				
1952															AAA	AAA	AAA	AAA					4				
1953															AAA	AAA	AAA	AAA					4				
1954															AAA	AAE	AAA	AAA					4				
1955															AAA	AAA	AAA	AAA					4				
1956															AAA	AAA	AAA	AAA					4				
1957		W	WWW	WWW			WWW	WWW							AAA	AAA	AAA	AAA	X				8				
1958	WBW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				8				
1959	W														AAA	AAE	AAA	AAA	X				8				
1960															AAA	AAA	AAA	AAA	X				8				
1961															AAA	AAA	AAA	AAA	X				9				
1962															AAA	AAA	AAA	AAA	X				9				

For symbols see page 33

INVERNESS (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1963												AAA AAA S	X				9	

REPLACED FRASERBURGH

IRKUTSK
(IR 352)

52.50 104.00 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1956												M					7	
1957												M M MM AAA NNN	X				2	
1958	W	W	WWW	WW	NNB NNA AAA AAA				X			NNA NNA AAA NAA	X		X	X	14	
1959	A				AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X	X	14	
1960	WWW	WWW	WWW	WWW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X	X	14	
1961	WWW	WWW	WWW	WWW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X	X	14	
1962	WWW	WWW	WWW	WWW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X		14	
1963	WWW	WWW	WWW	WWW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X		14	
1964	WWW	WWW	WWW	WWW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X		11	
1965	WWW	WWW	WWW	WW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X		12	
1966	WWW	WWW	WWW	WWW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X		13	
1967	WWW	WWW	WWW	WWW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X		13	
1968	WWW	WWW	WWW	WBB	AAA EAA AAA AAA				X			AAA AAA AAA AAA	X		X	X	13	
1969	WBW	WWB	BBB	WBW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X	X	13	
1970	BB	BWE	WWW	WWW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X	X	13	
1971	BBA	BBB	WWW	WWW	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X		X		13	
1972	WWW	WWW	WBW	WBW	A AA A AAA				X			MMA AAM MMA AAA	X				13	
1973	WWW	WWW	WWW	W	AAA AAA AAA AAA				X			AAA AAA AAA AAA	X				13	
1974	WWW	WWW			AAA AAA				X			AAA AAA	X				13	

JAMAICA
(JA 918)

18.00 283.20 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1962			B	AAA			B	BBA	X									
1963	AAA	AAA	AAA	ABB	AMA	AAA	AAM	BBB	X									
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X									A
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X									A A
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X									
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X									
1968	AAA	AAA	AAA	ABN	AAA	AAA	AAA	ABN	X									
1969	NNN	NNN	NNN	NNN	NNN	NNN	NNN	NNN										
1970	NNN	NAA	AMA	AAA	NNN	NAA	AAA	AAA	X									
1971	AAA				AAA	AAA	NNN	NNN	X									
1972					NNN	NNN	AAA	AAA										
1973					AA	AA	A A	A										
1974					AAA	AAA												

JICAMARCA
(JI 91J)

-11.95 283.14 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1962		A																
1963	BBB	BBB	BBB	BB														
1964	AAA	AAA	BBB	AAA														
1965	AAB	ABB	ABA	AAA														
1966	BBB	BB		B														
1967			B															
1968		BB																

JOHANNESBURG
(JO 120)

-26.10 28.10 0.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1946												AA	AAA				8	
1947												AAA AAA AAA	AAA				9	
1948												AAA AAA AAA	AAA				9	
1949												AAA AAA AAA	AAA				10	
1950												AAA AAA AAA	AAA				10	
1951												AAA AAA AAA	AAA				10	
1952												AAA AAA AAA	AAA				10	
1953												AAA AAA AAA	AAA				10	
1954												AAA AAA AAA	AAA				10	
1955												AAA AAA AAA	AAA				10	
1957												AAA	AAA	X			13	
1958												AAA AAA AAA	AAA	X			13	
1959												AEA AAA AAA	AAA	X			13	
1960												AAA AAA AAA	AAA	X			2	
1961												AAA AAA AAA	AAA	X	X		13	

For symbols see page 33

JOHANNESBURG (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1962															AAA	AAA	AAA	AAA	X		X		12				
1963															AAA	AAA	AAA	AAA	X		X		10				
1964	B		BB		WWW	WWW	W								AAA	AAA	A				X		10				
1965	BB		B																								
1966			BBB																								
1967															AAA	AAA	AAA	AAA			X		12				
1968															AAA	AAA	AAA	AAA			X		13				
1969	B	B	BB		WWW	WWW	WWW	WWW							AAA	AAA	AAB	AAA			X	X	13				
1970					WWW	WWW	WWW	WWW							AAA	AAB	AAA	AAA			X	X	13				
1971															AAA	AAN	ANB	AAA			X	X	13				
1972															AAA	AAA	AAA	AAA			X	X	13				
1973															AAA	AAA	AAA	AAA			X		13				
1974															AAA	A	A	AMM					13				
1975															M												

JULIACA
(JU J1N)

-15.50 289.80 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1959	B	ABS			B	ABS		X		B	ABS				B	ABS		X		X	X	X	13				

JULIUSRUH/RUGEN
(JR 055)

54.60 13.40 — 0.5-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957							WWW	WWW									A		X				6				
1958					WW	WWW	WWW	WWW							AAA	ABA	AAA	AAA	X				9				
1959					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				9				
1960															AAA	AAA	AAA	AAA	X		X		9				
1961					NWW	WWW	WWW	WWW							BAA	AAA	AAA	AAA	X		X		9				
1962					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		11				
1963					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		11				
1964					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		11				
1965					W	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		11				
1966					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		10				
1967					WWW	WWW	WWB	BWW							AAA	AAA	AAA	AAA			X		10				
1968					WWW	WNW	WWW	WWW							AAA	ABA	AAA	AAA			X		10				
1969					WWW	WWW	WWN	WWW							AAA	AAA	AAB	AAA			X		10				
1970					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X	X	10				
1971					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X	X	10				
1972															AAA	AAA	AAA	AAA			X		10				
1973															AAA	AAA	AAA	AAA			X		10				
1974															AAA	AAA	AAA	AAA					10				

KALININGRAD
(KL 154)

54.70 20.62 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1972							BB										BB						14				

KAMINOGE
(22 532)

35.60 139.60 — 1.0-16.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1945															BMM	MME	BBS				X		2				

KARAGANDA
(KR 250)

49.82 73.08 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1964																	AA	AAA	X		X		14				
1965															AAA	AAA	AAA	AAA	X		X		14				
1966															AAA	AAA	AAA	AAA	X		X		14				
1969															AAA	AAA	AAA	AAA	X		X		14				
1970															AAA	AAA	AAA	AAA	X		X		14				
1971															AAA	AAA	AAA	AAA	X		X		14				
1972							BB		X						AAA	AAA	AA	AAA	X		X		14				

For symbols see page 33

KERGUELEN (KG 24R)

-49.35 70.24 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1953															AA	AAA	AAA	AAA										
1954															AAA	AAA	AAA	AAA										
1955															AA													
1956															AAA	AAA	AAA	A					12					
1957															AAA	AAA	AAA	AAA	X				12					
1958															AAA	AAA	AAA	AAA	X		X		12					
1959															AAA	AAA	AAA	AAA	X		X	X	12					
1960															AAA	AAA	AAA	BNB	X		X	X	12					
1961															AAA	AAA	AAA	AAA	X		X	X	12					
1962															AAA	AAA	AAA	AAA	X		X	X	12					
1963															AAA	AAA	AAA	AAA	X		X		12					
1964															BAA	AAE	ABN	NNN	X		X		12					
1965															NNN	AAA	AAA	AAA			X	X	12					
1966					WWW	WWW	WWW	WWW							BAA	AAA	AAA	AAA			X	X	12					
1967					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X	X	12					
1968					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X	X	12					
1969															AAA	AAA	AAA	AAA			X	X	12					
1970															AAA	AAA	AAA	AAA			X	X	14					
1971															AAA	AAA	AAA	AAA					14					
1972															AAA	AAA	AAA						14					
1973															AA	AAA							14					

KERMADEC (KC 62R)

-29.20 182.10 — 1.8-12.8MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1943																M	MMM	MMM					8					
1944															MMM	MAA	AAA	AAA					10					
1945															AAM	MMA	AAA	AAA					16					
1946															AAA	AAA	AAA	AAA					13					
1947															A								13					
1964															BA	AAA	AAA	ABB	X				2					
1965															AAA	AAA	AAA	AAA	X				2					
1966															AAA	AAA	AAA	AAA	X				2					
1967															BNN	NNN	AAA	AAA	X				2					
1968															BAA	AAE	ABA	BBB	X		X		3					
1969															BAB	NNN	NNN	NNN			X		3					
1970															NBA	ABB	AAA	AAA			X	X	3					
1971															ABB	BBA	AAA	BBB			X	X	3					
1972															AAB	AAA	AAB	S			X		3					

KHABAROVSK (KB 548)

48.50 135.10 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1959							QQ	QQQ									QQ	QQQ										
1960					QQQ	QQQ	QQN	QQQ							QQQ	QQQ	QQN	QQQ										
1961					AAA	AAA	ABA	AAA	X						AAA	AAA	ABA	AAA	X		X		14					
1962					AAA	AAA	ABB	AAA	X						AAA	AAA	ABB	AAB	X		X		14					
1963					BBA	ABA	AAA	AAA	X						BBA	ABA	AAA	AAA	X		X		14					
1964	W	W	WW	W	WWW	AAA	AAA	ABA	AAA	X					AAA	AAA	ABA	AAA	X		X		14					
1965	WWW					AAA	AAA	AAA	AAA	X					AAA	AAA	AAA	AAA	X		X		14					
1966	WWW	WWW	WWW	WWW		ABA	ABA	AAA	AAA	X					ABA	ABA	AAA	AAA	X		X		14					
1967	WWW	WW		WWW		AAA	AAA	NNN	NNA	X					AAA	AAA	NNN	NNA	X		X		14					
1968	W		WW	WWW	WWW	NBN	NAA	AAA	AAA	X					NBN	NAA	AAA	AAA	X		X	X	14					
1969	WWW	WWW	WW		WW	AAA	AAA	AAA	AAA	X					AAA	AAA	AAA	AAA	X		X	X	14					
1970	WW	WWW	WWW	WW		AAA	AAA	AAA	AAA	X					AAA	AAA	AAA	AAA	X		X	X	14					
1971	WW	WWW	WWW	W		AAA	AAA	AAA	AAA	X					AAA	AAA	AAA	AAA	X		X	X	14					
1972	WWW	W		WB	WWW	AAA	AAA	AAA	AAA	X					AAA	AAA	AAA	AAA	X		X		14					
1973	WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA	X					AAA	AAA	AAA	AAA	X		X		14					
1974	WWW	WW		W	WWW	AAA	AAA	AAA	AAA	X					AAA	AAA	AAA	AAA	X				14					
1975	W	W				AA				X					AA				X				14					

KHARTOUM (23 115)

15.55 32.58 — 0.67-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1952															A	AA	A	A	ABA				4					
1953															BAB	MM	MAA	BAB					8					
1954															MES								8					

For symbols see page 33

KIEV
(KV 151)

50.72 30.30 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1964		AAA AAA AAA AAA	X			AAA AAA AAA AAA	X				14	
1965		AAA AAB AAA AAA	X			AAA AAB AAA AAA	X				14	
1966		QQQ QQQ QQQ QQQ				QQQ QQQ QQQ QQQ						
1967		QQQ QQQ QQQ QQQ				QQQ QQQ QQQ QQQ						
1968		QQQ QQQ QQQ QQQ				QQQ QQQ QQQ QQQ						
1969		AAA AAA AAN NAA	X			AAA AAA AAN NAA	X				14	
1970		NNN AAA AAA AAA	X			NNN AAA AAA AAA	X				14	
1971		AAA AAA AAA AAA	X			AAA AAA AAA AAA	X				14	
1972		AAA AAA AAA AA	X			AAA AAA AAA AA	X				14	

KINSHASA BINZA
(LB 10M)

-4.50 15.20 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1952						AA AAA AAA AAA					21	
1953						AAA AAA AAA AAA					18	
1954						AAA AAA AAA AAA					20	
1955						AAA AAA AAA AAA					21	
1956						AAA AAA AAA AAA					20	
1957						AAA AAA AAA AAA	X				20	
1958						AAA AAA AAA AAA	X				20	
1959						AAA AAA AAA AAA	X				20	
1960						AAA AAA AAA AAA	X		X		20	
1961						AAA AAA AAA AAA	X		X		20	
1962						AAA ANA ANN ANN	X		X		20	
1963						AAA AAN NNN NAA			X		20	
1964						BAN NNA AAB AAA			X		20	
1965						ABB BBA NNA AAA			X	X	20	
1966						AAA AAA NAB NAA			X		20	
1967						AAA BNA AAA ABN			X	X	14	
1968						NBB AAA AAA AAA			X	X	9	
1969						ABA AAE AAA AAA			X	X	9	
1970						AAA AAA AAA			X	X	11	

KIRUNA
(KI 167)

67.84 20.42 — 0.6-15.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1949						A AAA AAA AAA					10	
1950						AAA AAA AAA AAA					10	
1951						AAA AAA AAA AAA					10	
1952						AAA AAA AAA AAA					11	
1953						AAA AAA AAA AAA					11	
1954						AAA AAA ANA AAA					11	
1955						AAN NNA AAA ANN					11	
1956						AAA AAA AAA AAA					10	
1957		WWW WWW				AAA AAA AAA AAA	X				11	
1958		WWW WWW WWW WWW				AAA AAA AAA AAA	X				12	
1959		WWW WWW WWW WWW				AAA AAA AAA AAA	X				12	
1960						AAA AAA AAA AAA	X				12	
1961						AAA AAA AAA AAA	X		X		12	
1962						AAA AAA AAA AAA	X		X		12	
1963						AAA AAA AAA AAA	X		X		12	
1964	BAA	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		13	
1965	AAB	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		13	
1966		A				AAA AAA AAA AAA	X		X		13	
1967						AAA AAA AAA AAA	X		X		13	
1968						AAA AAA AAA AAA	X		X		13	
1969						AAA AAA AAA AAA			X		13	
1970						AAA AAA AAA AAA			X	X	13	
1971						AAA AAA AAA AAA			X	X	18	
1972						AAA AAA AAA AAA			X	X	18	
1973						AAA AAA AAA AAA			X		18	
1974						AAA AAA AAA AAA			X		18	
1975						AAA					18	

KJELLER
(OS 059)

60.00 11.10 — 0.7-25.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1945						A AAA AAA					5	
1946						A A A					4	
1948						AA					7	
1949						AAA AAA AAA AAA					8	
1950						AAA AAA AAA AAA					8	

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND						JFM	AMJ	JAS	OND
KJELLER (Continued)																											
1951															AAA	AAA	AAA	AAA					9				
1952															AAA	AAA	AAA	AAA					9				
1953															AAA	AAA	AAA	AAA					9				
1954															AAA	AAA	AAA	AAA					9				
1955															AAA	AAA	AAA	AAA					9				
1956															AAA	AAA	AAA	AAA					9				
1957							WWW	WWW							AAA	AAA	AAA	AAA	X				11				
1958					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA					11				
1959					WS										AS								11				
KOCHEL (24 064)																											
47.70 11.40																								1.2-10.4MHZ			
1945																	A						3				
KODAIKANAL (KO 310)																											
10.20 77.50																								1.0-25.0MHZ			
1952																	A										
1953																											
1954																											
1955																											
1956															MMM	MMM	MMM	MMM									
1957							WWW	WWW							AAA	AA	AAA	AAA	X		X		11				
1958		B			WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X	X	11				
1959					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		11				
1960															AAA	AAA	AAA	AAA	X		X	X	11				
1961															AAA	AAA	AAA	AAA	X		X	X	11				
1962															AAA	AAA	AAA	AAA	X		X	X	11				
1963															AAA	AAA	AAA	AAA	X		X		11				
1964					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		11				
1965					WWW	WWW									AAA	AAA	AAA	AAA	X		X		11				
1966															AAA	AAA	AAA	AAA	X		X		9				
1967				B											AAA	AAA	AAA	AAA	X		X		11				
1968															AAA	AAA	AAA	AAA	X		X	X	9				
1969															AAA	AAA	AAA	AAA	X		X		9				
1970															AAA	AAA	AAA	AAA	X		X	X	9				
1971															ABA	AAA	AAA	AAA	X		X	X	9				
1972															AAA	AAA	AAA	AAA	X		X	X	11				
1973															AAA	A.							11				
1974															M	MM	MM										
KOKUBUNJI (25 535)																											
35.70 139.50																								1.0-16.0MHZ			
1943																	MM	MMM			X		2				
1944															MMM	MMM	MMM	BMB			X		2				
REPLACED BY TOKYO																											
KWAJALEIN (26 609)																											
9.05 167.20																											
1945															MMM								7				
LANCHOW (27 336)																											
36.10 103.80																								2.4-16.0MHZ			
1946																		A					9				
1947															AAA	AAA	AAA	AAA					12				
1948															AAA	AAA	AAA	AAA					12				
1949															AAA	AAA	S						12				

For symbols see page 33

LANNION (LN 047)

48.45 356.73

1.2 - 17.0 MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1971									AAA AAA	AAA AAA			X		14		
1972									AAA AAA	AAA AAA			X		14		
1973									AAA AAA	AAA AAA					14		

REPLACED PARIS-SACLAY

LA PAZ (LP J10)

-16.50 291.90

0.25-20.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1957		BAA		BBA	X		BBA			AAA	X	X	X	X	13		
1958	ABA ABA	AAA AAB	ABA ABA	AAA AAB	X	ABA ABA	AAA AAB		AAA ABA	AAA AAB	X	X	X	X	13		
1959	NNN NNN	NNN NNB	NNN NNN	NNN NNB	X	NNN NNN	NNN NNB		NNN NNN	NNN NNB	X				13		
1960	AAA BBA	AAA AAA	AAA BBA	AAA AAA	X	AAA BBA	AAA AAA		AAA NBA	AAA AAA	X	X	X	X	13		
1961	BAB NNN	UNN NNN	BAB NNN	UNN NNN	X	BAB NNN	UNN NNN		NAA NNN	UNN NNN	X	X	X	X	13		
1962	NNN NNN	NNN BBB	NNN NNN	NNN BBB	X	NNN NNN	NNN BBB		NNN NNN	NNN AAB	X	X	X	X	13		
1963	UAA AAA	BBN NNN	BAB AAA	BBN NNN	X	BAB AAA	BBN NNN		BAA AAA	AAN NNN	X	X	X	X	13		
1964	NAA BAM	BAA ABB	NAB BBB	BBA BBB	X	NAA BBB	BUU BBB		NAA AAN	AUU AAB	X	X	X	X	13		A
1965	AAA BBA	AAB	AAA BBA	AAB		AAA BBA	UAB		AAA AAA	UA		X	X	X	13	AAA AAA	AA
1966		A		BB			BB			A					12		
1967										AAA AAA					10		
1968									AAA						10		
1969																	
1970		B															

OPERATED AT JULIACA MARCH-NOVEMBER 1959

LA QUIACA (LQ J2K)

-22.10 294.40

1.3-18.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1958																	
1959									B AAB		X				12		
									S								

LENINGRAD (LD 160)

59.95 30.70

0.5-20.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1945									MMM MMM	MMM MMM					4		
1946									MMM M	MMM M					6		
1956									M						8		
1957				B	A	X			M M MMM	AAA AAA	X		X	X	13		
1958	WWW WWN	NWW WWW	AAA AAN	NAA NNN	X				AAA AAN	NAA NNN	X		X	X	13		
1959	WWW WWW	WWW WWW	NNN AAA	ABA AAA	X				NNN AAA	AAA AAA	X		X	X	14		
1960	WWW WW	WW W	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	14		
1961	W W WWW	WWW WWW	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	14		
1962	W WWW	WWW WWW	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	14		
1963	WWW WWW	WWW W W	AAA AAA	AAA ANA	X				AAA AAA	AAA ANA	X		X	X	14		
1964	WWW WW	WWW WWW	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X		14		
1965	WWW WWW	W W WWW	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	14		
1966	WWW WWW	WWW WW	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	14		
1967	PPP PPP	PP PPP	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	14		
1968	W WW	WWW WWW	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	14		
1969	WWW WWW	WWW WW	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	14		
1970	P PP	WPP PPW	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	14		
1971	PPP PPP	PPP PPP	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X	X	14		
1972	PPW PPW	PPP WWW	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X		14		
1973	WWP PPP	PPP PPP	AAA AAA	AAA AAA	X				AAA AAA	AAA AAA	X		X		14		
1974	WWW WWW	W W	AAA A	A	X				AAA AMM	A	X				14		

LEYTE (28 411)

11.00 125.00

1.6-16.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1945		A AAA							A AAA	AAA					8		
1946	AAA AAA	AAA AAA							AAA AAA	AAA AAA					6		
1947	AAA AAA	AAA AAA								A AA					6		
1948	AAA AAA	S							AAA AAA	AAS					5		

For symbols see page 33

LINDAU (LI 050)

51.60 10.10 — 1.0-16.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1947										M	X						
1948									M M MMM	MM MMM	X						
1949									AAA AAA	AAA AAA					10		
1950									AAA AAA	AAA AAA					11		
1951									AAA AAA	AAA AAA					11		
1952									AAA AAA	AAA AAA					11		
1953									AAA AAA	AAA AAA					11		
1954									AAA AAA	AAA AAA					11		
1955									AAA AAA	AAA AAA					11		
1956									AAA AAA	AAA AAA					11		
1957		WWW WWW		AAA AAA					AAA AAA	AAA AAA	X				12		
1958	WWW WWW	WWW WWW	AAA AAW	WWW WWW					AAA AAA	AAA AAA	X				12		
1959			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X				12		
1960			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X		12		
1961			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X		12		
1962			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X		12		
1963			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X		12		
1964			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X		12		
1965			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X		12		
1966			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X		12		
1967			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X		12		
1968			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X		12		
1969			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X	X	12		
1970			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X		X	X	12		
1971			WWW WWW	WWW WWW					AAA AAA	AAA AAA			X		12		
1972			WWW WWW	WWW WWW					AAA AAA	AAA AAA					12		
1973			WWW WWW	WWW WWW					AAA AAA	AAA AAA					12		
1974			WWW WWW	W					AAA AAA	A					12		

LITTLE AMERICA (LA 77Q)

-78.20 197.80 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1957		AAA AAA		AAA AAA	X		AAA AAA			AAA AAA	X	X	X	X	13		
1958	AAA AAA	AAA AAA	AAA AAA	AAA AAA	X	AAA AAA	AAA AAA		AAA AAA	AAA AAA	X	X	X	X	13		
1959	S		S			S			S								

LONGYEARBYEN (LG 178)

78.20 15.70 — 0.68-24.6MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1956									A						9		
1957				WWW WWW						AAA AAA	X				11		
1958			WWW WWW	WWW WWW					AAA AAA	AAA AAA	X				11		
1959			WWW WWW	WWS					AAA AAA	ABS	X				11		

LOSHAN (29 329)

29.50 103.70

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1946									AAA AS						10		

LULEA (LU 165)

65.60 22.10 — 0.65-25.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1951									MMM MMM	MMM MMM							
1952										AAA AA					7		
1953									AAA AAA	AAA AAA					8		
1954									AAA AAA	A AAA					8		
1955									AAA AAA	AAA AAA					11		
1956									AAA A A	AAA AAA					8		
1957		BA							AAA AAA	AAA AAA	X				10		
1958	ABA AAA	BAA AAA		W WW					AAA AAA	AAA BAA	X				10		
1959	AAA AAA	AAA AAA	WWW WWW	WWW WWW					AAA AAA	AAA AAA	X				10		
1960	B								AAA AAA	AAA AAA	X				12		
1961	AAA AA								AAA AAA	AAA AAA	X		X		12		
1962	AAA AAA	BA AAA		WWW WWW	WWW				AAA AAA	AAA AAA	X		X		12		
1963	AAA B	BA							AAA AAA	AAA AAA	X		X		12		
1964				W WWW	WW				AAA AAA	AAA AAA	X		X		12		
1965			WW W W	WWW N	W				AAA AAA	AAA NAA	X		X		12		
1966	A AAA	AAA AAA	WW	W WWW	W				AAA BAA	AAA AA			X	X	12		

For symbols see page 33

LULEA (Continued)

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1967												
1968												
1969						AA S				X	12	

LWIRO
(LW 10K)

-2.30 28.80 1.25-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1952												
1953												
1954						AA AAA					22	
1955						AAA AAA AAA AAA					20	
1956						AAA AAA AAA AAA					20	
1957		WWW WWW				AAA AAA AAA AAA			X	X	20	
1958		WWN WWW WWW WWW				AAA AAA AAA ANA	X				21	
1959						AAN BAA AAA AAA	X				21	
1960						AAA AAA AAA AAA	X				21	
1961						AAA AAA AAA AAA	X		X	X	21	
1962						BNN NNN NNN NAA			X	X	21	
1963						ANN ABN NNN NNN			X		21	
1964						NNN NNA AAA AAA			X		21	
1965						AAA AAA AAA AAA	X		X	X	21	
1966						AAA AAA AAA AAA			X	X	21	
1967						AAA AAA AAA AAA			X		21	
						AAA AAA S			X		21	

LYCKSELE
(LY 164)

64.70 18.80 0.33-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1957		WWW WWW				AAA AAA AAA AAA	X				10	
1958		WWW WWW WWW WWW				AAA AAA AAA AAA	X				10	
1959		WWW WWW WWW WWW				AAA AAA AAA AAA	X				11	
1960		W				AAA AAA AAA AAA	X				12	
1961						AAA AAA AAA AAA	X		X		12	
1962		WW				AAA AAA AAA AAA	X		X		13	
1963		WWW WWW WWW WWW				AAA AAA AAA AAA	X		X		13	
1964		WWW WWW WWW WWW				AAA AAA AAA AAA	X		X		13	
1965		WWW WWW WWW WWW				AAA AAA AAA AAA	X		X		14	
1966						AAA AAA AAA AAA	X		X		14	
1967						AAA AAA AAA AAA	X		X		14	
1968						AAA AAA AAA AAA	X		X		14	
1969						AAA AAA AAA AAA	X		X		14	
1970						AAA AAA AAA AAA	X		X		14	
1971						AAA AAA AAA AAA			X	X	14	
1972						AAA AAA AAA AAA			X	X	19	
1973						AAA AAA AAA AAA			X	X	19	
1974						AAA AAA AAA AAA			X		19	
1975						AAA AAA AAA AAA			X		18	
						AAA					18	

MACAU
(MC 422)

22.20 113.60 1.6-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1958		WW WWW WWW				BA AAA AAA		X		X	13	
1959						AAA AAA AAA AAA	X				13	
1960						AAA NNN NNN NNN	X				13	
1961						A BA	X				13	

MACQUARIE IS
(MQ 55M)

-54.50 159.00 1.0-13.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1950						A AAA AAA					11	
1951						AAA AAA AAA AAA					11	
1952						AAA NNN NBB AAA					11	
1953						AAA BBA ABN AAA					11	
1954						BAA AAA AAA AAA					10	
1955						NAA BAA BBB BBA			X	X	10	
1956						AAA AAA AAA AAA					7	
1957		AA AAB				AAB BAB AAA AAA	X		X		13	
1958		BNB BBB BBN BBS				BNB BBB BBN BBS	X		X		13	

For symbols see page 33

MADRAS
(MD 313)

13.10 80.30 — 2.5-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1944						MMM MMM					2	
1945						MMM MMM MMM MMM					4	
1946						MMM MMM MMM MMM					3	
1947						MMM MMM MMM MMM					3	
1948						MMM MMM MMM MMM					3	
1949						MMM MMM MMM MMM					3	
1950						MMM MMM MMM MMM					3	
1951						MMM MMM MMM MMM					3	
1952						MMM MMM MMM MMM					3	
1953						MMM MMM MMM MMM					3	
1954						AAA AAA AAM AAA					3	
1956						MMM MMM MMM MMM					3	
1957		WWW WWW				AAA AAA AAA AAA	X	X		X	3	
1958		WWW WWW WWW WWW				AAA AAA AAA AAA	X	X		X	5	
1959		WWW WWW WWW WW				AAA AAA AAA AAA	X	X			5	
1960						AAA AAA ABB BBB	X	X		X	5	
1961						ABA BAA AAA AAB	X	X		X	5	
1962						ABA BAA BAA AAA		X		X	5	
1963						AAA AAA AAB BBB		X			5	
1964						AAN BBA NNN NNN		X			5	
1965						NNN NNN NNN NNN						
1966						NNN NBB BBB BNN	X				3	

MAKASSAR
(30 40N)

-5.20 119.50 — 1.0-16.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1944						MMM MMM MMM BS					5	

MANILA
(MN 414)

14.60 121.00 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1944						B MMM MMM MBS					5	
1946												
1947	AAA AAA AAA AAA					AA S					12	
1964	AAA AAA AAA AAA	AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X		X		13	AAR ARR RRR RRR
1965	AAA AAA AAA AAA	AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X		X		13	ARR RRR RRR RRR
1966	AAA AAA AAA AAA	AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X		X		13	RRR RRR RRR RAR
1967	AAA AAA AAA AAA	AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X		X		11	RRR RRR R RRR
1968	AAA AAA AAA AAA	AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X		X		14	RRR
1969	AAA AAA AAA AAA	AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X		X		16	
1970	AAA AAA AAA AAA	AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X	X	X		16	
1971	AAA AAA AAA AAA	AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X	X	X		16	
1972	AAA AAA AAA AAA	AAA AAA AAA AAA		AAA AAA AAA AAA		AAA AAA AAA AAA		X	X		16	
1973	AAA AAA AAA AAA	AAA AAA AAA AAA		AAA AAA AAA AAA		AAA AAA AAA AAA		X			18	
1974	AAA AAA AAA AAA	AAA AAA AAA AAA		AAA AAA AAA AAA		AAA AAA AAA AAA		X			18	
1975	AAA AA	AAA AA		AAA AA		AAA A		X			18	

REPLACED BAGUIO

MARION IS
(MR 140)

-46.87 37.85 — 1.6-19.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1957						AAB BBA	X				12	
1958						BBB NBS	X				6	

MAUI
(MA 720)

20.80 203.50 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1944	A AAA ABA AAA					A AAA AAA AAA		X			14	
1945	AAA AAA AAA AAA					AAA AAA AAA AAA		X			10	
1946	AAA AAA BBA AA					AAA AAA AAA AAA		X			9	
1947	AAA AAA AAA AAA					AAA AAA AAA AAA					12	
1948	AAA AAA ABA AAA					AAA AAA AAA AAA		X			12	
1949	ABA AAA AAA AAA					AAA AAA AAA AAA		X			12	
1950	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA		X			12	
1951	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA		X			12	
1952	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA		X			12	
1953	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA		X			12	
1954	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA					12	
1955	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA					13	

For symbols see page 33

MAUI (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1956	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					10				
1957	AAA	AAA	AAA	AAA			BBB	BWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	WBW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	WWW	WWA	AWW	AWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1963	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1964	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1965	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	15				
1966	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		15				
1967	AAA	AAA	AAA	AAA	WWW	WWW	WWB	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		15				
1968	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		15				
1969	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		15				
1970	AAA	AAA	AAA	AAA	WWW	WW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		18				
1971	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		18				
1972	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA		AAA	AA	AA	AAA	X	X	X		18				
1973	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		18				
1974	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA							X	X		18				
1975	AAA	A			WWW	W				AAA	A									X	X		18				

MAWSON
(MW 26P)

-67.60 62.90 1.6-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1958					WN	NNN	NNN	NNN							BN	NNN	NNN	NNN	X		X		13				
1959					NNN	NNN	NNN	NNN							NNN	BBB	BBB	BBB	X		X		3				
1960					NAN	NNA	AAA	AAA							BBN	NNA	AAA	AAA	X		X		11				
1961					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X	11				
1962		B			ANA	AAA	ABA	BAB							ABA	AAA	AAA	BAA	X		X	X	11				
1963					BNN	NNN	NNN	NNN							AAA	AAA	AAA	AAA	X		X		11				
1964					NNA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		13				
1965					AWW	WWW	WWN	WBW							AAA	AAA	AAA	AAA			X		11				
1966				A	NAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA			X		11				
1967					AAA	AAA	AAA	AAB							AAA	AAA	AAA	AAE			X	X	11				
1968															AAA	AAA	AAA	AAA			X		11				
1969															AAA	AAA	AAA	AAA			X	X	11				
1970															AAA	AAA	AAA	AAA			X	X	11				
1971															AAA	AAA	AAA	AAA			X	X	12				
1972															AAA	BAA	AAA	AAA			X		12				
1973															AAA	AAA	AAA	AAA			X		12				
1974															A						X		12				

MAYNARD
(MY J43)

42.43 288.55 1.5-12.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1970																		BAA			X	X	17				
1971															AAA	AAA	AAA	AAA			X	X	17				
1972															AAA	AAA	AAA	AAA			X		17				
1973															AAA	AAA	AAA	AAA			X		17				
1974															AAA	AAA					X		17				
1975																	S										

REPLACED BILLERICA

MEANOOK
(ME 855)

54.60 246.70 1.6-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957			AAA	AAA				B					B					A	X				10				
1958	AAA	AAA	AAA	AAA	BAA	AAA	AAA	AAA		BAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA			X	X	8				
1959	WS				AS					AS					AS								7				

MEGURO
(31 534)

35.60 139.70

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1934																M	NBN	BBB					1				
1935																M	MMM	MMM					1				
1936															MMM	M	BB	BMB					1				
1937															BBM	BBM	BBB	BBM					1				
1938															MMM	MMM	MMM	MMM					1				
1939															MMM	MMM	MMM	MMM					1				
1940															MMM	MMM	MMM	MMS					1				

For symbols see page 33

MEXICO CITY (MX 919)

19.40 260.30 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1958											BBB	NBN	BBB					BB	X		X		13				
1959					AA	BAA	AAA	AAA	X	AAA	BAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X		13				
1960					ABA	AAA	AAA	AAB	X	ABA	AAA	AAA	AAB		AAA	AAA	AAA	AAA	X		X		13				
1961					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X		13				
1962					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X		13				
1963					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X		13				AAA
1964					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X		X		13	A			AA
1965					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X		X		13	AAA	AAA	AAA	AAA
1966					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X		13	AAA			
1967					AAA	AA	AAA	AAA	X	AAA	AA	AAA	AAA		AAA	AAA	AAA	AAA	X		X		13				
1968					AAA	ABA	BAA	AAA	X	AAA	ABA	BAA	AAA		AAA	ABA	AAA	AAA	X		X		13			R	RRR
1969					AAA	AAA	BAA	AAA	X	AAA	AAA	BAA	AAA		AAA	AAA	AAA	AAA	X		X		13	AAA	AAA	AAA	AAA
1970					AAA	ABA	BAA	AAA	X	AAA	ABA	BAA	AAA		AAA	AAA	AAA	AAA	X	X	X		14	RRR	RRR	RRR	RRR
1971					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		16	RRR	RRR	RRR	RRR
1972					BAA	AAA	AAA	AAA	X	BAA	AAA	AAA	AAA		BAA	AAA	AAA	AAA		X	X		16	RRR	RRR	RRR	RRR
1973					AAA	ABB	BBB	BBB	X	AAA	ABB	BBB	BBB		AAA	AAA	AAA	AAA		X			16	RRR	RRR	RRR	RRR
1974					BBB	BBB	BBB	BBB		BBB	BBB	BBB	BBB		AAA	AAA	AAA	AAA		X			16	RRR	RRR	RRR	RRR
1975					BBB					BBB					AAB					X			16	RRR	R		

MIEDZESZYN (MZ 152)

52.20 21.20 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1958			WWW	WWW			WWW	WWW								A	AA	B	X				5				
1959	WWW	W	WWW	WWW	WWW	WWW	WWW	WWW							AAB	ANA	AAA	AAB	X				5				
1960															AAA	AAA	AAA	AAA	X		X		12				
1961															AAA	AAA	AAA	AAA	X		X		13				
1962															AAA	AAA	AAA	AAA	X		X		13				
1963															AAA	AAA	AAA	AAA	X		X		13				
1964															AAA	AAA	AAA	AAA	X		X		13				
1965															AAA	AAA	AAA	AAA	X		X		13				
1966															AAA	AAA	AAA	AAA	X		X		13				
1967															AAA	AAA	AAA	AAA	X		X		13				
1968															AAA	AAA	AAA	AAA	X		X		13				
1969															AAA	AAA	AAA	AAA	X		X		13				
1970															AAA	AAA	AAA	AAA	X		X	X	13				
1971															AAA	AAA	AAA	AAA	X		X	X	13				
1972															AAA	AAA	AAA	AAA	X		X		13				
1973															AAA	AAA	AAA	AAA			X		13				
1974															AAA	AAA	AAA	AA					13				

MILLSTONE HILL (MH J45)

42.60 288.50 — 1.0-12.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1963			BAA	AAA	AAA																						
1964	AAA	AAA	AAA	AAA																							
1965	AAA	AAA	AAA	AAA																							
1966	NAA	AAA	AAA	AAB																							
1967	AAA	AAA	AAA	BBB																							
1968	BAA	ABA	AAA	AAB																							
1969	AAA	BBA	AAA	ABA																							
1970	AAA	AAA	AAA	AAA																							
1971	AAA	AAA	AAA	AAA																							
1972	AAA	AAA	AAA	AAA																							
1973	AAA	AAB	AAA	AAA																							
1974	AAA	AAA	BAA	AAA																							
1975	AAA																										

MIRNY (MI 360)

-66.50 93.00 — 1.0-13.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957		W	WWW	WWW		W	WWW	WWW	X						AA	AAA	AAA	AAA	X		X		12				
1958	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1959	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1961	WWW	WWW	WW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1962	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1963	WWW	WWW	WWW		AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		12				
1966	WW	W	W	WWW	WWW	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		13				
1967	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		13				
1968	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		13				

For symbols see page 33

MIRNY (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1969	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		13				
1970	WWW	WWW			AAA	AAA			X						AAA	AAA			X				13				
1973	S				S										S												

MOSCOW
(MO 155)

55.50 37.30 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1944															M	MMM	MMM	MMM					1				
1945															AMA	AAA	AAA	AAA					5				
1946															AAA	AAA	AAA	AMA					8				
1956															AAA	AAA	AAA	AAA					14				
1957			WWW	WWW			AAA	AAA							MMM	MMM	AAA	AAA	X				14				
1958	WWB	WWW	BWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X	14				
1959	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X	14				
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1961	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1962	WWW	W W	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1963	WWW	WWW	WWW	BWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AA		X		X		14				
1964	WWA	AAA	AAA	AA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1966	WWW	BBW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1967	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1968	WWW	WWW	BWW	BBB	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1969	BBB	BBB	BBB	BB	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1970	BBB	BWB	BBB	BBB	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1971	BBB	BBB	BWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1972	WWW	WWW	WBW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1973	WWB	WBB	BBB	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1974	WWW	BWW	BBW		AAA	AAA	AAA		X						AAA	AAA	AAA		X				14				

MUNDARING
(MU 43K)

-31.99 116.31 — 1.6-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1959																AAA	AAA	AAA	X		X		8				
1960															AAA	AAA	AAA	AAA	X		X		6				
1961															AAA	AAA	AAA	AAA	X		X		6				
1962			E					A							AAA	AAA	AAA	AAA	X		X	X	6				
1963	B		A	B											AAA	AAA	AAA	AAA	X		X		6				
1964															AAA	AAA	AAA	AAA	X		X		13				
1965				A											AAA	AAA	AAA	AAA	X		X		13				
1966				B				A							AAA	AAA	AAA	AAA	X		X		5				
1967				B											AAA	AAA	AAA	AAA	X		X		5				
1968															AAA	AAA	AAA	AAA			X		5				
1969															AAA	AAA	AAA	ABA			X		7				
1970															AAA	AAA	AAA	AAA			X	X	7				
1971															AAA	AAA	AAA	AAA			X	X	7				
1972															AAA	AAA	AAA	AAA			X	X	7				
1973															AAA	AAA	AAA	AAA			X		6				
1974															AAA	AAA	AAA	AAA					6				
1975															AAA								6				

REPLACED WATHEROO

MURMANSK
(MM 168)

69.00 33.00 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1956															A	AAA	A		X				3				
1957			WWW	WWW			AAA	AAA	X						MMM	M	AAA	AAA	X				13				
1958	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1959	WWW	WWW	WWW	WWW	AAA	AAA	ABA	AAA	X						AAA	AAA	ABA	AAA	X		X	X	14				
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	15				
1961	NWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	15				
1962	WWW	WWW	WWW	WWW	AAA	AAA	AAA		X						AAA	AAA	AAA	AAA	X		X	X	15				
1963	WWW	WWW	WWW	WWW	AAA	AAA	A A	AAA	X						AAA	AAA	AAA	AA	X		X	X	15				
1964	WWW	WWW	WWW	WWW	AAA	AA	AAB	AAA	X						AAA	AAA	AAA	AAA	X		X		15				
1965	WWW	B W	WWW	BWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	15				
1966	BWB	BWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	15				
1967	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	15				
1968	WWW	WWW	WWW	BBB	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	15				
1969	WBB	BBW	BWB	BBW	AAA	AAA	ANA	AAA	X						AAA	AAA	ANA	AAA	X		X	X	15				
1970	WWW	WWW	BBW	BBW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	15				
1971	WWW	BBW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		15				
1972	WWW	WWW	W	WWW	AAA	AAA	A A	A	X						AAA	AAA	A A	A	X				15				
1973			W	BWW			A	A	X								A	A	X				15				
1974		B				AA			X							AA			X				15				
1975															A				X				10				

For symbols see page 33

NAIROBI
(NR 10J)

-1.28 36.83 — 1.0-15.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1952															AA	AA							10				
1953																	AA	AA					10				
1954															A		AAA	A	A				10				
1955															A	A	AA	AAA	AAA				10				
1956															AAA	A							10				
1957															AA	AA							10				
1964	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				14				
1965	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW	X						AAA	A	A	AAA	AAA	X			14				
1966															AAA		AA	AAA	AAA	X			14				
1967															AAA	AAA	AAA	AAA	AAA	X			14				
1968															AAA	AAA	A			X			14				

NANKING
(32 432)

32.10 119.00 — 1.7-16.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1947																	A	AAA					12				
1948															AAA	AAA	AAA	AAA					12				
1949															S												

NARSSARSSUAQ
(NQ J61)

61.20 314.60 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1950			U	UUA									A										12				
1951	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA										14				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA										14				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA										12				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA										12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA										13				
1956	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA										9				
1957	AAA	ABN	NBA	AAA	AAA	ABN	NBA	BAA	X	AAA	AAN	NBA	AAA				NBA	AAA	X		X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	11				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	11				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	11				A
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	13	A	RAA	AAA	AAA
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	BAA	X	AAA	AAA	AAA	BAA		AAA	AAA	AAA	AA	X		X	X	7	AAA	AAA	AAA	
1964	AAA	ABA	AAA	AAA	AAA	ABA	AAA	AAA	X	AAA	ABA	AAA	AAA		AAA	ABA	AAA	AAA	X		X	X	7				AAA
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	7	AAA	AAA	AAA	AAA
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	7	RRA	AAA	AAA	AAA
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	7	AAA	ARR	RRR	RRR
1968	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	7				
1969	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X	7				
1970	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AA					X	X	13				
1971	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA			X	X	16				
1972	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA		A	AAA			X	X	16				
1973	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AA		AAA			X	X	16				
1974	AB		A	AAA	AA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X							X	X	16				
1975						AA			X	AA				X							X	X	12				

NATAL
(NL AON)

-5.70 324.80 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1958		B	ABE	AAA	AAA		B	BB	B		BAB		B	B	B	BBA	AAB		B	B	B	BAA	AAA	X	X	X	X	13
1959	ANN	BNB	BBN	BAA	BNN	BNB	NBN	BAA		BNN	BNB	NBN	BAA		BNN	ANA	AAN	AAA	X	X	X	X	13				
1960	AAA	ABN	AAA	AAA	AAA	ABN	AAA	AAA		AAA	ABN	AAA	AAA		AAA	ABN	AAA	AAA	X		X		13				
1961	AAB	BAA	AUA	BBA	BBA	BAA	AUA	BBA		BBA	BAA	BUA	BBA		BBA	BAA	BUA	BBA	X		X	X	13				
1962	AAB	AAA	BAA	AAA	AAA	AA	AA	BAB		AAA	AA	AA	BAB		AAA	AAA	AAA	AAA	X		X	X	13				
1963	UUA	ABB	AAA	AAB	UUB	A	B	ABA	ABB	X	UUB	A	B	AAA	ABB	X	UUA	A			X	X	13				
1964	NBA	BAA	AAA	AAB	NBA	EBA	ABB	BAA	X		NBA	BBA	ABB	BAA	X								13				
1965	BBN	BA			BBN	BA					BBN	BA											13				
1966																											
1967																											
1968																											
1969				BBA																							
1970	AAA	AAB	AAB	AAB																							
1971	BBB	BBA	AAA	AAA																							
1972	AAN	BBB	BBB	BBB																							

CLOSED, 1973

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND

NHA TRANG
(33 412)

12.25 109.20 — 1.25-20MHZ

1951																	AAA	AAA					9				
1952															AAA	AAA	AAA	AAA					9				
1953															AAA	AAA	AAA	AAA					9				
1954															AAA	AAA	AAA	AAA	X				9				
1955															AAA	AAA	AAA	AAA					9				
1956															AAA	A							12				

NORFOLK IS
(NI 63v)

-29.00 168.00 — 1.0-20.0MHZ

1964	W	W	W	W											BA	AAE	AAA	AAA	X	X			13				
1965															AAA	AAA	AAA	AAA	X	X			13				
1966															AAA	AAA	AAA	AAA	X	X			5				
1967															AAA	BAA	AAA	AAA	X	X			5				
1968															AAA	AAA	AAA	AAA		X	X		5				
1969															AAA	AAA	AAA	AAA		X			7				
1970															AAA	AAA	AAA	AAA		X	X		7				
1971															AAA	AAA	AAA	AAA		X	X		7				
1972															AAA	AAA	AAA	AAA		X	X		7				
1973															AAA	AAA	AAA	AAA		X			7				
1974															AAA	AAA	AAA	AAA					6				
1975															ABA								6				

NORILSK
(NO 369)

69.40 88.10 — 1.0-10.0MHZ

1968					QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ									
1969					QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ									
1970					QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ									
1971					QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ									
1972					QQQ	QQQ	AAQ	QQQ	X						QQQ	QQQ	AAQ	QQQ	X				14				
1973					QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ									

NOVOKAZALINSK
(NK 246)

45.77 62.12 — 1.0-18.0MHZ

1964															A	AAA	AAA	AAA	X	X			14				
1965															AAA	AAA	AAA	AAA	X	X			14				
1966															AAA	AAA	AAA	AAA	X	X			14				
1967															AAA	AAA	AAA	AAA	X	X			14				
1968															AAA	AAA	AAA	AAA	X	X			14				
1969															AAA	AAA	AAA	AAA	X	X			14				
1970															AAA	AAA	AAA	AAA	X	X			14				
1971					AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X			14				
1972					AAA	AAA	AAA	A							AAA	AAA	AAA	A	X	X			14				

NOVOSIBIRSK
(NS 355)

54.60 83.20 — 1.0-10.0MHZ

1969					QQ	QQQ	QQ	QQQ							QQ	QQQ	QQQ	QQQ									
1970					QQQ	QQQ	QQQ	QNQ							QQQ	QQQ	QQQ	QNQ									
1971						Q	Q	Q								Q	Q	Q									
1972					Q	QQQ	QBQ		X			B		X	Q	QQQ	QQQ						14				

NURMIJARVI
(NU 159)

60.50 24.60 — 1.0-16.0MHZ

1957							WWW	WAA	X						AAA	AAA	AAA	AAA	X				10				
1958					AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X				10				
1959					AAA	AWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				10				
1960						WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X				10				
1961					WWW	WWW	WWW	WW	X						AAA	AAA	AAA	AAA	X	X			11				
1962					WWW	W			X						AAA	AAA	AAA	AAA	X	X			11				
1963				W											AAA	AAA	AAA	AAA	X	X			11				

For symbols see page 33

NURMIJARVI (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1964	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		11				
1965	WWW	WWW			WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		11				
1966					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		11				
1967					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		11				
1968					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X		11				
1969					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X		11				
1970					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X	X	11				
1971					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X	X	11				
1972					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X	X	12				
1973					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X		12				
1974					WWW	WWW	WWW	WWW							BBA	AAA	AAA	AAA					12				
1975					W										A								12				

OKINAWA
(OK 426)

26.30 127.80 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1946		AAA	AAA	AAA											AAA	AAA	AAA	AAA		X			5				
1947	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA		X			5				
1948	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA		X			5				
1949	AAA	AAA	A												AAA	AAA	ANN	NAA		X			5				
1950	B	NNN	NNA	AAA									AAA		AAA	NNN	NNA			X			12				
1951	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA							X			12				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1954	AAB	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					13				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					13				
1956	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					11				
1957	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAU	UUU	UUU	UUU	AAU	UUU	UUU	UUU	X	AAU	UUU	UUU	UUU		AA				X	X	X	X	13				
1961	AAA	UUU	AAA	AAU	AAA	UUU	AAA	AAU	X	AAA	UUU	AAA	AAU		AAA	AA	AAA	AA	X	X	X	X	13				
1962	UAA	AAA	AAA	AAA	UAA	AAA	AAA	AAA	X	UAA	AAA	AAA	AAA		AA	AAA	AAA	AAA	X	X	X	X	13				
1963	AAA	AAA	ABA	AAA	AAA	AAA	ABA	AAA	X	AAA	AAA	ABA	AAA		AAA	AAA	ABA	AAA	X	X	X	X	13				A
1964	BBA	AAA	AAA	AAA	BBA	AAA	AAA	AAA	X	BBA	AAA	AAA	AAA		BBA	AAA	AAA	AAA	X	X	X	X	13	A	A		
1965	AAA	A	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13	A			
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		13				A
1967	AAA	AAA	AAA	AA	AAA	AAA	AAA	AAB	X	AAA	AAA	AAA	AAB		AAA	AAA	AAA	AA	X	X	X		13				
1968	AAA	ABA	AAA	AAA	AAA	ABA	AAA	AAA	X	AAA	ABA	AAA	AAA		AAA	ABA	AAA	AAA	X	X	X		13				
1969	NNB	NNN	NNN	BNA	NNB	NNN	NNN	BNB		NNB	NNN	NNN	ANB		NNA	NNN	NNN	NNA	X	X	X		13				
1970	ANN	NNA	NNN	NBA	ANN	NNA	NNN	NBA		ANN	NNA	NNN	NBA	X	ANN	NNA	NNN	NNN	X	X	X						
1971	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		13				
1972	AAA	AAB	PPP	PPP	AAA	AAA	AAA	AAA		AAA	AAB			X		A	AAA	AAA	X	X			12				
1972	AAA	AAB	PPP	PPP	AAA	AAA	AAA	AAA		AAA	AAB			X		A	AAA	AAA	X		X		12				
1973	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1974					AAA	AAA	AAA	A							AAA	AAA	AAA	AAA	X				14				
1975															AAA								14				

OTTAWA
(OT 945)

45.40 284.10 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1942															AAA	AAA	AAA	AAA					10				
1943															AAA	AAA	AAA	AAA					11				
1944															AAA	AAA	AAA	AAA					11				
1945															NNA	AAA	AAA	AAA					11				
1946															AAA	AAA	AAA	AAA					11				
1947															AAA	AAA	AAA	AAA					14				
1948															AAA	AAA	AAA	AAA					15				
1949															AAA	AAA	AAA	AAA	X				12				
1950				A	AAA										AAA	AAA	AAA	AAA	X				13				
1951	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					14				
1952	A														AAA	AAA	AAA	AAA					13				
1953															AAA	AAA	AAA	AAA					11				
1954															MAA	MMA	AAA	AAA					11				
1955															AAA	AAA	AAA	AAA					11				
1956															AAA	AAA	AAA	AAA					9				
1957			AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				10				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				10				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		11				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		10				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		10				
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		10				
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		10				
1965	AAA	AAA	AAA	AAA	BAA	AAA	AAA	AAA							BAA	AAA	AAA	AAA	X		X	X	10				
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	11				
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	11				
1968	BAA	AAA	AAA	AAA	BAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	11				
1969	AAA	AAA	BAA	AAA	AAB	AAA	BAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	11				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND						JFM AMJ JAS OND
OTTAWA (Continued)																								
1970	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X	11		
1971	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X	11		
1972	AAA	BAA	BAA	ABA	AAA	BAA	BAA	BBB	X						AAA	AAA	AAA	AAA		X	X	11		
1973	AAB	BBA	AAB	AAB	BAB	BBA	AAB	AAB	X						AAA	BAA	AAA	AAA		X		11		
1974	BBB	BBA	AAA	AAA	BBB	BBB	BBB	BAA	X						BBB	AAA	AAA	AAA		X		11		
1975					AA										AAA	A				X		11		

OUAGADOUGOU (OU 012)

12.37 358.47 — 1.2-17.0MHZ

1966																B	BBA	AAA		X	X	12		
1967															BBA	BBA	AAB	NBA		X	X	12		
1968															AAA	AAA	AAA	AAA		X	X	12		
1969															BAA	ABA	AAA	AAA		X	X	12		
1970															AAA	BAA	AAA	AAA		X	X	13		
1971															AAA	AAA	ABB	AAB		X	X	14		
1972															BAA	AAA	AAA	AAA		X		14		
1973															ABA	AAA	AAA	AAA				14		

PALAU IS (34 40T)

7.30 134.50

1939																	BNM	MMM				1		
1940															MMM	MMB	MMM	MMM				1		
1941															MMM	MMM	BBM	MMM				5		
1942															MMM	MMM	MMM	MNM				5		
1943															MMM	MMM	BMM	BMM				5		
1944															MMM	MMS						5		

PALMYRA (35 705)

5.38 197.82 — 1.0-18.0MHZ

1946				AA														AA				12		
1947	A	A	AAA	A A AAA											AAA	AAA	AAA	AAA				12		
1948	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA				12		
1949	AAA	AAA	AAA	AAS											AAA	AAA	A A	AAS				12		

PANAMA (PN 909)

9.40 280.10 — 1.0-25.0MHZ

1951			A	AAA	AAA							A	AAA	AAA								12		
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA									12		
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA									13		
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA									13		
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA									13		
1956	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA									10		
1957	AAA	AAA	AAA	AAA				AAA	AAA	X	AAA	AAA	AAA	AAA				AAA	AAA	X	X	X	X	13	
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	X	X	X	13	
1959	S				S						S				S									

PARAMARIBO (PM J06)

5.80 304.80 — 0.6-20.0MHZ

1957							WWW	WWW									AAA	AAA	X			15		
1958					WWW	WWW	WWW	WWW							AAA	AAA	BAA	AAA	X			12		
1959															AAA	AAB	NAA	AAA	X		X	12		
1960															AAA	AAA	AAA	AAA	X		X	12		
1961															AAA	AAA	AAA	ABA	X		X	12		
1962															AAA	AAN	NNN	NNN	X		X	12		
1964					NWW	WWW	WWN	WWW	X		NAA	AAA	AAN	AAA	X	BAA	AAA	AAB	AAA	X	X	14		
1965					NNW	NWW	WWW	WNW								NNA	NAA	AAA	AAA	X	X	14		
1966					W				X							AAA	AAA	AAA	AAA	X	X	14		
1967				BB												BAA	ABA	AAA	AAA	X	X	14		
1968																ABB	AAB	BNN	NNN	X	X	14		
1969																NNN	NNN	NNN	NNN			14		
1970																NNN	NNN	NNN	AA		X	14		

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND

PARAMUSHIRO
(36 550)

50.10 155.30 — 1.0-16.0MHZ

1943																		MM					3				
1944															MMM	MMB	MBM	S					3				

PARIS SACLAY
(SC 047)

48.10 2.30 — 1.0-25.0MHZ

1960																A	AAA	AAA	X		X		12				
1961															AAA	AAA	AAA	AAA	X		X	X	12				
1962															AAA	AAA	AAA	AAA	X		X	X	12				
1963															AAA	AAA	AAA	AAA	X		X		12				
1964															AAA	AAB	BAB	NAA	X		X		12				
1965															AAA	AAA	AAA	BAN	X		X		12				
1966															BBA	AAA	BAA	ABA	X		X	X	12				
1967															AAA	AAA	AAN	NAB	X		X	X	12				
1968															BAA	AAA	AAA	AAA	X		X	X	12				
1969															AAB	AAA	AAA	AAA			X	X	12				
1970															AAA	AAA	AAB	ABA			X		12				

REPLACED BY LANNION

PEIPING
(37 440)

39.90 116.40 — 2.3-12.3MHZ

1946																AAA	ABA	AAA					2				
1947															AAA	AAA	AAA	AAA					2				
1948															AAA	AAA	AAA	AAS					1				

PENANG
(38 305)

5.50 100.40 — 1.0-16.0MHZ

1944															B	MMM	MMM	MMM					4				
1945															MMB	MBS							5				

PESHAWAR
(39 234)

34.00 71.50 — 1.8-16.0MHZ

1945																		M	MMM				2				
1946															MMM	MMM	MMM	MMM					4				
1947															MMM	MS							4				

PITCAIRN IS
(40 82N)

-25.00 230.00 — 1.0-13.0MHZ

1944																		AAA					10				
1945															AAA	AAA	AAA	AAS					10				

PLATTEVILLE
(PV 842)

40.01 254.70 — 1.5-20.0MHZ

1970									BBB																		
1971		BB	B		B																						

INTERMITTENT OPERATION

POINT ARGUELLO
(PA 836)

35.60 239.40 — 2.0-32.0MHZ

1963					AAA	AAA					B	B		BA	X												A
1964		AAA	ABA	AAA	AAA		ABA	ABA	ABB	BBA	X							A					1		AA	A	
1965		AAA	AAA	AAA	AAA		AAA	AAA	AAA	ABB	X														AAA	AAA	AAA	AAA

For symbols see page 33

POINT ARGUELLO (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1966	AAA	AAA	AAA	AAA	BAA	AAA	AUA	AAA	X															AAA	AA		
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X									5			A	AA
1968	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X									5				
1969	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X									5				
1970	AAA	AAB	AAA	AAA						AAA	AAA	AAA	AAA	X									8				
1971	AAA	AAA	AAA	AAA				WWW		AAA	AAA	AAA	AAA	X						X	X		8				
1972	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA	X						X	X		16				
1973	AAA	AAA	AAA	AAA	WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA	X	AA	A		AA	AAA	X	X		18				
1974	AAA	AAA	AAA	AAA	WWW	W				AAA	AAA	BBB	AAA										14				
1975	AAA									A	BA												14				

POITIERS
(PT 046)

46.57 .35 1.6-17.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1948																	AAA	AAA					16				
1949															AAA	AAA	AAA	AAA					16				
1950															AAA	AAA	AAA	AAA					14				
1951															AAA	AAA	AAA	AAA					7				
1952															AAA	AAA	AAA	AAA					9				
1953															AAA	AAA	AAA	AAA					9				
1954															AAA	AAA	AAA	AAA					9				
1955															AAA	AAA	ANA	AAA					9				
1956															AAA	AAA	AAA	AAA					9				
1957							WWW	WWW	X						AAA	AAA	AAA	AAA	X				11				
1958					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		11				
1959															AAA	AAA	AAA	AAA	X		X		11				
1960															AAA	AAA	AAA	AAA	X		X	X	11				
1964															A												
1968															AAA	AAA	AAA	AAA			X	X	12				
1969															AAA	AAA	AAA	AAA			X	X	12				
1970															AAA	AAA	AAA	AAA			X	X	12				
1971															AAA	AAA	AAA	AAA			X	X	13				
1972															AAA	AAA	AAA	AAA			X		13				
1973															AAA	AAA	AAA	AAA			X		13				
1974															AAA	AAA	AAA	AAA					13				

POPAYAN
(PP 902)

2.45 283.38 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1970		BB	BBA	AAB	AA						UU	U											13				
1971			B	BB	BBA																						
1972	BB			B	BBB								B	BBB									13				
1973	BBB	BBB	B	B	BBB					BBB	BB	B	B	BBB									17				
1974	BBB	B								BBB	B	B											17				

REPLACED BOGOTA

PORT MORESBY
(PY 50R)

-9.40 147.10 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1961																BB	AAA	AAA	X		X	X	11				
1962				B											AAA	AAA	AAA	AAA	X		X		7				
1963															AAA	AAA	AAA	AAA	X		X		7				
1964															AAA	AAA	AAA	AAA	X		X		11				
1965															AAA	AAB	BAA	AAA	X		X		11				
1966				A											AAA	AAA	AAA	AAA	X		X		5				
1967															AAA	AAA	AAA	AAA	X		X		5				
1968															AAA	AAA	AAA	AAA			X	X	5				
1969															AAA	NBN	BAA	AAB			X	X	7				
1970															AAA	AAA	AAA	ANB			X	X	7				
1971															AAA	AAA	AAA	ABB			X	X	7				
1972															BAA	AAB	AS				X	X	7				

PORTAGE LA PRAIRIE
(41 950)

49.90 261.70 1.2-16.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1946																	A	AAA					12				
1947															AAA	AAA	AAA	AAA					13				
1948															AAA	AAA	AAA	AAA					13				
1949															AAA	AAA	NAA	AAA	X				13				
1950															AAA	AAA	AAA	AAA					13				
1951															AAA	S							12				

For symbols see page 33

PORT STANLEY (PS J5J)

-51.70 302.20 — 0.25 - 20.25 MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1945																		A					4				
1946															AA	AAA	AAA						2				
1947																	AA	AAA					2				
1948															AAA	AAA	AAA	AAB					4				
1949															BAA	AAA	AAA	AAA					4				
1950															AAA	AAA	AAA	AAA					4				
1951															AAA	AAA	AAA	AAA					4				
1952															AAA	AAA	AAA	AAA					4				
1953															AAA	AAA	AAA	AAA					4				
1954															AAA	AAA	AAA	AAA					4				
1955															AAA	AAA	AAA	AAA					4				
1956															AAA	AAA	AAA	AAA					4				
1957			WWW	WWW			WWW	WWW							AAA	NNN	AAA	AAA	X				8				
1958	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				8				
1959	WWW	WWW	WWW	WWW	W										AAA	AAA	AAA	AAA	X				8				
1960	WWW	WWW	WWW	WWW											AAA	AAA	AAA	AAA	X				8				
1961	WWW	W													AAA	AAA	AAA	AAA	X		X		8				
1962															AAA	AAA	AAA	AAA	X		X		8				
1963	B														AAA	AAA	AAA	AAA	X		X		12				
1964	WWW	WWW	WWW	WWW			WWW	WWW							AAA	AAA	AAA	AAA	X		X		12				
1965	WWW	WWA	AWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		14				
1966	WWW	WWW	WWW	W88	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		14				
1967	P	WWW	W		WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X	X	13				
1968	WWW	WWW	WWW	WW	NWW	WN	WWW	WWW							NAA	ANB	AAA	AAA	X		X		13				
1969	WWW	WWN	WWW	WWW	WWW	WWN	WWW	WWW							AAA	AAE	AAA	AAA	X		X	X	14				
1970	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X	X	14				
1971	WW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		14				
1972	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		14				
1973	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X		14				
1974	WWW	WWW	WWW	WWW	WW	WW	WWW	WWW							AAA	AAA	AAA	AAA					14				
1975	W														A								14				

PRINCE RUPERT (42 854)

54.30 229.70 — 1.0-10.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1945															AA	AAA	AAA	AAA					13				
1946															AAA	AAA	AAA	AAA					13				
1947															AAA	AAA	AAA	AAA					13				
1948															AAA	AAA	AAA	AAA					13				
1949															AAA	AAA	AAA	AAA	X				13				
1950															AAA	AAA	AAA	AAA	X				13				
1951	AA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X				13				
1952	A														AAA	AAA	AAA	AAA					12				
1953															AAA	AAA	AAA	AAA					10				
1954			S												AAA	AAS							10				

PROVIDENYA (PD 664)

64.40 186.60 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957				W			WW	WWW	X							MM	AAA	AAA	X		X	X	13				
1958					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	13				
1959			WW	WWW	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	13				
1960	WWW	WWW	WWW	WWW	WW	WWW	WWW	WWW	X						BAA	AAA	AAA	AAA	X		X	X	11				
1961	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	14				
1962	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X	X	14				
1963	W W	WWW	WWW	WWW	W W	WWW	WWW	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1966	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1967	WW	WWW	WWW	WW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1968	WWW	WWW	WWW	WWW	AAA	AAA	AAB	AAA	X						AAA	AAA	AAB	AAA	X		X	X	14				
1969	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1970	WW	WW			AA	AA			X						AA	AAA	AAA	AAA	X		X	X	14				
1971						AA			X							AA			X				14				
1972															MMM												

PRUHONICE (PQ 052)

50.00 14.56 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1958	A	AAA	AAA	AAA												AAA	AAA	AAA			X		5				
1959	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X		X	X	11				
1960	AAA	AAA	AAA	AA											AAA	AAA	AAA	AAA	X		X	X	11				

For symbols see page 33

YEAR	IONOGRAMS	f-PLOTS		ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS		TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC		PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES
	JFM AMJ JAS OND	JFM AMJ JAS OND	MICRO.	JFM AMJ JAS OND	MICRO.	JFM AMJ JAS OND	MICRO.	HR. VALUES	MEDIANS			JFM AMJ JAS OND
PRUHONICE (Continued)												
1961						AAA AAA AAA AAA			X	X	6	
1962						AAA AAA AAA AAA	X		X		6	
1963						AAA AAA AAA AAA	X		X		6	
1964						AAA AAA AAA AAA	X		X		9	
1965						AAA AAA AAA AAA	X		X		10	
1966						AAA AAA AAA AAA	X		X		10	
1967						AAA AAA AAA AAA	X		X		10	
1968						AAA AAA AAA AAA	X		X	X	10	
1969						AAA AAA AAA AAA	X		X		10	
1970						AAA AAA AAA ABB	X		X	X	10	
1971						NNA AAA ABA AAA	X		X	X	10	
1972						AAA AAA AAA AAA			X		10	
1973						AAA AAA AAA AAA			X		10	
1974						AAA AAA AAA AA					10	
PUERTO RICO (PR J18) — 18.50 292.80 — 1.0-25.0MHZ												
1941						A AAA AAA AAA	X				4	
1942						AAA AAA AAA AAA	X				13	
1943						AAA AAA AAA AAA	X				10	
1944						AAA AAA AAA AAA	X				11	
1945						AAA AAA AAA AAA	X				11	
1946						AAA AAA AAA AAA	X				11	
1947						AAA AAA AAA AAA	X				8	
1948						AAA AAA AAA AAA	X				8	
1949						AAA AAA AAA AAA	X				8	
1950						AAA AAA AAA AAA	X				8	
1951	NNN AAA AAA AAA			NNN AAA AAA AAA		NNN AAA AAA AAA	X	X			12	
1952	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA	X	X			12	
1953	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA	X	X			12	
1954	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA	X				12	
1955	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA	X				12	
1956	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA	X				10	
1957	AAA AAA AAA AAA		WB	AAA AAA AAA AAA		AAA AAA AAA AAA	X	X	X	X	13	
1958	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA	X	X	X	X	13	
1959	AAA AAA AAA AAA			A AAA				X	X	X	8	
1960	AAA AAA AAA AAA											
1961	AAA AAA AAA AAA											
1962	AAA AAA AAB NBA											
1963	AAA AAB S											
QUETTA (QT 230) — 30.20 67.00 — 0.7-24.0MHZ												
1957						MMM	X				12	
1958						MMM MMM MMM MMM	X				12	
1959						MMN NNN NNN NNN	X				12	
1960						NNN NNN MMM MNN	X				12	
1961						NNN NNN NNN MNN	X				12	
1962						NNN NNM MNN NNN	X				12	
RABAT (RT 034) — 33.90 353.90 — 1.7-16.0MHZ												
1958		WW WWW WWW WWW	X			AA AAA AAA AAA	X				12	
1959			W X			AAA NNN AAA AAA	X				12	
1960		W	X			AAA AAA AAA AAA	X		X	X	12	
1961						QQQ QQQ QQQ QQQ						
1962						QQQ QQQ QQQ S						
RANGOON (43 316) — 16.80 96.50 — 1.0-16.0MHZ												
1943						B NNN MMM					6	
1944						MMM MNM MMM MMM					4	
1945						S						

For symbols see page 33

RAROTONGA (RA 72J)

-21.20 200.20 — 1.0-22.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1945															AA			A	AAA					11				
1946															AAA	AAA	AAA	AAA						6				
1947															AAA	A A	AAA	AAA										
1948															AA	AA	AAA	AAA						13				
1949															AAA	AAA	AAA	AAA						13				
1950															AAA	AAA	AAA	AAA						12				
1951															AAA	AAA	AAA	AAA						16				
1952															AAA	AAA	AAA	AAA						16				
1953															AAA	AAA	AAA	AAA						16				
1954															AAA	AAA	AAA	AAA						16				
1955															AAA	AAA	AAA	AAA						9				
1956															AAA	AAA	AAA	AAA						9				
1957	BBB	BBB	BBB	BBB			WWW	WWW	X						BAA	AAA	AAA	AAA	X					9				
1958	BB	BB	BBB	BBB	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X					13				
1959	BBB	BBB	BBB	BBB	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X			7				
1960	BBB	BBB	BBB	BBB	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X		7				
1961	BBB	BBB	BBB	BBB	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X		7				
1962	BBB	BBB	BBB	BBB	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X		8				
1963				BB	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X			14				
1964					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X			14				
1965		BB			WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X			14				
1966															AAA	AAA	AAA	ABA	X		X			14				
1967															AAA	AAE	BAA	AAA	X		X			14				
1968			BB												AAA	AAA	AAA	AAA	X		X			2				
1969															AAB	AAA	AAA	AAA			X			3				
1970															AAA	AAA	AAA	AAA			X	X		11				
1971															AAA	AAA	AAA	AAA			X	X		11				
1972															AAA	AAA	AAA	AAA			X			11				
1973															ABA	AAA	AAA	AAA			X			11				
1974															AAA	AAA	AAA							11				

RESOLUTE BAY (RB 974)

74.70 265.10 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1949		AAA	AAA	AAA											AA	AAA	AAA	AAA	X					12				
1950	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X					14				
1951	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X					16				
1952	A														AAA	AAA	AAA	AAA										
1953															AAA	AAA	AAA	AAA										
1954															AAA	AAA	AAA	AAA										
1955															AAA	AAA	AAA	AAA										
1956															AAA	AAA	AAA	AAA										
1957			ABA	AAA			ABA	AAA							AAA	AAA	ABA	AAA	X					10				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X					10				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X					10				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X					11				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X			10				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X			10				
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X			11				
1964	AAA	AAA	A B	ABA	AAA	AAA	ABB	BBA							AAA	AAA	AAA	BAA	X		X			10				
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X		10				
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X		11				
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X		11				
1968	AAA	AAA	ABA	AAA	AAA	AAA	ABA	AAA	X						AAA	AAA	ABA	AAA	X		X	X		11				
1969	AAA	AAB	BNB	NNN	AAA	AAB	BNB	NNN	X						AAA	AAE	BNB	NNN			X	X		11				
1970	NAA	AAA	AAA	AAA	NAA	AAA	AAA	AAA	X						NAA	AAA	AAA	AAA			X	X		11				
1971	AAA	AAA	AAA	ABB	AAA	AAA	AAA	ABB	X						AAA	AAA	AAA	ABB			X	X		11				
1972	AAA	BBA	ABA	BAA	AAA	BBA	ABA	AAA	X						AAA	BBA	ABA	AAA			X	X		11				
1973	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA			X			11				
1974	AAA	BAA	AAA	AAN	AAA	BAB	AAA	AAN	X						AAA	BAB	AAA	AAN			X			11				
1975	NN				NNB										NNA									11				

REYKJAVIK (RK A64)

64.10 338.20 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1944	A	AAA	AAA	AAA											AA	AAA	AAA	AAA						12				
1945	AAA	AAA	A												AAA	AAA	A							10				
1950	AAA	AAA	AAA	AAA						AAA	BAA	AAB	BAA		AAA	AAA	AAA	AAA						12				
1951	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	A A	AAA						12				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X				12				
1953	AAA	AAA	AAA	AAA						BAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X				12				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAE	AAA	AAA	X					12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X					12				
1956	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X					9				
1957	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X		12				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X		13				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
REYKJAVIK (Continued)																											
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		13				
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1965	S				S					S					S												
RCME (RO 041)																											
41.90 12.52																								1.4-15.0MHZ			
1951															AAA	AA							9				
1957																		A	X				8				
1958															AAA	AAA	AAA	ABA	X				9				
1959															AAA	AAA	AAA	AAA	X				9				
1960															AAA	AAA	AAA	AAA	X				9				
1961															AAA	AAA	AAA	AAA	X	X			9				
1962															AAA	AAA	AAA	AAA	X	X			9				
1963															AAA	AAA	AAA	AAA	X	X			9				
1964															AAA	AAA	AAA	AAA	X	X			9				
1965															AAB	BAA	AAA	AAA	X	X			9				
1966															AAA	AAA	AAA	ABB	X	X			9				
1967															AAA	AAA	AAA	AAA	X	X			9				
1968															AAA	AAA	AAA	AAA	X	X			9				
1969															AAA	AAA	AAA	AAA		X			9				
1970															AAA	AAA	AAA	AAA		X		X	9				
1971															AAA	AAA	AAA	AAA		X		X	11				
1972															AAA	AAA	AAA	AAA		X		X	11				
1973															NAA	AAA	AAA	AAA		X			11				
1974															AAA	AAA	AAA	AAA					11				
1975															A								11				
ROSTOV (RV 149)																											
47.20 39.68																								1.0-18.0MHZ			
1956																M							8				
1957			WWW	WWW				W							M	M	MM	AAA	AAA	X		X	X	10				
1958	WWW	WWW	WWW	WWW	WNW	AAA	AAA	AAA							ANA	AAA	AAA	AAA	X		X	X	14				
1959	WWW	WWW	WWW	WWW	AAA	AAA	NAA	AAA							AAA	AAA	NAA	AAA	X		X	X	14				
1960	WWW	WWW	W W	WWW	AAA	AAA	ABA	BAA	X						AAA	AAA	ABA	BAA	X		X	X	14				
1961	WWW	WWW	WWW	WWW	AAA	AAB	AAA	AAA	X						AAA	AAB	AAA	AAA	X		X	X	14				
1962	WWW	WWW	WW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1963					AAA	AAA	BBA	AAA	X						AAA	AAA	BBA	AAA	X		X	X	14				
1964	WWW	WWW	WWW	WWW	AAA	AAB	AAA	AAA	X						AAA	AAB	AAA	AAA	X		X		14				
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1966	WWW	WWW	W W	W W	AAA	AAA	ABA	ABA	X						AAA	AAA	ABA	ABA	X		X	X	14				
1967	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1968	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1969	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1970	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1971	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1972	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1973	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1974					NAA	AAA	BAA	AAA	X						NAA	AAA	BAA	AAA	X				14				
SALEKHARD (SD 266)																											
66.50 66.70																								1.0-18.0MHZ			
1957			WWW				BAW	NN									BAB	NNA	X		X		10				
1958	W	WWW	WWW	WWW	W	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X	14				
1959	A				AAA	ANN	NAA	AAA	X						AAA	ANN	NAA	AAA	X		X	X	14				
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1961	WWW	WWW	WWW	WW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1962	WWW	WWW	WWW	W	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1963	WWW	WWW	WWW			AA	AAA	ABA	X						AAA	AAA	AAA	ABA	X		X	X	14				
1964		WWW	W	WW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1965	WWW	W W	WWW	WWW	AAA	AAB	BAA	AAA	X						AAA	AAA	BAA	AAA	X		X	X	14				
1966	W	WW	WW		AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1967	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1968	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1969	WW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1970	WWW	WWW	W W	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1971	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1972	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1973	WWW	WWW	WWW	WWW	AAA	AAA	AA	AAA	X						AAA	AAA	AA	AAA	X		X		14				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND						JFM	AMJ	JAS	OND
SALEKHARD (Continued)																											
1974	WWW	WWW	W	WW	AAA	BAA	A		X						AAA	BAA	A		X				14				
1975															AAA				X				14				

SALISBURY
(SR 53M)

-34.70 138.60 1.6-20.0MHZ

1962																		AAA	X		X		11				
1963															AAA	AAA	AAA	AAA	X		X		11				
1964															AAA	AAA	AAA	AAA	X		X		11				
1965															AAA	AAA	AAA	AAA	X		X		11				
1966															AAB	AAA	AAA	AAA	X		X		11				
1967															AAA	ABN	NNN	NNN	X		X		10				
1968															BBA	BAB	AAA	BAA	X		X		10				
1969	W														AAB	AAA	AAA	BAA	X		X	X	11				
1970															AAB	AAA	ANB	AAB	X		X	X	10				
1971															AAA	AAA	AAA	ABA			X	X	15				
1972															AAA	AAA	AAA	AAA			X	X	10				
1973															BAA	AAA	AAA	AAA			X		9				
1974															S												

SALISBURY/RHOD
(SY 11P)

-17.80 31.00 1.0-16.0MHZ

1958															BBB	BBB	BBB	BBB	X				12				
1959															S												

SAN SALVADOR
(SS J24)

24.10 285.50 1.0-25.0MHZ

1958				BA				BA	X				BA					BA	X		X	X		13				
1959	AAA	AAA	AAA	AAA	AAA	ABA	AAA	AAA	X	A		B			A				X		X	X	X	13				
1960	AAA	AAA	ABA	AAA	BAB	AAA	AAA	AAA	X																			
1961	AAA	AAB	ABA	AAA	AAA	AAA	AAA	AAA	X																			
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X																			
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X																			
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X																	AAR	RRR	RR
1965	ABS				ABS				X																AA	AAR	RRR	RR

SANAE
(QM 07v)

-70.30 357.60 1.0-18.0MHZ

1962																A	AAA	AAA	X				6				
1963															AAA	AAA	AAA	ABA	X				6				
1964															ABA	AAA	AAA	AAA	X		X		8				
1965															AAE	BAA	AAA	ABA	X		X		8				
1966															NAA	AAA	AAA	AAA	X		X		10				
1967															AAA	AAA	AAA	AAA	X		X		10				
1968															AAA	AAA	AAA	AAA	X		X	X	10				
1969															BAA	AAA	AAA	AAA	X		X	X	10				
1970															AAA	AAA	ANN	NNN			X	X	10				
1971															NNB	AAA	AAA	AAA			X	X	10				
1972															AAA	ABN	BAA	AAA			X		11				
1973															ANA	ABA	AAA	AAA			X		11				
1974															BAA	AA							11				

SAO PAULO
(SP J2L)

-23.50 313.50 1.0-25.0MHZ

1953																AA	AAA	AAA					3				
1954															AAA	AAA	AAA	AAA					12				
1955															AAA	AAA	AAA	AAA					12				
1956																AA	AAA	AAA					11				
1957			AAA	AAA			WWW	W	W								AAA	AAA	X				10				
1958	AAA	AAA	AAA	AAB	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAB	X				10				
1959					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				10				
1960					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		13				
1961					W W	WWW	WWW	NWW							AAA	AAA	AAA	NAA	X		X	X	13				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
SAO PAULO (Continued)																											
1962					WW			W	WWW						AAA	AAA	ABA	BBA	X		X	X	13				
1963									W						BBA	NBB	BAM	MBB			X	X	13				

SCHWARZENBURG
(SZ 045)

46.60 6.70 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	AMJ	JAS	OND	f-PLOTS JFM	AMJ	JAS	OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1950																		A					6				
1951															AAA	AAA	AAA	AAA					8				
1952															AAA	AAA	AAA	AAA					9				
1953															AAA	AAA	AAA	AAA					9				
1954															AAA	AAA	AA	AAA					9				
1955															AAA	AAA	AAA	AAA					9				
1956															AAA	AAA	AAA	AAA					9				
1957															AAA	AAA	AAA	AAA	X				9				
1958	B														AAA	AAA	AAA	AAA	X				9				
1959															AAA	NNN	AAA	AAA	X				9				
1960															AAA	AAA	AAA	AAA	X				10				
1961															AAA	AAA	AAA	AAA	X		X		9				
1962															AAA	AAA	AAA	AAA	X		X		9				
1963															AAA	AAA	AAA	AAA	X		X		9				
1964															AAA	AAA	ANA	BAA	X		X		9				
1965															AAA	AAA	AAA	AAA	X		X		9				
1966															AAB	AAA	AAA	AAA	X		X		9				
1967															AAA	AAA	AAA	AAB	X		X		9				
1968															AAA	ABA	BAA	AAA			X		9				
1969															AAA	AAA	BAA	AAA			X	X	9				
1970															AAA	BAB	ABB	BAA			X	X	9				
1971															AAA	AAA	AAA	A			X		9				
1972															BAA	BBA		S					9				

SCOTT BASE
(SB 67Q)

-77.90 166.80 — 1.0-22.0MHZ

YEAR	IONOGRAMS JFM	AMJ	JAS	OND	f-PLOTS JFM	AMJ	JAS	OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957		W	WWW	WWW			WWW	WWW	X						A	AAA	AAA	AAA	X				13				
1958	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		13				
1959	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW	X						BBA	BBA	AAA	AAA	X		X		7				
1960	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X		7				
1961					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	7				
1962				BB	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAB	X		X	X	13				
1963					WWW	WWW	WWW	WWW	X						BAA	AAA	AAA	ABA	X		X		14				
1964					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		14				
1965					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		14				
1966															AAA	AAA	AAA	ABA	X		X		14				
1967															AAA	AAA	AAA	AAA	X		X	X	14				
1968															AAA	AAA	AAA	AAA	X		X		3				
1969															AAA	AAA	AAA	AAA	X		X		3				
1970															AAA	AAA	AAA	AAA			X	X	4				
1971															AAA	AAA	AAA	AAA			X	X	4				
1972															BAA	AAA	AAA	AAA			X		4				
1973															AAA	AAA	AAA	AAA			X		4				
1974															AAA	AAA	AAA						4				

SEATTLE
(SE 847)

47.75 237.58 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	AMJ	JAS	OND	f-PLOTS JFM	AMJ	JAS	OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1958	BAA	AAA	AAA	AB																							
1959	AAA	AAA	AAA																								
1960			AAA	AS																							

SEOUL
(SU 437)

37.39 126.95 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	AMJ	JAS	OND	f-PLOTS JFM	AMJ	JAS	OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1967			A	AA																							
1968																											
1969	B		BA	BBB	BB																						
1970			BA	B		A									AAA						X		12				
1973															AAA	AAA	AAA	AAA					12				
1974															AAA	AAA	AA						12				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
SHIBATA (44 537)																											
37.90 139.30																											1.0-17.0MHZ
1946																		AA			X		10				
1947															AAA	AAA	AAA	AAA			X		10				
1948															AAA	AAA	AAA	AAA			X		10				
1949															AAA	AAA	AAA	S			X		11				
SHIKUKA (45 549)																											
49.30 143.00																											
1940																		BMB					1				
1941															MMM	MMM	MMM	MMB					5				
1942															S												
SIMFEROPOL (SF 144)																											
44.80 34.10																											0.5-20.0MHZ
1957			AAA	AAA			A	AAA	X						M	M	M	M	A	AAA	X		X		14		
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1959	A			A	BNN	NAA	AAA	AAA	X						BNN	NAA	AAA	AAA	X			X	14				
1961	A																										
SINGAPORE (SI 301)																											
1.40 103.70																											0.67-25.0MHZ
1943															BM	MMM	MMM	MMM					8				
1944															MMM	MNM	MMM	MMN					8				
1945																											
1946															B	B											
1948																		BMM					4				
1949															AAA	AAA	AAA	AAA					4				
1950															AAA	AAA	AAA	AAA					4				
1951															AAA	BAA	AAA	AAA					4				
1952															AAA	AAA	AAA	AAA					4				
1953															AAA	AAA	AAA	AAA					4				
1954															AAA	AAA	AAA	AAA					4				
1955															AAA	AAA	AAA	AAA					4				
1956															AAA	AAA	AAA	AAA					4				
1957			WWW	WWW			W	WWW	WWW						AAA	AAA	AAA	AAA	X				6				
1958	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				6				
1959	W				W										AAA	AAA	AAA	AAA	X				6				
1960															AAA	AAA	AAA	AAA	X				6				
1961															AAA	AAA	AAA	AAA	X		X		6				
1962															AAA	AAA	AAA	AAA	X		X	X	6				
1963															AAA	AAA	AAA	AAA	X		X		6				
1964	WWW	WWW	WWW	WWW	WW	W	W	WW	WW						AAA	AAA	AAA	AAA	X		X		12				
1965	WWW	WW	W	WWW	WWW	WWW	WWW	WWW				A	AAA	X	AAA	AAA	AAA	AAA	X		X		13				
1966	WWW	WWW	WWW	WA	WWW	WWW	WWW	WWW		AAA	AAA	AA		X	AAA	AAA	AAA	AAA			X	X	13				
1967	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							ABB	AAA	AAA	AAA			X	X	13				
1968	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X		13				
1969	WBB	BBB	BBW	WW	WWW	WW	WWW	WWW							AAA	AAA	AAA	AAB			X	X	13				
1970	WWW	WWB	BBB	BWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X	X	13				
1971	BBB	BBB			WWW	WWW	WWS								AAA	AAA	AS				X	X	13				
SLOUGH (SL 051)																											
51.50 359.43																											1.0-20.0MHZ
1930																AA	AAA						2				
1931															A	A	A		A	X			1				
1932															AA	A			AAA	X			5				
1933															AAA	AAA	AA		A	X			6				
1934															AAA	AAA	AAA	AAA	X				6				
1935															AAA	AAA	AAA	AAA	X				6				
1936															AAA	AAA	AAA	AAA	X				6				
1937															AAA	AAA	AAA	AAA	X				6				
1938															AAA	AAA	AAA	AAA	X				6				
1939															AAA	AAA	AAN	AAA	X				6				
1940															AAA	AAA	AAA	AAA	X				8				
1941															AAA	AAA	AAA	AAA	X				8				
1942															AAA	AAA	AAA	AAA	X				10				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
SLOUGH (Continued)																											
1943															AAA	AAA	AAA	AAA	X				10				
1944		W	WWW	WWW	WWW										AAA	AAA	AAA	AAA	X				8				
1945	WWW	WWW	WWW												AAA	AAA	AAA	AAA	X				11				
1946															AAA	AAA	AAA	AAA	X				11				
1947															AAA	AAA	AAA	AAA					4				
1948															AAA	AAA	AAA	AAA					4				
1949															AAA	AAA	AAA	AAA					4				
1950															AAA	AAA	AAA	AAA					4				
1951															AAA	AAA	AAA	AAA					4				
1952															AAA	AAA	AAA	AAA					4				
1953															AAA	AAA	AAA	AAA					4				
1954															AAA	AAA	AAA	AAA					4				
1955															AAA	AAA	AAA	AAA					4				
1956															AAA	AAA	AAA	AAA					4				
1957			WWW	WWW			WWW	WWW							AAA	AAA	AAA	AAA	X				6				
1958	ABW	WWW	WBW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				6				
1959	WWW	WWW	WWW	WWW											AAA	AAA	AAA	AAA	X			X	6				
1960	W														AAA	AAA	AAA	AAA	X				6				
1961															AAA	AAA	AAA	AAA	X		X		12				
1962															AAA	AAA	AAA	AAA	X		X	X	12				
1963															AAA	AAA	AAA	AAA	X		X		12				
1964	WWW	WWW			WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		12				
1965				WWW	WWW	WWW	WWW	WWW					A	AAA X	AAA	AAA	AAA	AAA	X		X		12				
1966	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X		X		13				
1967	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X	X	13				
1968	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		13				
1969	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		13				
1970	WWW	WWW	WWW	WWW	WWW	WW	WW	WWW							AAA	AAA	AAA	AAA	X		X	X	13				
1971	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X	X	14				
1972	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X	X	14				
1973	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X		14				
1974	WWW	WWW	WWW	WWW	WWW	WWW	WWW	W							AAA	AAA	AAA	AAA					14				
1975	WWW														AA								14				

SLUTSK
(46 15I)

59.70 30.50

1945															AAA	AAA	AAA	AAA					6				

SNAINTON
(47 05D)

54.20 0.00 2.0-16.0MHZ

1944																	AA						1				

SODANKYLA
(SO 166)

67.40 26.60 1.0-16.0MHZ

1957																	AA	AAA	X				12				
1958															AAA	AAA	AAA	AAA	X				13				
1959															AAA	AAA	AAA	AAA	X				13				
1960															AAA	AAA	AAA	AAA	X				13				
1961															AAA	AAA	AAA	AAA	X		X		13				
1962															AAA	AAA	AAA	AAA	X		X		13				
1963								AAA							AAA	AAA	AAA	AAA	X		X		13				
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		13				
1965	WWW	WWW		WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		13				
1966	WWW	WWW			AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		13				
1967					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		13				
1968					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA			X		13				
1969					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA			X		14				
1970					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA			X	X	14				
1971					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA			X	X	14				
1972					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA			X	X	14				
1973					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA			X		14				
1974					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA					14				
1975					AAA	A									AA								14				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
SOFIA (SQ 143) 42.70 23.40 1.0-20.0MHZ																											
1964															AAA	AAA	AAA	AAA		X			11				
1965															AAA	AAA	AAA	AAA		X			11				
1972															AAA	AAA	AAA	AAA					12				
SOUTH GEORGIA (SG A5M) -54.27 323.50 0.67-25.0MHZ																											
1970																	AAA	AAA		X	X		12				
1971															AAA	AAA	AAA	AAA		X	X		12				
1972															AAA	AAA	AAA	AAA		X	X		12				
1973															AA	AAA	AA	A					12				
1974															A	MMM	M	M					12				
1975															MMM								3				
SOUTH POLE (PO 09v) -90.00 0.00 0.25-20.0MHZ																											
1957	B	AAA	AAA	AAA			AAA	AAA	X			AAA	AAA				AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	BBA	AAA	AAA	AAA	X	BBA	AAA	AAA	AAA		BBA	AAA	AAA	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AB	X	AAA	AAA	AAA	AB		AAA	AAA	AAA	A	X	X	X	X	13				
1963	AAN	NNB	AAA	ANA	AAN	NNB	AAA	ANB	X	AAN	NNB	AAA	ANB		AAN	NNB	AAA	AN	X	X	X	X	13				
1964	AAA	AAA	AAA	ABA	B	AAA	AAB	BA	X	BBB	AAA	AAA	BBA		BBB	AAA	AAA	BAA	X	X	X	X	15				
1965	AAA	AAA	AAA	AAA	AAA	AA	AAA	AAA		AAA	AA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		15				
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	A		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		15				
1967	AAA	AAA	AAA	BAA						AAA	AAA	AAA	BAA										7				
1968	ABB			B	BBS																						
SOYA SHIP (XD) -60.00 -0.00 1.0-20.0MHZ																											
1956																		BA					10				
1957															AAA	B							9				
1958																		BA	X				9				
1959															B			AA	X				9				
1960															BAA	B		BA	X				9				
1961															AAB	B			X				9				
1962															BBA	BS			X								
ST JOHN'S (SJ J47) 47.60 307.30 1.0-16.0MHZ																											
1944																A											
1945															AAA	AAA	AAA	AAA					12				
1946															AAA	AA	AAA	AAA					13				
1947															AAA	AAA	AAA	AAA					13				
1948															AAA	AAA	AAA	AAA					13				
1949															AAA	AAA	AAA	AAN	X				12				
1950															AAA	AAA	AAA	AAA	X				12				
1951	AA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X				13				
1952	A														AAA	AAA	AAA	AAA					12				
1953															AAA	AAA	AAA	AAA					10				
1954															AAA	AAA	S						10				
1957	BAA	AAA	AAA	AAA		AA	AAA	AAA	AAA	BAA	AAA	AAA	AAA		AA	AAA	AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AA				AAA	AAA	AAA	AAA	X		X	X	12				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X		X		11				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X		X		10				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X		X		10				
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X		X		10				
1964	AAA	AAB	AAA	AAA	AAA	AAB	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X		X		10				
1965	AAA	AAA	ABA	AAA	AAA	AAA	ABA	AAA	AAA						AAA	AAA	ABA	AAA	X		X		10				
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X		X		11				
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		11				
1968	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		11				
1969	AAA	ABA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		11				

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS			JFM	AMJ	JAS	OND
ST JOHN'S (Continued)																											
1970	AAA	BBA	AAA	AAA	AAA	BBA	AAA	AAA	X						AAA	BBA	AAA	AAA	X		X	X	11				
1971	BBA	AAA	ABA	AAA	BBA	AAA	ABA	AAA	X						AAA	AAA	ABA	AAA	X		X	X	11				
1972	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA			X	X	11				
1973	AAA	BAA	AAA	AAA	AAA	BAA	AAA	AAA	X						AAA	BAA	AAA	AAA			X		11				
1974	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA			X		11				
1975															AAA	A					X		11				

STANFORD
(ST 837)

37.40 237.80 1.0-25.0MHZ

1942															AA	AAA	AAA	AAA		X			10				
1943															AAA	AAA	AAA	AAA		X			11				
1944															AAA	AAA	AAA	AAA		X			14				
1945															AAA	AAA	AAA	AAA		X			15				
1946															AAA	AAA	AAA	AAA		X			15				
1947															AAA	AAA	AAA	AAA					15				
1948															AAA	AAA	AAA	AAA					11				
1949			AAA	AAA											AAA	AAA	AAA	AAA					11				
1950	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					11				
1951	AAA	A	AAA	AAA								A	AAA	AAA	AAA	AAA	AAA	AAA		X			13				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X	AA	AAA	AAA	AAA					12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA					13				
1956	AAA	AAA	AAB	BNA						AAA	AAA	AAA	BAA	X	AAA	AAA	AAA	AAA					10				
1957	AAA	AAA	AAA	AAA			WBW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAN	WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	NNA	AAA	W				X	A					A				X	X	X	X	13				
1963	BAA	AAA	AAA	AAA																							
1964	AAA	AAA	AAA	AAA																							
1965	AAA	AAA	AAA	AAA																							
1966	BAA	AAA	AAA	AAA																							
1967	ABN	BAA	AAA	AAA		B	AAA	AAA															1				
1968	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA															1				
1969	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA															1				
1970	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA															1				
1971	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA															1				
1972	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA															1				
1973	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA															1				
1974	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA															1				
1975	A				A																		1				

CLOSED, MAR. 1975

SVERDLOVSK
(SV 256)

56.70 61.10 1.0-18.0MHZ

1944																AA	AAA	AAA					6				
1945															MMM	MMM	MMM	MMM					8				
1946															MMM	MMM	MMM	M					8				
1956																M							8				
1957			WWW	WWW			WWW	WWW	X						M M	MMM	AAA	AAA	X		X		14				
1958	WWW	WWW	WWW	WWW	WWA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1959	A	A		A	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1960		W	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1961	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1962	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1963	W W	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1966	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1967	WWW	WW	WW	W W	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1968	WWW	W	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1969	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1970	WWW	WWW	W W	WW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1971	WWW	WWW	WWW	WW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1972	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1973	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1974		W	WWW	WW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X				14				
1975					A				X						AA				X				14				

SWAN RIVER
(48 952)

52.10 258.80 1.2-16.0MHZ

1946															BA	AAS							12				

For symbols see page 33

SYOWA BASE (SW 16R)

-69.00 39.60 — 0.4-15.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1959	WW WWW WWW WWW	BA AAA AAA AAA				BA AAA AAA AAA	X		X		10	
1960	WWW WWW WWW WWW	A				AAA AAA AAA AAA	X		X	X	10	
1961	WWW WWW WWW WWW					AAA AAA AAA AAA			X	X	10	
1962						B			X	X	9	
1966	PP PPP PPP PP					NAA AAA AAA AAA			X		9	
1967	PPP PPP PPP PPP					ABA AAA AAA AAA			X	X	9	
1968	PPP PPP PPP PPP					AAA AAA AAA AAA			X	X	9	
1969	PPP PPP PPP PPP					AAA AAA AAA AAA			X	X	9	
1970	PPP PPP PPP PPP					AAA AAA AAA AAA			X	X	10	
1971	PPP PPP PPP PPP	WWW WWW				AAA AAA AAA AAA			X		10	
1972	PPP PPP PPP PPP	WWW WWW WWW WWW				AAA AAA AAA AAA					10	
1973	P											

TAHITI (TT 71P)

-17.70 210.70 — 1.2-17.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1957	B					A	X				12	
1958	BBA AAA AAA AAA					AAA AAA AAA AAA	X				12	
1959	B					AAA AAA AAA AAA	X		X		12	
1960						AAA AAA AAA AAA	X		X		12	
1961						AAA AAA AAA AAA	X		X	X	12	
1962						AAA AAA AAA AAA	X		X	X	12	
1963						AAA AAA AAA AAA	X		X		12	
1964						AAB ABN ABB BBB	X		X		12	
1965						BBB BBB AAA AAA	X		X		12	
1966	A					ABB AAA AAA AAA	X		X	X	12	
1967						AAA AAA AAA AAA	X		X	X	12	
1968						AAA AAA AAA AAA	X		X	X	12	
1969						AAA AAA AAA AAA			X	X	12	
1970						AAA AAA AAA AAA			X		12	
1971						AAA AAA AAA AAA			X		14	
1972						AAA AAA AAA AAA			X		14	
1973						AAA AAA AAA AAA			X		14	

TAIPEI (TP 424)

25.00 121.20 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1950						A AAA AAA AAA					14	
1951						AAA AAA AAA AAA					14	
1952						AAA AAA AAA AAA					13	
1953						AAA AAA AAA AAA					13	
1954						AAA AAA AAA AAA					13	
1955						AAA AAA AAA AAA					13	
1956						AAA AAA AAA AAA					13	
1957	WWW WWW	WWW WWW				AAA AAA AAA AAA	X				11	
1958	WWW WWW WWW WWW	WWW WWW WWW WWW				AAA AAA AAA AAA	X				11	
1959	WWW WWW WWW WBW	WWW WWW WWW WWW				AAA AAA AAA AAA	X				11	
1960	WWW W	AAA AAA AAA AAA				AAA AAA AAA AAA	X				13	
1961		BAA AAA AAA AAA				BAA AAA AAA AAA	X		X		13	
1962	BB	AAA A A AAA AAA				AAA AAA AAA AAA	X		X		13	
1963		AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		13	
1964	WWW WWW WWW WWW	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		15	AAA AAA AAA
1965	WWW WWW WWW WWW	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		15	
1966	WWW WAA AAA AAA	AAA AAA AAA AAA	X	BA		AAA AAA AAA AAA	X		X		15	
1967	AAA AAA WWW WWW	AAA AAA AAA AAA	X	AAA AAA		AAA AAA AAA AAA	X		X		15	
1968	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		13	
1969	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X	X	13	
1970		AAA AAA AAA AAA	X	A AAA		AAA AAA AAA AAA	X		X	X	15	
1971		AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X		X	X	15	
1972		AAA AAA AAA AAA	X	AAA AAA AA		AAA AAA AAA AAA	X		X		15	
1973		AAA AAA AAA AA	X	A		AAA AAA AAA AA	X		X		15	
1974		AAA AAA AAA		AAA AA AAA		AAA AAA AAA A					15	

TALARA (TA 90M)

-4.60 278.70 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1954	B					B					13	
1955	B A AAA AAA AAA			AAA MAA AAA AAA		BAA AAA AAA AAA					16	
1956	AAA AAA AAA AAA			AAA AAA AAA AAA		AAA AAA AAA AAA					10	
1957	AAA AAA AAA AAA	AAA AAA AAA	X	AAA A A AAA AAA		AAA AAA AAA	X	X X	X		13	
1958	AAA AAA AAA AAA	AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X	X X	X		13	
1959	AAA AAA AAA AAA	AAA AAA AAA AAA	X	AAA AAA AAA AAA		AAA AAA AAA AAA	X	X X	X		13	

For symbols see page 33

TALARA (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13	BAA	AAB	AAA	AAA
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13	AAA	AAA	AAA	AAA
1966	S				S					S					S												

TAMANRASSET
(TN 022)

22.80 5.53 1.2-17.0MHZ

1956																		AAA	X								
1957																	AAA	NAN	X		X		11				
1958															NAA	AAA	AAA	AAN	X		X		12				
1959															AAA	AAA	AAA	BNN	X		X		12				
1960															BAA	ABA	AAA	AAA	X		X	X	12				
1961			B	A	B										AAB	ABB	BBA	AAA	X		X	X	12				
1962															BAB	NNN	NNN	BAB	X		X	X	12				
1963															AAA	AAA	NNA	BBA	X		X		12				
1964															AAA	AAA	AAA	AAA	X		X		12				
1965															AAA	AAA	AAA	AAA	X		X		12				
1966															AAA	AAA	AAA	AAA			X	X	12				
1967															AAA	AAA	AAA	AAB			X		12				
1968															BBB	BBB	BBB	BBB			X	X	12				
1969															AAA	AAB	BBA	AAA			X		12				
1970															B								13				

CLOSED, DATE UNKNOWN

TANANARIVE
(IV 21Q)

-18.80 47.50 1.25-20.0MHZ

1951																		AA									
1952															AAA	AAA	AAA	AAA									
1953															AAA	AAA	AAA	AAA									
1954															AA	AA	AA	A									
1955																	A	AAA									
1956															AAA	AAA	AAA	AAA									
1957																	AAA	AAA	X		X		12				
1958															BAA	AAA	AAA	AAA	X		X		12				
1959															AAA	AAA	AAA	AAA	X		X		12				
1960															AAA	AAA	AAA	AAA	X		X		12				
1961															AAA	AAA	AAA	AAA	X		X	X	12				
1962															AAA	AAA	AAA	AAA	X		X	X	12				
1963															AAA	AAA	AAA	AAA	X		X		12				
1964															AAA	AAA	AAA	AAA	X		X		12				
1965			B	AB											AAA	AAA	AAA	AAA	X		X		12				
1966															AAA	AAA	AAA	AAA	X		X	X	12				
1967															AAA	AAA	AAA	AAA	X		X	X	12				
1968															AAA	AAA	AAA	AAA	X		X	X	12				
1969															AAA	AAA	AAA	ABB			X	X	12				
1970															AAN	AAA	AAA	AAA			X		12				
1971															AAA	A					X		12				
1972																S											

TASHKENT
(TQ 241)

41.33 69.62 1.0-18.0MHZ

1961							A	AAA	X									A	AAA	X		X		15			
1962			ANN	NNN	NNN	NNN	X								ANN	NNN	NNN	NNN	X		X		15				
1963			NNN	NNN	NNN	NNA	X								NNN	NNN	NNN	NNA	X				15				
1964			ABA	AAN	BAA	AAA	X								AAA	AAN	AAA	AAA	X		X		15				
1965			AAA	AAA	AAA	AAA	X								AAA	AAA	AAA	AAA	X		X		15				
1966			AAA	AAA	AAA	AAA	X								AAA	AAA	AAA	AAA	X		X		15				
1967			AAA	AAA	AAA	AAA	X								AAA	AAA	AAA	AAA	X		X		15				
1968			AAA	NNA	AAA	AAA	X								AAA	NNA	AAA	AAA	X		X		15				
1969			AAA	AAA	AAA	AAA	X								AAA	AAA	AAA	AAA	X		X		15				
1970			AAA	AAA	AAA	AAA	X								AAA	AAA	AAA	AAA	X		X		15				
1971			AAA	AAA	AAA	AAA	X								AAA	AAA	AAA	AAA	X		X		15				
1972			ANA	NNA	AAA		X								ANA	NNA	AAA		X		X		15				

For symbols see page 33

TBILISI (TB 142)

41.70 44.80 — 1.0-10.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1963						A	AA	N	X							A	AA	N	X		X		14				
1964	WWW	WWW	WWW	WWW	AAB	AAA	AAA	AAA	X						AAB	AAA	AAA	AAA	X		X		14				
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	BBA	X						AAA	AAA	AAA	BBA	X		X		14				
1966	WWW	WWW	WWW	W W	AAA	BAB	ABB	AAA	X						AAA	BAB	ABB	AAA	X		X		14				
1967					AAA	BBB	BAA	AAB	X						AAA	BBB	BAA	AAB	X		X		14				
1968	WWW	WWW	WWW	WWW	AAA	BBB	BBB	BBB	X						AAA	BBB	BBB	BBB	X		X		14				
1969					AAA	BAA	AAA	ANA	X						AAA	AAA	AAA	ANA	X		X	X	14				
1970	N	WWW	WWW	WWW	AAN	AAA	AAA	AAA	X						AAN	AAA	AAA	AAA	X		X	X	14				
1971	WW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1972	WWW	WWW	WWW		AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1973	W	WWN	WWW	WWW	AAA	AAN	AAA	AAA	X						AAA	AAN	AAA	AAA	X		X		14				
1974	WW	W		WW	AAA	AA	AAA	A	X						AAA	AA	AAA	A	X				14				

TEHRAN (TE 236)

35.70 51.40 — 1.0-15.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1963																AAA	AAA	AAA	X		X		8				
1964															AAA	AAA	AAA	AAA	X		X		2				
1965															AAA	AAA	AAA	AAA	X		X		2				
1966															BNA	AAA	AAA	NAA	X		X		2				

TERRE ADELIE (DU 560)

-66.66 140.02 — 0.25-20MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1949																		A									
1950															AA												
1951															AA	AAA	AAA	AAA									
1952															A												
1956																	AAA	AAA									
1957															M M	MMM	AAA	AAA	X		X		12				
1958															AAA	AAA	AAA	AAA	X		X		12				
1959															AAA	AAA	AAA	AAA	X		X		12				
1960															AAA	AAA	AAA	AAA	X		X	X	12				
1961															AAA	AAA	AAA	BAA	X		X	X	12				
1962															AAA	AAA	AAA	AAA	X		X	X	12				
1963															AAA	AAA	AAA	AAA	X		X		12				
1964															AAA	AAA	AAA	AAA	X		X	X	12				
1965															AAA	AAA	AAA	AAA	X		X	X	12				
1966															ABA	AAB	AAA	AAA			X	X	12				
1967															AAA	BAA	AAA	AAA			X	X	12				
1968															AAA	AAA	BAA	AAA			X	X	12				
1969															AAA	AAA	AAA	AAA			X	X	13				
1970															AAA	AAA	AAA	AA			X	X	14				
1971															AAA	AAA	AAA						14				

THE PAS (49 954)

54.00 259.00 — 1.2-16.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1946																M	M						12				
1950		AAA	AAA	AAA												AAA	AAA	AAA					13				
1951	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					13				
1952	AAA	AAA													AAA	AAA	AAA	AAA					13				
1953															AAA	A							13				

THULE (TH J77)

77.50 290.80 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1956	AA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AA	AAA	AAA	AAA										8				
1957	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA				AAA	AAA	X	X	X	X	11				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	AAA	BBA	AAA	AAA	AAA	BBA	AAA	X	AAA	AAA	BBA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				BAA
1963	ABA	AAA	ABB	AAA	ABA	AAA	ABB	AAA	X	ABA	AAA	ABB	AAA		AAA	AAA	AAA	AAA	X	X	X		13		ABA	AAA	AAA
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13		AAA	ABA	AAA
1965	AAA	AAA	AAA	AAA	AAA	UAA	AAA	AAA	X	AAU	AAA	AAA	AAA		AAU	AAA	AAA	AAA	X	X	X	X	13		AAA	AAA	AAA
1966	AAA	AAA	S		AAA	AAA	S		X	AAA	AAA	S			AAA	AAA	S		X	X	X		13		RRR	RRR	

For symbols see page 33

THULE (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1969	BBB	BBB	BBB	BBB																							
1970	AAA	AAA	AAA	AAA																							
1971	BAA	AAA	AAA	AAA	BAA	AAA	AAA	AAA	X	BAA	AAA	AAA	AAA	X									16				
1972	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X			A	AAA		X	X		16				
1973	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA					X	X		16				
1974	AA		AA		AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X						X	X		16				
1975					AA				X	AA				X						X	X		16				

THUMBA
(TC 309)

8.60 76.90 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1964																		AAA	X		X		8				
1965															BAA	BAN	AAA	AAA	X		X		8				
1966				A											ABA	BBN	BAA	AAA	X		X		8				
1967															AAA	ABB	BAA	AAB	X		X		8				
1968															AAA	BAA	AAB	AAA	X		X		9				
1969															ABA	BAA	NBA	AAA	X		X	X	9				
1970															AAA	AAA	ABA	AAA	X		X	X	9				
1971															AAB	AAA	AAA	AAA	X		X	X	9				
1972															AAA	BBA	AAA	AAA	X		X		9				
1973															AAB	A							9				
1974															AAA	AA	AA						9				

REPLACED TRIVANDRUM

TIRUCHIRAPALLI
(TI 311)

10.80 78.70 2.5-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1949															AA	AAA	AAA	AAA					2				
1950															AAA	AAA	AAA	AAA					3				
1951															AAA	AAA	AAA	AAA					3				
1952															AAA	AAA	AAA	AAA					3				
1953															AAA	AAA	AAA	AAA					3				
1954															AAA	AAA	AAA	AAA					3				
1955															AAA	AAA	AAA	AAA					3				
1956															AAA	AAA	AAA	AAA					3				
1957							W	WW							AAA	AAA	AAA	AAA	X			X	3				
1958					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X			X	5				
1959															AAA	AAA	AAA	AAA	X		X		5				
1960															AAA	AAA	AAA	AAA	X		X	X	5				
1961															AAA	AAA	AAA	AAA	X		X	X	5				
1962															AAA	BAA	BAA	BBB	X		X	X	5				
1963															BBB	BBB	BBB	BBB	X		X		5				
1964															BBN	AAA	ABA	AAA	X		X		5				
1965															AAA	AAA	AAA	AAA	X		X		5				
1966															AAA	AAA	AAA	AAA	X		X		5				
1967															AAA	AAA	AAA	AAA	X		X		5				
1968															BAA	AAA	AAA	AAA	X		X	X	5				
1969															AAA	AAA	AAA	AAB	X		X	X	5				
1970															AAA	AAA	AAA	AAA	X		X	X	5				
1971															AAA	BAA	AAA	AAA	X		X		5				
1972															AAA	ABA	AAA	AAA	X				5				
1973															BAA	AAA			X				5				
1974															M	MM	M	MMM					5				

TIXIE BAY
(TX 471)

71.60 129.80 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957			WWW	NNN			AAA	NNN	X								AAA	NNN	X		X						
1958	NNN	WWN	WW	WWW	NNN	AAN	AAA	AAB	X						NNN	AAN	AAA	AAA	X		X	X	13				
1959	NWW	WWW	WWW	WWW	NAA	AAA	AAA	AAA	X						NAA	AAA	AAA	AAA	X		X	X	13				
1960	WWW	BBW	WWW	WWW	AAA	ANN	AAA	AAA	X						AAA	ANN	AAA	AAA	X		X		13				
1961	WWW	W		W	AAA	ANN	NNN	NNB	X						AAA	ANN	NNN	NNB	X		X		13				
1964	NNN	NNW	WW		NNN	NNA	AAA	AAA	X						NNN	NNA	AAA	AAA	X		X		13				
1965	W	WWW	WW		AAA	AAA	BAB	ABB	X						AAA	AAA	EAB	ABB	X		X		13				
1966	NNN	NNN	NNN	NN	NNN	NNN	NNN	NNA	X						NNN	NNN	NNN	NNA	X				10				
1967	WWW	NWW	NNN	WWW	ABA	NAA	NNN	BAA	X						ABA	NAA	NNN	BAA	X		X		13				
1968	WWW	WWW	W		AAA	AAA	ABA	AAA	X						AAA	AAA	ABA	AAA	X		X		13				
1969					NNN	NAA	AAA	AAA	X						NNN	NAA	AAA	AAA	X		X		13				
1970					AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X				14				
1971					AAA	A			X						AAA	A			X				14				

For symbols see page 33

TOGO
(TG 011)

10.80 .40 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1965						BAB NBB					16	
1966						BBB BBB BBB ABB					17	
1967						AS					16	

TOKYO
(TO 535)

35.70 139.50 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1945						AAA			X		2	
1946						AAA AAA AAA AAA			X		8	
1947						AAA AAA AAA AAA			X		10	
1948						A A AAA AAA AAA			X		10	
1949						AAA AAA AAA AAA			X		11	
1950						AAA AAA AAA AAA			X		11	
1951						AAA AAA AAA AAA					12	
1952						AAA AAA AAA AAA					12	
1953						AAA AAA AAA AAA					12	
1954						AAA AAA AAA AAA					12	
1955						AAA AA A AAA					12	
1956						AAA AAA AAA AAA					12	
1957	AAA AAA	AAA AAA				AAA AAA AAA AAA	X				14	
1958	AAB ABB BBB WBW	AAA AAA AAA AAA				AAA AAA AAA AAA	X				14	
1959	BWW BBB WBB BBB	AAA AAA AAA AAA				AAA AAA AAA AAA	X				14	
1960	WWW WWW WWW WWP	AAA AAA AAA AAA				AAA AAA AAA AAA	X				14	
1961	BWW WWW WWW WWW	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		14	
1962	WWW WWW WWW WWB	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		14	
1963	WWW WWW WWW WWW	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		14	
1964	WWW WWW WWW WWW	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		14	
1965	WWW WWW WWW WWW	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		14	
1966	PPP PP PPP P	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		14	
1967	PPP PPP PPP P P	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		14	
1968		AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		14	
1969	PPP PPP PPP PPP	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		14	
1970	P P PPP PPP PPP	AAA AAA AAA AAA				AAA AAA AAA AAA	X	X	X		14	
1971	PPP PPP PPP PPP	AAA AAA AAA AAA				AAA AAA AAA AAA	X	X	X		14	
1972	PPP PPP PPP PPP	AAA AAA AAA AAA				AAA AAA AAA AAA	X		X		14	
1973	PPP PPP PPP PPP	AAA AAA AAA AAA				AAA AAA AAA AAA	X				14	
1974		AAA AAA AAA A				AAA AAA AAA AAA					14	
1975						AA					14	

REPLACED KOKUBUNJI

TOMSK
(TK 356)

56.50 84.90 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1944						MMM MMM					6	
1945						MMM MM MMM MMM					6	
1946						MMM MMM MMM M					6	
1949						AAA AAA AAA AAA	X				3	
1950						AAA AAA AAA AAA	X				3	
1951						AAA AAA AAA AAA	X				4	
1956						AAA AAA AAA AAA	X				4	
1957	WWW WWW	AAA AAA	X			M M MMM AAA AAA	X		X	X	14	
1958	WWW WWW WWW WW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X	X	14	
1959	WW WW WWW WWW	NAA AAA AAA AAA	X			NAA AAA AAA AAA	X		X	X	14	
1960	WWW WWW WWW WWW	AAA AAA ABA AAA	X			AAA AAA ABA AAA	X		X		14	
1961	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		14	
1962	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		14	
1963	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		14	
1964	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		14	
1965	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		14	
1966	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		14	
1967	WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		14	
1968	WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X	X	14	
1969	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X	X	14	
1970	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X	X	14	
1971	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X	X	14	
1972	WWW WWW WWW WWW	AAA AAA AAA	X			AAA AAA AAA	X		X		14	
1973	WWW WWW WWW WWW	AAA ANA AAA AAA	X			AAA ANA AAA AAA	X		X		14	
1974	WWW WWW WWW	AA AA AAA	X			AA AA AAA	X				14	

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND						JFM	AMJ	JAS	OND
TORTOSA (EB 040)																											
40.80 .50																								0.25-20.0MHZ			
1957																AA	AAA	ABA	X				12				
1958															AAA	AAA	AAA	AAA	X		X		12				
1959															AAA	ABB	AAN	AAB	X		X	X	12				
1960															AAA	AAA	AAA	AAA	X		X	X	12				
1961															AAA	AAA	AAA	AAN	X		X	X	12				
1962															AAA	AAA	AAA	AAA	X		X	X	12				
1963															AAA	AAA	AAA	AAB	X		X		12				
1964															BNN	NBA	AAN	BAA	X		X		12				
1965															AAA	AAA	AAA	AAA	X		X		13				
1966															AAA	AAB	NNN	NNN	X		X		13				
1967			BB	BB											AAA	AAA	AAA	AAA	X		X		13				
1968		B													AAA	AAB	AAA	AAA	X		X		13				
1969		B	BB												AAA	AAA	AAA	AAA	X		X		13				
1970															AAA	ANN	AAA	AAA	X		X		13				
1971															AAA	AAN	NNA	AAN	X		X		13				
1972															NNN	AAN	NNN	NAA	X		X		13				
1973															AAA	NNN	AAA	AAA	X		X		13				
1974															AAA	AAA	AAA	AAA	X				13				
1975															A				X				13				
TOWNSVILLE (TV 51R)																											
-19.30 146.70																								1.0-25.0MHZ			
1946																A	AAA	AAA					18				
1947															A A	NAA	AAA	AAA					18				
1948															A								18				
1949																											
1950																											
1951																A	A						11				
1952															AAA	AAA	AAA	AAA					11				
1953															AAA	AAA	AAA	AAA					11				
1954															AAA	AAA	AAA	AAA					10				
1955															AAA	AAA	AAA	AAA					10				
1956																											
1957												WWW	WWW		AAA	AAA	AAA	AAB	X				13				
1958					WWW	WWW	WWW	WWW							BAA	ABA	AAA	AAB	X				13				
1959					BNN	NNW	WWW	WW							BNN	NBB	BBB	ABA	X		X		8				
1960															BBB	BAA	BAB	ABB	X		X		6				
1961															BAA	AAA	AAA	ANN	X		X		6				
1962			A	B			BA								NNA	ABA	AAA	AAA	X		X	X	6				
1963	B														AAA	AAA	AAA	AAA	X		X		6				
1964															AAA	AAA	AAA	AAA	X		X		11				
1965							B								AAA	AAA	AAA	BAA	X		X		11				
1966															AAA	AAA	AAA	AAA	X		X		5				
1967															AAA	AAA	AAA	AAA			X		5				
1968															AAA	AAA	AAA	AAA			X		5				
1969		B													AAA	AAA	AAA	ABB			X		7				
1970															AAA	AAA	AAA	AAA			X	X	7				
1971															AAA	AAA	AAA	AAA				X	7				
1972															AAA	AAA	AAA	AAA				X	6				
1973															AAA	AAA	AAA	AAA					6				
1974															AAA	AAA	AAA	AA					6				
1975															A								6				
TOYOHARA (50 546)																											
46.90 142.80																											
1942																	B	MMM					2				
1943															MMM	MMM	MMM	MMM					2				
1944															MMM	MMM	MS						2				
TRELEW (TW J4L)																											
-43.20 294.70																								1.3-18.0MHZ			
1958		AA	AAA	AAA	AAA											AAA	ABA	AAA	X		X		11				
1959		AAA	AAA	AAA	AAA										BAA	AAN	BAA	BNA	X		X		11				
1960		AAA	NAA	AAN	NNA										BBB	NBA	BBN	NNA	X		X		11				
1961		AAA	AAA	AAA	AAA										AAA	AAA	AAA	AAB	X		X		12				
1962					BBB										AAA	BBB	NBB	BBB	X		X	X	7				
1963		AAA	AAA												NNN	NNN	NNN	NNN									
1964																BAA			X				12				
1965												WW					BA		X			X	11				

For symbols see page 33

TRELEW (Continued)

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1966																	
1967																	
1968									QQQ QQQ	QQQ QQQ							

TRINIDAD
(51 J10)

10.75 298.43 — 1.2-19.5MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1944									AA AAA	AAA AA		X			25		
1945									AAA AAN	NNA AAA		X			14		
1946		AAA AAA							AAA AAA	AAA AAA					13		
1947	AAA AAA	AAA AAA							AA AAA	AAA AAA					12		
1948	AAA AAA	AAA AAA							AA AAA	AAA AAA		X			12		
1949	AAA AAA	AAA AAA							AAA AAA	AAA AAA					12		
1950	ANA AAA	AAA AAA							ANA AAA	AAA AAA					12		
1951	AAA AAB	S							AAA AAB	S					12		

TRIVANDRUM
(TM 308)

8.50 77.00 — 1.5-18.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1957			WWW WWN	WWW WWW					AAA AAN	AAA AAA X				X	3		
1958			WWW WWW	WWW WWW					AAA AAA	AAA AAA X			X	X	5		
1959			WWW WWW	WWW WW					AAA AAA	AAA AA X			X		5		
1960									AAA AAA	BBB BBB X			X	X	5		
1961									ABA AAA	AAA AAA X			X	X	5		
1962									AAA AAA	AAA AAA X			X	X	5		
1963									BBA AAA	AAA AAA X			X		5		
1964									AAA AAA	BBM S X			X		5		

REPLACED THUMBA

TROMSO
(TR 169)

69.70 19.00 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1945									A B	A					3		
1946									NNA AAA	AAA AAA					5		
1947									AAN NNN	NNN NNN					4		
1951									AAA AAA	AAA AAA					8		
1952									AAA AAA	AAA AAA					9		
1953									AAA AAA	AAA AAA					9		
1954									AAM AAM	MAA MMM					8		
1955									AAA AAA	AAA AAA					9		
1956									AAA AAA	AAA AAA					9		
1957				WWW WWW					AAA AAA	AAA AAA X					10		
1958			WWW WWW	WWW WWW					AAA AAA	AAA AAA X					12		
1959			W						AAA AAA	AAA AAA X					12		
1960									AAA ANN	NNA AAA X					12		
1961									AAA AAA	AAA AAA X			X		12		
1962									ABA BAA	AAA AAA X			X		12		
1963									AAA AAA	AAA AAA X			X		12		
1964									AAA AAA	AAA AAA X			X		12		
1965									AAA AAA	AAA AAA X			X		12		
1966									AAN NEA	AAA AAB X			X		12		
1967									AAA AAA	AAA AAA X			X		12		
1968									AAA AAA	AAA AAA X			X		12		
1969									AAA AAA	AAA AAA X			X		12		
1970									BAA AAA	AAA AAA X			X	X	12		
1971									ABA AAA	AAA AAA			X	X	13		
1972									AAA AAA	NNB AAA			X	X	13		
1973									QQQ QQQ	QQQ QQQ							
1974									QQQ QQQ	QQQ QQQ							

TSITSIHAR
(52 447)

47.30 123.90 — 1.0-16.0MHZ

YEAR	IONOGRAMS JFM AMJ	IONOGRAMS JAS OND	f-PLOTS JFM AMJ	f-PLOTS JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ	HOURLY COMPOSITE PROFILES JAS OND
1940									MMM	MMM MMM					7		
1941									MMM MMM	MMM MMM					7		
1942									MMM MMM	MMM MMM					7		
1943									MMM MMM	MMM MMM					7		
1944									MMM MMM	MMM MMM					7		
1945									MMM MMM	MS					7		

For symbols see page 33

TSUMEB
(TS 11R)

-19.20 17.70 — 1.0-16.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957							WWW	WWW									AAA	AAA	X				12				
1958					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				12				
1959					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				12				
1964					NNN	NNW	WWW	WWW							NNN	NNA	AAA	AAA	X		X		12				
1965					WWW	WWW	WWW	WWW							AAA	BAA	AAA	BAB	X		X		12				
1966					WWW	NNN	NNN	NNN							BEB	NNN	NNN	NNN	X		X		12				
1967					NNN	WWW	WWW	WWW							NNN	AAA	AAA	AAA			X	X	12				
1968					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X	X	12				
1969					WWW	WWN	NNN	NNN							AAA	AAN	NNN	NNN			X	X	12				
1970					NNN	NWW	WWW	WWW							NNN	NAA	AAA	AAA			X		12				
1971					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA			X		12				
1972																	Q	QQQ									
1973					WWW	W									AAA	A							12				

TUCUMAN
(TU J20)

-26.90 294.60 — 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957			AAA	AAA			AAA	B A									AAA	AAA	X				12				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1959	B				BAB	AAB	AAA	AAA							AAB	AAE	AAA	BAA	X		X		11				
1960					AAB	BBA	AAB	NNN							AAA	AAA	AAB	NNB	X		X	X	12				
1961					AAA	BBB	BBB	NNN							AAA	AAA	BBB	NNN	X		X	X	12				
1962				A	NNN	NNN	NN								NNN	NNN	NNB	ABA	X		X	X	10				
1963					NNN	NAA	AAA	AAA							ABA	AAA	AAA	AAA	X		X	X	12				
1964					BNN	BAA	AAA	AAN							BNN	BAA	AAA	AAN	X		X		12				
1965					NNN	NNN	NAA	AAA							NNN	BAA	AAA	AAA	X		X	X	12				
1966															BAA	EBA	BAA	AAA	X		X	X	13				
1967															AAA	AAA	ABB	ABA	X		X		3				
1968															AAA	AAA	AAA	AAA	X		X	X	3				
1969															AAA	AAA	AAA	AAA	X		X	X	3				
1970															AAA	AAA	AAA	AAA	X		X	X	3				
1971															AAA	AAA	AAA	AAA			X		3				
1972															AAA								3				
1973	BB					B																					

TUNGUSKA
(TZ 362)

61.60 90.00 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1968	QQ	Q	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ									
1969	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ									
1970	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ									
1971	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ									
1972	QQQ	QQQ	QQ	QQQ	QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	BBQ	QQQ	X				12				
1973					QQQ										QQQ												

UPPSALA
(UP 158)

59.80 17.60 — 0.33-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1952															AAA	AAA	AAA	AAA									
1953															AAA	AAA	AAA	AAA									
1954															AA	AA	AA										
1955															AAA	AAA	AAA	AAA									
1956															AAA	AAA	AAA	AA									
1957							WWW	WWW							AAA	AAA	AAA	AAA	X				10				
1958					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				10				
1959					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				11				
1960					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X				12				
1961															AAA	AAA	AAA	AAA	X		X	X	12				
1962															AAA	AAA	AAA	AAA	X		X		13				
1963					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		13				
1964					WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA	X		X		13				
1965								W W							AAA	AAA	AAA	AAA	X		X		13				
1966															AAA	AAA	AAA	AAA	X		X		13				
1967															AAA	AAA	AAA	AAA	X		X		13				
1968															AAA	AAA	AAA	AAA	X		X		13				
1969															AAA	AAA	AAA	AAA	X		X		13				
1970															AAA	AAA	AAA	AAA	X		X	X	13				
1971															AAA	AAA	AAA	AAA	X		X	X	18				
1972															AAA	AAA	AAA	AAA	X		X	X	18				
1973															AAA	AAA	AAA	AAA			X		18				
1974															AAA	AAA	AAA	AAA					18				
1975															AAA								18				

For symbols see page 33

USHUAIA (UA J5M)

-54.80 291.70 — 1.3-18.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1957						BN	X				12	
1958						AAA NNN BNA ABA	X		X	X	12	
1959						BAN NNN NNN NNN	X				11	
1961						NNN NBN NNB BAN	X		X	X	12	
1962	BB	A ABA				BBA BBA AAA ABA			X	X	12	
1963	A AAA	ABB BBB				ABB BBB				X	12	
1964		W WWW				A AAA					13	
1966		WWW				AAA					13	

VANIMO (VA 50L)

-2.70 141.30 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1964						BBB AAB	X		X		11	
1965						ABA AAA AAB BAA	X		X		11	
1966	A					AAA NBA AAA BAA			X	X	5	
1967						ABA AAA AAA AAA			X	X	5	
1968						AAA AAA AAA AAA			X	X	5	
1969						AAA BAA ABA BAA			X		7	
1970						AAA AAA AAA AAA			X	X	7	
1971						AAA AAA AAA AAA			X	X	7	
1972						AAA AAA AAA AAA			X	X	6	
1973						AAA AAA AAA AAA			X		6	
1974						AAA AAA AAA AAA					6	
1975						AAA					6	

VICTORIA (VI 848)

48.40 236.60 — 1.6-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1957		AAA AAA		AAA AAA		AAA AAA	X				10	
1958		BAA AAB AAA AAA		BAA AAB AAA AAA		AAA AAA AAA AAA	X		X		8	
1959		AS		AS		AS	X				8	

VICTORIA BEACH (53 951)

50.80 263.95

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1945						AM					7	

CLOSED IN 1945

VOSTOK (VO 47P)

-78.40 106.90 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1958	W WWW WWW WWW	A AAA ABA AAB	X			A AAA AAA AAB	X		X		12	
1959	WWW WWW WWW WWW	BAA AAA AAA AAA	X			BAA AAA AAA AAA	X		X		13	
1960	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		13	
1961	WW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		13	
1964	NNN WWW WWW	NNN BAA AAA BAA	X			NNN AAA AAA AAA	X		X		13	
1965	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		13	
1966	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		13	
1967	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		13	
1968	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		13	
1969	WWW WWW WWW WWW	AAA AAA AAA AAA	X			AAA AAA AAA AAA	X		X		13	

WAKKANAI (WK 545)

45.40 141.70 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM AMJ JAS OND	f-PLOTS JFM AMJ JAS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM AMJ JAS OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM AMJ JAS OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM AMJ JAS OND
1947						A AAA AAA AAA					10	
1948						AAA AAA AAA AAA					10	
1949						AAA AAA AAA AAA					11	
1950						AAA AAA AAA AAA					11	
1951						AAA AAA AAA AAA					11	
1952						AAA AAA AAA AAA					11	
1953						AAA AAA AAA AAA					11	
1954						AAA AAA AAA AAA					11	
1955						AAA AAA AAA AAA					3	
1956						AAA AAA AAA AAA					3	

For symbols see page 33

WAKKANAI (Continued)

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957			WWW	WWW			AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1958	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1959	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1961					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1962	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1963	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1965	WWW	WWW	WWW	WW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1966	WW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1967	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1968	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1969	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1970	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X	12				
1971	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X	X	12				
1972	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		13				
1973	PPP	PPP	PPP	PPP	AAA	AAA	BAA	AAA							AAA	AAA	AAA	AAA	X		X		13				
1974					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				13				
1975															AAA	AAA			X				14				

WALLOPS IS
(WP 937)

37.90 284.50 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1963			AA	AAA			AA	BBB	X														15			AA	AAA
1964	AAB	AAA	AAA	AAA	BBB	AAA	AAA	AAA	X														15	AAA	AAA	AAA	AAA
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X														15	AAA	AAA	AAA	AAA
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X														15	AAA	AAA	AAA	AAA
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	A	A	MMM	A					X	X		15	AAA	AAA	AAA	AAA
1968	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	A	AAA	X	X	X		15	AAA	AAA	AAA	ABA
1969	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		18	AAA	AAA	AAA	AAA
1970	AAA	AAB	AAA	AAA	AAA	AAB	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		18	AAA	AAA	AAA	AAA
1971	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		18	AAA	AAA	AAA	AAA
1972	AAA	AAA	AAA	AAA	AAA	AA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		18	AAA	AAA	AAA	AAA
1973	AAA	AAA	AAA	AAA	AA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		18	AAA	AAA	AAA	AAA
1974	AAA	AAA	AAA	AAA	AA	AAA	AAA	AAA		AAA	AAA	AAA	AAA							X	X		18	AAA	AAA	AAA	AAA
1975	AAA	AAA			AAA	AAA				AAA	AAA									X	X		18	AAA	AAA		

REPLACED WASHINGTON

WASHINGTON
(WA 938)

38.70 282.90 1.0-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1936	AAA	AAA	AAA	AAA																			6				
1937	AAA	AAA	AAA	AAA																			6				
1938	AAA	AAA	AAA	AAA																			6				
1939	AAA	AAA	AAA	AAA																			6				
1940	AAA	AAA	AAA	AAA																			6				
1941	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X	X			13				
1942	AAA	AAA	ABA	BAA											AAA	AAA	AAA	AAA	X	X			13				
1943	BAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X	X			13				
1944	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X	X			13				
1945	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X	X			12				
1946	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X	X			12				
1947	AAA	AAA	AAA	AAA											AAA	BBB	AAA	AAA	X	X			12				
1948	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X	X			12				
1949	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X	X			12				
1950	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X	X			12				
1951	AAA	AAA	AAA	AAA						BA	A				AAA	AAA	AAA	AAA	X	X			12				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X			12				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X			12				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X			12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X			12				
1956	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X			11				
1957	AAA	AAA	AAA	AAA			AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X		X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		13				
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		13				
1968	AAA	AAA	ABB	S	AAA	AA		S	X	AAA	AAA	ABB	S		AAA	AAA	A	S	X	X	X		13				

REPLACED BY WALLOPS ISLAND

For symbols see page 33

WATHEROO (WT 43v)

-30.30 115.90 — 1.0-16.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1937															MMM	MMM	MMM	MMM					4				
1938															MMM	MMA	AAA	AAA			X		6				
1939															AAA	AAA	AAA	AAA			X		6				
1940															AAA	AAA	AAA	AAA			X		9				
1941															AAA	AAA	AAA	AAA			X		9				
1942															AAA	AAA	AAA	AAA			X		15				
1943				B											AAA	AAA	AAA	AAA			X		12				
1944															AAA	AAA	AAA	AAA			X		12				
1945															AAA	AAA	AAA	AAA			X		11				
1946															AAA	AAA	AAA	AAA			X		10				
1947															AAA	AAA	AAA	AAA			X		10				
1948															AAA	NNA	AAA	AAA			X		10				
1949															AAA	AAA	AAA	AAA			X		10				
1950															AAA	AAA	AAA	AAA					9				
1951															AAA	AAA	AAA	AAA					9				
1952															AAA	AAA	AAA	AAA					9				
1953															AAA	AAA	AAA	AAA					9				
1954															AAA	AAA	AAA	AAA					9				
1955															AAA	AAA	AAA	AAA					9				
1956															AAA	AAA	AAA	AAA					9				
1957							WWW	WWW							AAA	AAA	AAA	AAA	X				14				
1958					WWW	WWW	WWW	WWW							AAA	AAA	AAA	ABA	X				13				
1959															AAB	S			X				8				

REPLACED BY MUNDARING

WHITE SANDS (WS 832)

32.30 253.50 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1946		A	AAN	AAA												A	AAN	AAA					9				
1947	NNA	AAA	NNA	AAA											AAA	AAA	AAA	AAA					12				
1948	WWW	WWW	WWW	WWW											AAA	AAA	AAA	AAA					12				
1949	WWW	WNW	WWW	AWW											AAA	AAA	AAA	AAA					12				
1950	WWW	WWW	WWW	WWW											AAA	AAA	AAA	AAA		X			12				
1951	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X			12				
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					12				
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					13				
1956	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA					10				
1957	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13	R	R R	RRR R	R
1963	ABA	AAA	BBB	BUA	ABA	AAA	BBB	BUA	X	ABA	AAA	BBB	BUA		ABA	AAA	B	A	X	X	X	X	13	RRA	RRA	A	R
1964	BBA	AAA	AAA	ABA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13	AAR	RAR	RRA	RRA
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13	AAA	AAA	RAA	AAA
1966	BAA	AAA	AAA	AAA	BAA	AAA	AAA	AAA	X	BAA	AAA	AAA	AAA		BAA	AAA	AAA	AAA	X	X	X		13	RRR	RRR	RRR	RAR
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		13	RRR	RRR	RRR	RRR
1968	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		13	RRR			
1969	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		13				
1970	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	A		X	X	X		13				
1971	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA							X	X		13				
1972	AAA	AAA	AAN	NNN	AAA	AAA	AU			AAA	AAA	AU	U						X	X	X		13				
1973	BAN	ABA	BAB	ANB	UU					UU			U				A						18				
1974	ABN	BNB	EAA								B												18				

WILKES (WL 460)

-66.90 110.50 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957	B	AAA	AAA	AAA			AAA	AAA		B	AAA	AAA	AAA				AAA	AAA	X	X	X	X	13				
1958	AAA	NBB	AAA	AAA	AAB	NBA	AAA	UAA		AA	NBA	AAA	UAA		AAN	NBA	AAA	AA	X	X	X	X	13				
1959	AAA	AAA	AAA	AAA	A					A					AAA	AAA	AAA	AAA	X			X	11				
1960	AAA	AAA	AAA	AAA	AA	AAA	BAA								AAA	AAA	AAA	AAB	X		X		11				
1961	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X		X	X	11				
1962	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X		X	X	11				
1963	B			AAA											BNN	NNN	NNN	AAA	X		X		11				
1964	AAA	AAA	AAA	AAA	BAA	AAA	AAA	AAA							BAA	AAA	AAA	AAA	X		X		11				
1965	AAA	AAA	AAA	AAA	A			AA							AAA	AAA	AAA	AAA			X	X	11				
1966				A	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA			X		11				
1967					AA	AA	AAA	B							AAA	AAA	AAA	AAA			X	X	11				
1968															AAA	AAA	AAA	AAA			X		11				
1969	S														AS						X		11				

REPLACED BY CASEY

For symbols see page 33

WINNIPEG (WI 949)

49.80 265.60 — 0.25-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1951		AAA	AAA	AAA											AAA	AAA	AAA	AAA	X				13				
1952	A														AAA	AAA	AAA	AAA					13				
1953				A											AAA	AAA	AAA	AAA					10				
1954		A													AAA	AAA	AAA	AAA					10				
1955															AAA	AAA	AAA	AAA					10				
1956															AAA	AA	AAA	AAA					9				
1957			AAA	AAA			AAA	AAA							AAA	AAA	AAA	AAA	X				11				
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				11				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				11				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				11				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		10				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		10				
1963	ABA	AAA	AAA	AAA	ABA	AAA	AAA	AAA							ABA	AAA	AAA	AAA	X		X		10				
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		10				
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		10				
1966	BAA	BAA	AAA	AAA	BAA	BAA	AAA	AAA	X						BAA	BAA	AAA	AAA	X		X		11				
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		11				
1968	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		11				
1970	AAA	BAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	11				
1971	AAA	AAA	AAB	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	11				
1972	AAA	AAA	AAA	AAA	ABA	AAB	BAA	AAB	X						ABA	AAB	BAA	AAB			X	X	11				
1969	AAA	AAA	AAA	AAA	AAA	ABA	AAA	AAA	X						AAA	ABA	AAA	AAA	X		X		11				
1973	BAA	BBB	AAA	AAB	BAB	BBB	AAA	AAA	X						BAB	BBB	AAA	AAA			X		11				
1974	AAA	BAB	AAA	AAA	AAA	BAB	AAA	AAA	X						AAA	BAB	AAA	AAA			X		11				
1975					AAA										AAA						X		11				

WOOMERA (WO 53J)

-31.00 138.60 — 0.7-25.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1961			B															A	X		X		10				
1962															AAA	AAA	AAA	AAA	X		X	X	10				
1963															AAA	AAA	AAA	AAA	X		X		10				
1964															AAA	AAB	AAA	AAA	X		X		12				
1965															AAA	AAA	AAA	AAB	X		X		12				
1966															BAA	AAA	AAA	AAA	X		X		10				
1967				B											AAA	AAA	AAA	AAA	X		X		10				
1968															AAA	AAA	AAA	ABA			X	X	10				
1969			B												QQQ	QQQ	QQQ	QQS									

WUCHANG (54 430)

30.60 114.40 — 1.2-19.2MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1946																	AA	AAA					10				
1947															AAA	AAA	AAA	AAA					10				
1948															AAA	AAA	AAA	AAA					10				
1949															AAA	AS							10				

YAKUTSK (YA 462)

62.00 129.60 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957							W	WWW	X						MM	MMM	AAA	AAA	X		X		10				
1958			WW	WWW	WW	WW	WWW	WWW	X						WWW	WAA	AAA	AAA	X		X		13				
1959	WWW	WWW	WWW	WWW	AA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1961	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAB	X						AAA	AAA	AAA	AAB	X		X	X	14				
1962	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1963	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1965	WWW	WWW	WWW	WW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1966	WWW	W	W	WW	WWW	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1967	WWW	WWW	WWW	WWW	WWW	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1968	WWW	WWW				AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1969		W	W	WW		AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1970	WWW					AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X	X	14				
1971				WWW		AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X		X		14				
1972	WWW	W	W	W W	WW	AAA	A	A A A	AA	X					AAA	A	A A A	A	AA	X			14				
1973						AAA	A			X					AAA	A				X			14				

For symbols see page 33

YAMAGAWA (YG 431)

31.20 130.60 — 1.0-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1946																		A			X		8				
1947															AAA	AAA	AAA	AAA			X		10				
1948															AAA	AAA	AAA	AAA			X		10				
1949															AAA	AAA	AAA	AAA			X		11				
1950															AAA	AAA	AAA	AAA			X		11				
1951															AAA	AAA	AAA	AAA					11				
1952															AAA	AAA	AAA	AAA					11				
1953															AAB	AAA	AAA	AAA					11				
1954															AAA	AAA	BBB	BBB					11				
1955															AAA	AAA	AAA	AAA					3				
1956															AAA	AAA	AAA	AAA					3				
1957			WWW	WWA			AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1958	AWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1959	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1960	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X				12				
1961	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1962	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1963	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		13				
1965	WWW	WWW	WMW	WWW	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1966	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1967	P P	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1968	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1969	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1970	PPP	PPP	PBP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1971	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1972	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1973	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		12				
1974					AAA	AAA	AAA	A							AAA	AAA	AAA	AAA	X				14				

YELLOW KNIFE (YE 862)

62.40 245.60 — 1.6-20.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1957		A	AAA	AAW				NBA					NBA					NBA	X				6				
1958	AAA	WW	AAA	AAA	AAA	BNB	AAA	AAA		AAA	BNB	AAA	AAA		AAA	NB	AAA	AAA	X				6				
1959	S				BS					BS					BS				X				6				

YUZHNO SAKHALI (SA 547)

47.00 143.00 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1956																MM							8				
1957			W				WWW	WWW	X						M	MM	BAA	AAA	X		X	X	13				
1958					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	12				
1959					WWW	WWW	WWW	WWW	X						ABA	AAA	BAB	AAA	X		X		13				
1960				W W	WNW	WWW	WWW	WWW	X						ANB	BAA	ABA	AAA	X		X	X	13				
1961	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	13				
1962	WWW	W W	WWW	WW	WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAA	X		X	X	13				
1963					WWW	WWW	WWW	WWW	X						AAA	AAA	AAA	AAN	X		X	X	13				
1964	W	WWW	WWW	WWW	NNW	WWW	WWW	WWW	X						NNA	AAA	AAA	BAA	X		X		13				
1965	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAB	X						AAA	AAA	AAA	AAB	X		X	X	14				
1966	WWW	WWW	WWW	WWW	AAA	AAB	AAA	ABA	X						AAA	AAB	AAA	ABA	X		X	X	14				
1967	W W	WWW	WWW	WWW	AAA	AAB	AAA	AAA	X						AAA	AAB	AAA	AAA	X		X	X	14				
1968	WW	WWW	WWW	W W	NAA	BAA	AAB	AAA	X						NAA	BAA	AAB	AAA	X		X	X	14				
1969	NWW	W			NAA	AAA	AS		X						NAA	AAA	AS		X		X	X	14				

ZARYA SHIP (XF)

-0.00 -0.00 — 1.0-18.0MHZ

YEAR	IONOGRAMS JFM	IONOGRAMS AMJ	IONOGRAMS JAS	IONOGRAMS OND	f-PLOTS JFM	f-PLOTS AMJ	f-PLOTS JAS	f-PLOTS OND	MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS JFM	AMJ	JAS	OND	MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC JFM	AMJ	JAS	OND	MICRO.	PUNCHED CARDS HR. VALUES	PUNCHED CARDS MEDIANS	MAG. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES JFM	AMJ	JAS	OND
1959			BB	BBB			BB	BBB	X			BB	BBB	X									13				
1960	BBB	BBN	NNN	BBB	BBB	BBN	NNN	BBB	X	BBB	BBN	NNN	BBB	X									13				
1961	BBB	BNN	NBB	BNN	BBB	BNN	NBB	NNN	X	BBB	BNN	NBB	NNN	X									13				
1962	NNN	NNN	NNB	BBB	NNN	NNN	NNB	BBB	X	NNN	NNN	NNB	BBB	X									14				
1963	BBA	BBN	NNN	NNN	BBA	BBN	NNN	NNN	X	BBA	BBN	NNN	NNN	X									14				
1964	NNN	NNN	NBB	BBN	NNN	NNN	NBB	BBN	X	NNN	NNN	NBB	BBN	X									14				
1965	NNN	NNN	NNB	ABB	NNN	NNN	NNB	ABB	X	NNN	NNN	NNB	ABB	X									14				
1966	BBB				BBB				X	BBB				X									14				

For symbols see page 33

VII. Special Data Holdings

This Section lists a collection of data obtained through non-routine ionosphere sounding programs and research projects. The special data holdings are divided into five parts. The explanations of the various holdings are as follows:

1. Individual N(h) Profiles - A relatively extensive collection of electron density data produced from vertical soundings are archived at WDC-A. The table beginning on page 104 summarizes these data by station, year, month and number of profiles produced each month.

2. Composite Tracings - Hourly composite ionogram tracings are produced as a step in the inversion of h'f data to composite N(h) profiles. These tracings are useful for studies of variations about the monthly median value. The table on page 116 lists the station and the intervals of time for which composite tracings have been produced.

3. Special Project Soundings - These were recorded at times of solar eclipses, ionospheric drift studies, traveling ionospheric disturbances, ionospheric storms, etc. The information given on pages 117-118 is listed by station, geographic coordinates, year, month, day, and remarks (purpose of the study where known). In some cases these were temporary stations established for some research project (e.g., eclipse studies) and in others they were special programs at a network station. In many instances the frequency of observation was greater than normal or the probing frequency or height range was specially adapted to the special project.

4. Continuous Run Soundings - These data were recorded at the highest rate allowed by the equipment. Many rapidly changing and short lived events are shown in these data in a different perspective. Often the equipment produced a record as rapidly as once every 30 seconds. The information is displayed on page 119 in the format as discussed for Special Project Soundings.

5. Movies - The movies shown on page 120 were produced by various research and training groups and are available for loan to interested groups.

If the desired station name is not found in the list described above, refer to the Alternate Name List, Section III, List I.

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Adak	1958	6	71
		7	95
		8	694
	1960	1	486
		2	567
		3	653
		4	607
		5	526
		6	555
		7	571
		8	559
		9	534
		10	488
		11	422
		12	363
	1962	4	2
		7	1
		12	10
	1963	6	10
	1964	3	262
		6	219
		9	524
		12	630
Akita	1961	11	1
Anchorage	1958	1	24
		3	8
		6	93
		9	24
		12	4
	1961	9	11
		10	2
	1963	7	70
Arecibo	1967	9	6
	1972	6	3
		7	5
Argentine Is.	1958	6	46
	1966	11	1
		12	3
Ashkhabad	1958	6	65
Baguio	1960	2	219
		3	474
		4	275
		5	261
		6	367
		7	417
		8	438
		9	392
		10	366
		11	466
		12	565
	1961	1	545
		2	450
		3	377
		4	391
		5	395
		6	312
		7	320
		8	349
		9	313
		10	480
		11	447
		12	446
	1962	1	371
		2	386
		12	10
Barrow	1958	6	3
		12	3
	1962	4	5
		12	2
	1963	6	9
		7	5
	1966	11	1
		12	3
Belgrano	1966	12	2
Bogota	1959	9	10
		10	25
		11	12
		12	3
	1960	1	446
		2	231
		3	419
		8	52
		12	371
	1961	1	409
		2	140
		3	131
		4	95
		11	4
	1962	12	17
	1963	1	7
		6	22
		9	1
		10	2
		11	4
	1964	3	260
		6	243
		9	462
		12	456
	1965	6	2
		11	2
	1966	5	12
		6	12
		7	15
		8	12
		9	12
		10	12
		11	13
		12	15
	1967	1	12
Boulder	1958	6	39
	1960	11	41
	1961	3	76
		11	5
	1962	4	12
		6	1
		7	63
		8	5
		9	1
	1963	2	8
		6	14
		7	26
		8	61

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Boulder (Continued)		9	3
		10	15
		11	1
	1964	1	10
		2	6
		3	277
		4	2
		6	182
		9	459
		12	682
	1965	3	1
		10	18
	1966	11	1
		12	3
	1968	10	10
		11	2
		12	78
	1969	3	2
		5	3
		6	1
		8	5
		10	4
		11	11
	1970	1	4
		2	5
		3	22
		4	7
		5	2
		6	5
		7	1
		8	1
		9	2
		10	14
		12	2
	1971	4	30
		5	18
		6	31
		7	15
		8	11
		10	40
		12	6
	1972	1	10
		2	63
		3	5
		4	26
		5	48
		6	10
		9	9
		10	9
		11	6
	1973	1	47
		2	13
		4	9
		5	4
		6	7
		7	52
		8	4
		9	35
		10	32
		11	1
		12	10
	1974	1	1
		7	2
		8	8
		10	7

STATION	YEAR	MONTH	NUMBER OF PROFILES
Brisbane	1958	6	73
	1962	12	5
	1963	6	5
	1969	5	3
	1973	2	18
Buenos Aires	1958	6	57
	1962	12	2
	1963	6	8
	1966	5	12
		6	6
		7	12
		8	12
		9	12
		10	12
		11	12
		12	12
	1967	1	12
Byrd Station	1958	3	12
		6	12
		9	12
	1966	11	1
		12	3
Campbell Is.	1958	6	67
Canberra	1958	6	48
	1964	1	8
		2	18
		4	2
		7	24
	1965	2	36
		3	18
		7	92
	1966	6	100
		8	79
		9	116
		11	54
	1967	4	90
		5	48
		7	15
		8	38
		9	127
		11	146
	1968	1	71
		6	105
	1969	1	138
		5	58
		7	196
		8	150
Cape Hallett	1958	3	12
		9	12
		12	12
Cape Kennedy	1958	6	71
	1959	2	105
	1960	2	3
		9	2
		10	73
		11	74
		12	43
	1961	1	71
		2	46
		3	240

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Cape Kennedy (Continued)		4	114
		5	47
		6	37
		7	42
		8	5
		9	12
		10	10
		11	12
		12	2
	1962	4	1
		6	1
		10	2
		11	1
		12	24
	1963	1	4
		5	2
		6	13
		10	1
		11	4
		12	2
	1964	1	4
		9	36
	1965	4	17
		5	5
		6	6
		7	1
		8	2
		11	3
	1966	8	5
	1967	1	24
		4	3
	1969	11	7
Cape Town	1962	4	2
Cape Zevgari	1972	3	7
	1973	3	1
		5	1
		10	4
Chiclayo	1958	1	35
Churchill	1957	11	2
		12	24
	1958	6	24
		9	22
	1962	6	1
		12	13
	1963	7	73
	1964	7	4
		11	29
	1965	2	3
		9	10
		11	9
	1966	2	2
		7	12
		8	1
		9	9
		11	1
		12	3
	1967	7	7
		12	3
	1968	4	8
		5	15
	1969	8	1
		11	3

STATION	YEAR	MONTH	NUMBER OF PROFILES
Cocos Island	1963	11	4
College	1957	11	1
		12	24
	1958	6	25
		9	24
		12	4
	1962	4	3
	1966	5	12
		6	12
		7	12
		8	12
		9	12
		10	12
		11	13
		12	15
	1967	1	12
Concepcion	1958	9	2
	1959	9	6
		10	34
		11	11
		12	2
	1960	10	7
		11	10
		12	7
	1961	1	1
		3	5
		4	4
		5	10
		6	30
		7	3
	1962	4	3
		6	1
		12	18
	1963	1	4
		6	15
		10	4
		11	2
	1964	3	201
		6	225
		9	406
		11	1
		12	475
	1965	5	42
		11	5
	1966	11	1
		12	3
	1973	2	12
Cuba	1966	12	3
De Bilt	1962	4	1
Dixon	1957	12	9
	1958	1	24
		6	24
Eglin	1962	4	1
		5	1
		10	4
		12	3
	1963	5	6
		6	3
		7	4
		10	12

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Eglin (Continued)	1964	3	2
	1965	2	1
		8	2
		11	11
	1966	2	99
	1967	1	4
		4	21
		7	5
	1969	1	3
	1971	1	8
		2	4
Eights	1965	6	14
Ellsworth	1958	3	12
		6	86
		9	12
		12	12
Erie	1970	7	6
		9	7
		10	9
		12	3
	1971	2	3
		3	3
		4	15
		6	2
		7	6
		10	13
	1972	2	7
		4	1
		5	22
		6	30
		9	17
		10	19
		11	20
		12	59
	1973	1	8
		9	92
		10	4
Fort Monmouth	1957	12	35
	1958	6	60
	1959	2	529
		3	497
		4	492
		5	439
		6	337
		7	359
		8	452
		9	481
		10	589
		11	609
		12	520
	1960	1	164
		9	605
		10	463
		11	336
		12	110
	1961	1	565
		2	523
		3	640
		4	467
		5	452
		6	309
		7	629
		8	613
		9	220
		10	424
		11	519
		12	326
	1962	10	3
		11	1
	1963	6	15
		7	45
		11	3
	1964	3	29
		10	2
	1965	3	10
Freiburg	1964	1	5
		4	5
		7	4
	1968	4	5
	1971	8	4
		9	5
Godhavn	1957	12	24
	1958	6	24
		9	24
	1962	12	5
	1963	1	2
		6	10
	1966	11	1
		12	3
Godley Head	1962	4	2
		12	3
	1963	6	7
Grand Bahama	1957	9	27
	1959	1	99
		2	627
		3	676
		4	584
		5	604
		6	299
		7	341
		8	547
		9	562
		10	595
		11	617
		12	603
	1960	1	618
		2	545
		3	596
		4	571
		5	583
		6	534
		7	522
		8	543
		9	658
		10	649
		11	416
		12	350
	1961	1	2
		3	539
		4	510
		7	9
		8	1
		9	3
		10	588

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Grand Bahama (Continued)		11	626
		12	514
	1962	1	493
		2	497
		4	19
		10	1
		11	2
		12	11
	1963	5	2
		6	5
		9	66
		11	1
		12	1
	1964	1	107
		2	163
		3	314
		4	138
		5	79
		6	223
		7	82
		8	63
		9	451
		10	114
		11	96
		12	749
	1965	1	69
		2	38
		3	125
		6	25
		8	2
	1966	8	8
		11	1
		12	3
	1968	3	88
	1969	2	2
		11	1
	1970	3	11
Graz	1962	7	1
Halley Bay	1958	6	38
Heiss Is.	1957	12	24
	1958	6	24
		9	25
Hobart	1958	6	25
Huancayo	1938	12	156
	1939	3	106
		6	229
	1944	3	109
		6	180
		12	112
	1954	3	26
		12	26
	1957	7	294
		8	207
		9	256
		10	254
		11	424
		12	236
	1958	1	217
		2	246
		3	231
		4	281

STATION	YEAR	MONTH	NUMBER OF PROFILES
		5	308
		6	283
		7	273
		8	269
		9	182
		10	185
		11	254
		12	209
	1959	9	6
		10	31
		11	38
		12	1
	1960	9	440
		10	466
		11	420
		12	447
	1961	1	472
		2	477
		3	503
		4	563
		5	33
		6	30
		7	579
		8	527
		9	508
		10	522
		11	416
		12	412
	1962	1	439
		2	447
		4	15
		7	4
		12	5
	1963	8	12
	1964	2	22
		6	206
		9	227
		12	510
	1965	11	3
	1966	7	5
		11	158
		12	3
	1967	10	1
	1968	3	2
		4	80
		12	11
	1969	2	2
		5	17
		8	6
		9	28
		11	13
Inverness	1958	6	47
Jamaica	1962	10	1
		11	1
		12	3
	1963	9	16
		11	3
	1964	1	91
		2	165
		3	57
		4	137
		5	46
		6	221
		7	58

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Jamaica (Continued)		8	63
		9	446
		10	108
		11	104
		12	314
	1965	1	65
		2	28
		3	124
		6	3
		12	1
	1966	5	12
		6	12
		7	12
		8	12
		9	12
		10	12
		11	13
		12	15
	1967	1	12
Jicamarca	1963	12	18
	1964	2	1
		4	4
Johannesburg	1960	10	1
	1962	4	2
	1964	1	6
		7	12
	1965	3	41
		7	75
	1966	8	30
		12	55
	1968	3	18
	1969	1	131
		3	10
		5	49
		7	244
		8	223
		11	15
	1970	1	5
		2	6
		4	6
		5	8
		6	17
		7	16
		9	9
		10	8
Kinshasa-Binza	1967	10	1
Kodaikanal	1961	11	5
	1967	10	1
Kwajalein	1973	5	33
		6	7
	1975	1	1
		2	2
La Paz	1958	1	26
		6	42
	1960	10	20
		11	28
	1961	1	1
		2	21
		3	14
		7	37

STATION	YEAR	MONTH	NUMBER OF PROFILES
	1962	12	3
	1963	6	21
	1966	12	3
Little America	1958	3	12
		6	73
		9	12
		12	12
Longyearbyen	1957	12	15
	1958	6	23
		9	24
Lulea	1958	1	24
		6	23
		9	24
Macau	1960	10	3
Manila	1964	3	200
		6	187
		9	426
		12	581
	1965	4	1
	1967	10	1
	1969	11	2
		12	1
Maui	1949	9	215
		12	214
	1950	6	212
	1953	12	140
	1954	6	154
		9	197
	1958	6	64
		7	558
		8	664
	1961	9	59
		11	108
	1962	3	3
		4	59
		6	1
		7	1
		10	82
	1963	2	65
	1964	3	247
		6	211
		9	329
		10	1
		11	29
		12	502
	1965	1	97
		2	81
		3	47
		4	30
		5	31
		6	38
		7	31
		8	43
		9	30
		10	33
		11	30
		12	31

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Maui (Continued)	1966	2	1
		3	1
		7	6
	1967	3	1
	1968	4	1
	1969	5	3
		7	131
		11	3
		12	2
	1970	2	1
		3	1
		5	1
		7	3
		10	3
	1971	10	4
	1972	10	1
	1973	4	59
		5	34
		6	4
		8	3
		9	8
		10	12
		11	2
		12	4
	1974	1	2
		4	62
		5	33
	1975	5	1
Meanook	1958	1	23
		6	24
		9	24
Mexico City	1960	10	3
	1961	7	4
		8	1
		9	3
		10	3
	1962	12	15
	1963	1	2
		6	19
	1964	3	59
		6	185
		9	355
		12	638
	1965	6	1
	1966	11	2
		12	2
	1969	11	1
Midway	1958	7	3
		8	397
Millstone Hill	1962	2	17
		3	45
		4	14
	1963	7	29
	1968	10	2
	1969	1	1
		2	1
		4	1
		5	2
		6	2
		7	1
		8	1
		9	1
	1971	12	5
Mundaring	1944	12	102
	1948	6	133
		9	150
		12	100
	1950	6	175
		9	203
		12	113
	1954	6	139
		9	146
	1958	6	70
	1963	11	4
	1968	11	1
	1973	2	9
Narssarssuaq	1957	12	23
	1958	6	115
		9	23
	1962	12	18
	1963	6	26
	1965	11	7
	1966	12	1
	1969	2	1
		11	2
	1970	2	1
Natal	1967	11	3
	1969	6	3
	1973	1	5
		2	76
	1974	2	5
New Delhi	1958	7	55
Norfolk Is.	1965	6	1
Nurmijarvi	1962	4	1
Okinawa	1959	6	239
		7	241
		8	216
		9	183
		10	256
		11	160
		12	202
	1960	1	259
		2	142
		3	115
	1962	4	1
		7	21
	1963	12	2
	1964	3	221
		6	41
		9	454
		12	599
	1969	12	4
	1972	2	1
Ottawa	1958	1	24
		6	24
		9	24
	1961	3	159
		4	101
	1962	4	1

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Ottawa (Continued)		12	10
	1963	1	2
		6	11
		7	4
		9	20
		10	4
	1964	1	36
		2	68
		3	50
		4	45
		5	53
		6	56
		7	50
		8	26
		9	57
		10	60
		11	33
		12	27
	1965	1	34
		2	19
		3	57
		6	15
		11	1
	1966	11	1
		12	3
	1968	9	1
		10	9
	1969	1	1
		2	2
		4	1
		5	1
		6	2
		7	1
	1971	12	5
Panama	1957	7	237
		8	266
		9	285
		10	303
		11	252
		12	302
	1958	1	270
		2	300
		3	235
		4	307
		5	300
		6	281
		7	277
		9	528
		10	240
		11	324
		12	261
Paramaribo	1966	12	3
Point Arguello	1963	12	36
	1964	1	4
		2	4
		3	125
		4	8
		6	177
		9	222
		12	327
	1965	4	16
		6	3
		8	1
		10	1
		11	3
	1966	2	1
		7	2
		11	2
		12	3
	1969	9	3
		10	3
		11	1
	1974	1	11
		5	2
Port Stanley	1958	6	45
	1962	6	2
		12	3
	1963	1	1
		6	4
	1966	11	1
		12	1
Puerto Rico	1958	1	37
		6	71
	1959	1	396
		2	666
		4	673
		5	651
		6	4
		7	594
		8	647
		9	628
		10	687
		11	654
		12	689
	1960	1	658
		2	627
		3	682
		4	557
		5	570
		6	574
		7	553
		8	594
		9	586
		10	651
		11	639
		12	633
	1961	1	606
		3	647
		4	635
		5	523
		6	482
		7	374
		8	532
		9	594
		10	587
		11	611
		12	624
	1962	1	597
		2	552
		3	684
		4	34
		5	12
		6	25
		7	7
		8	12
		9	12
		11	11

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Puerto Rico (Continued)		12	34
	1963	1	14
		2	12
		3	12
		4	12
		5	12
		6	3
		12	1
Rarotonga	1959	4	13
	1960	4	15
	1963	11	1
Resolute Bay	1957	11	1
	1958	3	3
		6	4
		12	2
	1962	12	11
	1963	1	1
		6	10
	1966	11	4
	1970	2	1
Reykjavik	1962	4	1
		6	1
		12	9
	1963	6	12
Roma	1962	6	1
		7	1
		12	11
	1963	1	1
		6	3
Salisbury	1973	2	23
San Francisco	1958	11	1
		12	1
	1968	3	91
	1970	2	3
	1972	1	10
San Salvador	1959	2	118
	1961	4	10
		11	1
		12	1
	1962	10	2
		11	1
		12	20
	1963	1	2
		6	9
		10	3
		11	3
		12	4
	1964	1	6
		9	83
Singapore	1962	12	10
	1963	1	2
		6	11
Slough	1950	1	712
		7	644
		9	661
	1953	6	519
		9	673
		12	647
	1958	6	44
	1959	4	1
	1962	4	1
	1973	5	1
		7	1
		8	1
		9	2
South Pole	1958	3	12
		6	53
		9	12
		12	12
	1963	10	2
		11	2
		12	3
St. John's	1957	11	2
	1958	6	49
	1960	9	2
		10	1
		11	2
	1961	1	1
		7	1
		8	1
	1962	4	1
	1966	11	1
		12	3
	1970	2	1
	1971	1	10
		2	10
		3	12
		4	10
		12	64
Sverdlovsk	1958	6	44
Tahiti	1963	10	1
		11	2
Taipei	1967	3	1
		10	1
Talara	1957	7	296
		8	226
		9	287
		10	270
		11	235
		12	261
	1958	1	253
		2	286
		3	273
		4	276
		5	300
		6	278
		7	278
		8	259
		9	218
		10	202
		11	265
		12	218
	1959	9	8
		10	24
		11	9
		12	31
	1960	1	512

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Talara (Continued)		2	459
		3	482
		4	489
		5	585
		6	589
		7	603
		8	562
		9	595
		10	473
		11	438
		12	443
	1961	1	397
		2	443
		3	474
		4	573
		5	563
		6	522
		7	503
		8	474
		9	448
		10	408
		11	386
		12	357
	1962	1	327
		2	346
		3	466
		4	18
		6	1
		7	7
		12	24
	1963	6	501
		10	4
		11	4
	1964	3	211
		6	215
		9	365
		12	527
	1965	6	1
		11	2
Tananarive	1968	3	3
Thule	1958	3	4
		6	3
		12	4
	1962	12	11
	1963	6	12
		7	1
		11	1
Tokyo	1958	6	24
	1961	11	1
Tortosa	1967	7	9
		8	20
		9	5
		10	83
		11	113
	1968	1	135
		6	65
	1969	1	4
		5	55
		7	177
		8	165
Townsville	1958	6	31
	1963	6	6
	1969	5	3
Trelew	1958	6	46
Tromso	1967	9	1
Tsumeb	1968	3	3
Tucuman	1958	6	59
	1973	2	5
Tutuila	1962	10	81
Uppsala	1962	4	1
Ushuaia	1966	11	1
		12	2
Victoria	1958	6	25
Vostok	1958	6	70
Wakkanai	1961	11	1
Washington	1957	7	276
		8	251
		9	302
		10	308
		11	258
		12	309
	1958	1	288
		2	305
		3	268
		4	310
		5	299
		6	366
		7	263
		8	282
		9	274
		10	238
		11	330
		12	300
	1960	9	2
		10	14
		11	5
		12	1
	1961	1	4
		3	187
		4	121
		5	4
		7	110
		8	87
		9	77
		10	87
		11	76
		12	27
	1962	1	55
		2	114
		3	156
		4	41
		5	58
		6	57
		7	30
		8	12
		9	12

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Washington (Continued)		10	27
		11	1
		12	15
	1963	1	9
		5	2
		7	4
		9	66
		10	7
		11	72
		12	22
	1964	1	104
		2	141
		3	80
		4	143
	1966	7	1
Wallops Island	1960	11	1
	1961	4	2
		5	1
		8	1
		10	6
	1962	4	1
		5	2
		6	2
		11	3
		12	4
	1963	4	1
		5	1
		7	29
		9	10
		10	7
	1964	1	2
		2	1
		3	1
		4	2
		5	78
		6	59
		7	95
		8	59
		9	111
		10	66
		11	82
		12	79
	1965	1	61
		2	50
		3	88
		5	3
		6	26
		9	3
	1966	5	13
		6	13
		7	14
		8	30
		9	20
		10	13
		11	15
		12	15
	1967	1	12
		3	3
		7	3
	1968	5	1
		8	19
		11	1
	1969	1	1
		2	1
		4	35
		6	1
		9	2
		10	2
		11	3
		12	1
	1970	2	1
		3	165
	1971	7	24
		8	23
		9	24
		10	24
		11	24
		12	25
	1972	1	48
		3	24
		7	44
	1973	5	2
	1974	4	8
		10	3
White Sands	1958	6	69
	1959	3	366
		4	634
		5	576
		6	473
		7	475
		8	499
		9	592
		10	653
		11	625
		12	336
	1960	1	494
		2	583
		3	652
		4	545
		5	464
		6	463
		7	461
		8	470
		9	543
		10	494
		11	494
		12	430
	1961	1	258
		2	342
		3	587
		4	587
		5	386
		6	16
		7	400
		8	490
		9	545
		10	574
		11	494
		12	551
	1962	1	506
		4	10
		6	1
		7	53
		12	175
	1963	2	20
		6	20
		8	1
	1964	1	10
		2	3
		3	164

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
White Sands (Continued)		4	2
		6	170
		8	1
		9	479
		12	648
	1965	3	11
		6	6
		7	1
		8	2
		10	12
		11	2
	1966	1	3
		3	43
		8	2
		9	11
		10	4
		11	2
		12	4
	1967	1	5
		4	1
		6	2
		7	4
		8	6
		10	4
		12	1
	1968	1	2
		2	3
		3	92
		6	1
		8	1
		9	2
		11	1
	1969	4	1
		9	6
		10	2
		11	3
		12	1
	1970	1	4
		2	1
		4	9
		5	4
		6	2
		7	1
		8	1
	1971	11	2
	1972	1	5
		2	2
		8	1
	1973	1	2
		5	1
		8	2
		9	14
		12	36
	1974	1	7
		4	1
		8	10
Winnipeg	1957	11	1
	1960	11	1
	1961	7	1
		8	2
	1963	7	100
	1966	11	4
	1969	11	2
	1970	1	1
		2	1

STATION	YEAR	MONTH	NUMBER OF PROFILES
Woomera	1960	10	6
		11	5
		12	2
	1961	2	5
		5	7
		6	13
		7	5
	1966	9	61
	1967	10	63
		11	26
Yamagawa	1958	6	44
	1962	4	1
	1973	2	13

2. Composite Tracings

Station	Interval
Adak	March-April 1962; June 1962-December 1965.
Anchorage	September 1962-May 1963; August-September 1963; January 1964-February 1965.
Bogota	January, April, June 1963; January-February 1964; April 1964-April 1965; June 1965-June 1967.
Boulder	February-September 1960; November-December 1960; June 1961; January-March, July-August 1962; October 1962-August 1963; January 1964-April 1968.
Cape Kennedy	April 1964-October 1966.
Ft. Monmouth	February-March, May 1960; July 1960-June 1961; September-December 1961; March-April, June-September 1962; January 1964-December 1965.
Godhavn	November 1961-June 1964; November 1964-March 1968.
Grand Bahama	March-April, June, August, October-November 1962; January 1963-June 1965; August 1965-June 1967; September 1967-March 1968.
*Huancayo	January-June 1964; January 1965-August 1967; October 1967-September 1975.
Jamaica	June 1964; January-February 1965; November 1966.
La Paz	October 1964; February-August 1965.
Manila	October 1963; January 1964-July 1967; October 1967-March 1968.
*Mexico	January 1962; October 1963-January 1964; November-December 1964; January 1965-March 1966; November 1966; September-December 1968; January 1970; March 1970-May 1973; November 1973; January 1974-September 1975.
Narssarssuaq	December 1961; January 1962; April-December 1962; April-September 1963; October-November 1964; January 1965-March 1968.
Okinawa	January-December 1965; March-October 1967; January-February 1968.
Point Arguello	January-February, May 1964; January 1965-May 1966.
San Salvador	April 1964-February 1965.
Talara	January 1964-June 1965; August-November 1965.
Taipei	April-December 1964.
Thule	April-July 1960; September 1960-June 1962; September 1962-June 1966; November 1966.
*Wallops Island	August-September 1963; December 1963-June 1964; August 1964-December 1975.
White Sands	March-April, June, August-October 1962; December 1962-July 1963; December 1963-June 1965; August 1965-March 1968.

*These stations are expected to continue supplying composite tracings.

3. Special Project Soundings

STATION	COORDINATES LAT	LONG EAST	IONOGRAMS YEAR	MONTHS AND DAYS	REMARKS
Adak	N51.90	183.40	1958	Apr. 18	Eclipse
Aircraft			1962	Feb.	Eclipse
Baguio	N16.40	120.60	1955	June 15-25	Eclipse
Baker Lake	N64.30	264.0	1963	July	Eclipse of July 20
Barbados	N13.12	300.4	1957	June 7-25	Bottomside Soundings including
			1964	July 5-26	intervals of amplitudes and
			1965	June 1-18; Sep. 18,19; Nov. 14-21	Drifts
			1966	Feb. 16-24	
			1967	Feb. 14-17	
Bedford	N42.48	288.72	1964	May 8-11	
Bocayuva	S17.1	316.9	1947	Apr. 28 - May 24	Eclipse of May 20; also tabulated medians for May 1-24
Bondville	N40.0	272.0	1963	July 20	Eclipse
Boulder	N40.0	254.70	1970	Mar. 4-10	Eclipse of Mar. 7
Canton Island	S 3.0	172.0	1962	Feb. 3-8; July 1-12; Oct. 28-31, Nov. 1-6	Eclipse Feb. 3-8
Cape Kennedy	N28.40	279.40	1969	Nov. 5-14	Apollo Shot
Cape Parry			1974	Dec. 3-14, 18-31	Print time varies from UT-120°W
			1975	Jan. 1-11	Polar cusp studies
Cartagena	N10.	285.0	1962	Oct. 6 - Dec. 31	
			1963	Jan. - Dec.	
			1964	Jan. - Dec.	Partial Data for May, June, Aug., Oct., Nov., Dec.
			1965	Jan. 6-22; Feb. 6-22	
Carthage	N40.8	268.8	1953	Sept. - Nov.	Data are incomplete
Charleston	N34.	285.0	1964	June 26-30, July 1-17	
Churchill	N58.80	265.80	1963	July 16-24	Eclipse of July 20
Columbia	N34.	279.0	1962	June 1; Sept. 27 - Dec.	
			1963	Jan. - Mar. 1 Oct. 25 - Dec.	
			1964	Jan. - Dec.	Partial Data for June - Dec.
Concepcion	S36.60	287.0	1972	Aug. 1-10	Special Solar Project
Danger Island	S11.	163.0	1958	Oct.	Eclipse
Eglin AFB	N30.38	273.30	1962	Oct. - Dec.	Firefly - N(h) studies
			1964	Mar. 7-11; Jul. 25,26; Oct. 12; Nov. 19	Bottomside Soundings at Eglin include intervals of amplitudes and drifts
			1965	Feb. 27, 28	
			1966	Feb. 19-22	
			1967	Jan. 23-27	
			1969	Jan.	
Erie	N40.01	254.70	1970	Apr., May, July - Dec.	Heating Experiments were conducted for a few hours on selected days.
			1971	Feb.-July, Oct. - Dec.	
			1972	Jan. - Dec.	
			1973	Jan., Feb., Oct.-Dec.	
Fort Clark	N29.3	259.8	1940	Apr. 5-16	Eclipse of Apr. 7
Frobisher Bay	N63.80	291.40	1963	July	Eclipse of July 20
Grand Bahama Island	N26.60	281.80	1970	Mar. 1-9	Eclipse of Mar. 7
High Jump	on USS Canisteo		1946	Dec. 11-31	Byrd Antarctic Expediction - no data Feb. 19-23
			1947	Jan. - Mar. 13, Aug.	Also hourly values for Jan. - Mar.
Huntsville	N34.44	273.65	1969	Oct.	
			1972	Feb.-May, July, Sept.-Dec.	
Ithaca	N42.4	285.50	1964	Feb. 14-29	
Jicamarca	S11.95	283.14	1966	Nov. 1-16	Eclipse
Keokuk	N40.8	268.4	1940	Apr. 24-30	
Mexico City	N19.40	260.34	1970	Mar. 1-10	Eclipse of Mar. 7
Millstone Hill	N42.60	288.50	1963	July 20	Eclipse
Mt. Laurier			1963	July	Eclipse of July 20
Okinawa	N26.30	127.80	1958	Apr. 19, 20	Eclipse
Ottawa	N45.40	284.10	1963	July 20	Eclipse
Patos	S 7.0	323.0	1940	Sept. 20-30	Eclipse
Platteville	N40.03	254.80	1970	Oct. - Dec.	Heating experiments were conducted
			1971	Feb., Mar., Apr., July	for a few hours on selected days
Resolute Bay	N74.70	265.10	1963	July 1-24	Eclipse of July 20

Special Projects Soundings (continued)

STATION	COORDINATES LAT	LONG EAST	IONOGRAMS YEAR	MONTH AND DAYS	REMARKS
Sachs Harbour	N72.0	234.85	1974	Nov. 29 - Dec. 30	Polar cusp studies - Partial data for Dec.
Shipboard	West Coast of So. America		1965	Feb. 24 - May 3	75th Meridian study, Apr. f-plots on microfilm
Sondre Stromfjord	N67.02	309.28	1973	June 24 - July 10	
St. John's	N47.60	307.30	1963	June 30 - July 22	Eclipse of July 20
Sudbury	N46.5	279.0	1963	July 20	Eclipse
Sunset Field Site, (Boulder)	N40.0	254.0	1953	Jan. 5 - Dec. 21	Much of these films were run for special sunrise effects
			1954	Feb. 9 - Apr. 2	
			1955	Oct. 27 - Dec. 31	
			1956	Jan., Nov., Dec.	Special sunrise effects, data not continuous
			1957	Jan. - Dec.	
			1958	Jan. - Dec.	Aug. 7, 8, 15, 27 are also on 16 mm film
			1959	Jan., June, July, Aug., Nov., Dec.	Data are incomplete June 15, 16, 17, 20 Special sunrise effects. 1 min. intervals
			1960	Jan., Apr., June - Dec.	Data are incomplete
			1961	Feb. - July, Sept.	Low Frequency (0.25-2.0 MHz) Soundings on selected days
Tenerife	N28.80	344.70	1959	Sept. 25 - Oct. 7	Eclipse
University of Illinois	N40.0	272.00	1965	Oct. 19-31; Nov. 1-9	
Wallops Island	N37.9	284.50	1960	Nov. 18; Dec. 10	
			1962	Mar. 28, 29	
			1970	Mar. 6-8	Eclipse of Mar. 7
White Sands	N32.30	253.50	1949	May 8, 9	Eclipse
			1956	Nov. 1	Aerobee #73, #74

4. Continuous Run Soundings

STATION	COORDINATES LAT	LONG EAST	IONOGRAMS YEAR	MONTHS AND DAYS	REMARKS
Adak	N51.90	183.40	1954	Feb. 19	16 mm TID Activity
Anchorage	N61.20	210.10	1951	Apr. 27, 28	16 mm continuous runs of bottomside ionograms
				June 6, 5, 19, 20	
				July 3, 4, 17, 18, 31	
				Aug. 14, 15	
				Sept. 5, 18, 19	
				Oct. 2, 18	
				Dec. 18, 19	
			1952	Jan. 2, 3, 16	
				Feb. 6	
				Mar. 5	
				Apr. 2, 16	
				May 7, 21	
				June 4	
				July 2	
				Aug. 19	
				Sept. 3, 16	
				Nov. 15	
				Dec. 2, 3	
Baker Lake	N64.30	264.00	1949	Mar. 7, 9	16 mm Spread F Precip. Activity
			1950	Sept. 5, 6	16 mm E Sporadic, Nighttime E, Total absorption
Bocayuva	S17.1	316.9	1947	Apr. 28 - May 24	16 mm Eclipse
Boulder	N40.00	254.70	1960	Feb. 21, 26, 27	16 mm Color bottomside soundings
			1961	July 13, 14-16	16 mm Color, July 13 TID, Spread, Es, G-condition
			1968	Jan. 16-19	16 mm Color bottomside soundings
Chiclayo	S 6.80	280.20	1957	Sept. 28 - Oct. 22	16 mm
				Dec. 11-21	
			1958	Mar. 17-26	16 mm
				Sept. 19 - Oct. 13	
				Nov. 3-28	
				Dec. 26-30	
Chimbote	S 9.10	281.40	1957	Dec. 12-22	16 mm
			1958	Mar. 17-26	
				May 18 - August 18	
				Nov. 3-29	
				Dec. 12-31	
			1959	May 26 - June 1	
Churchill	N58.80	265.80	1956	Nov. 15	35 mm Runs of 1 minute intervals with approximately 7 intervals per day
			1957	July 15, 16	
			1958	Feb. 4, 24	
Concepcion	S36.60	287.00	1965	May 8-10	35 mm Drifts
Ellsworth	S77.72	318.90	1957	Oct. 23	16 mm
			1958	June 21 - Sept. 17	
Ft. Chimo	N58.10	291.60	1950	Aug. 1-16	16 mm E Sporadic, Night E, Variable precipitation activity
Freiburg	N48.10	7.60	1959	No times given	35 mm Amplitude Recordings
			1960	No times given	35 mm Amplitude Recordings
Huancayo	S12.00	284.70	1952	Feb. 21 - Mar. 11	16 mm Mostly continuous runs of bottomside ionograms
				June 17	SID
				July	
			1953	Jan. - Oct.	
				Nov. 17, 18	
				Dec. 15, 16	
			1954	Jan. 18-20	
				Feb. 16, 17	
				Mar. 16, 17	
				Apr. 20-22	
				May 25, 26	
				June 15-17	
			1957	Sept. 5, 6, 11-14	
			1958	Mar. 17 - Sept. 9	Mar. 17-26, World Meteorological Interval
				Nov. 3-29	
				Dec. 6-31	

Continuous Run Soundings (continued)

STATION	COORDINATES LAT	LONG EAST	IONOGRAMS YEAR	MONTHS AND DAYS		REMARKS
Huancayo	S12.00	284.70	1959	Feb. 10 - May 14		
				May 26 - June 1		
				Aug. 10-13		
				Sept. 14-17		
				Oct. 1		
Ilo	S17.40	288.80	1959	May 26 - June 1	16 mm	
Juliaca	S15.50	289.80	1959	May 26 - June 1	16 mm	
Kiruna	N67.80	20.40	1961	Aug. 31 - Oct. 29	16 mm	Both reels are 1961 - Study of an event not identified
				Sep. 6 - Nov. 18		
Pt. Arguello	N34.60	239.40	1965	Dec. 13	16 mm	Spread F, Nighttime E, TID's
			1966	Apr. 18	16 mm	Spread F, TID's
South Pole	S90.00	0.00	1957	Apr. 27 - June 22	16 mm	
				July 30 - Aug. 26, 29, Sept., Oct. 7-23		Sept. Data Intermittent
			1958	Feb. - May	16 mm	
				June 6 - Aug. 29		
				Sept. 18 - Dec. 18		
			1959	Feb. 26 - May 12	16 mm	
			1960	Feb. 16-18	16 mm	
				Mar. 15-17		
			1961	Jan. 17 - May 31	16 mm	
				June 20-29		
				Aug. 15 - Sept. 19		
Talara	S 4.60	278.70	1958	Mar. - Dec.	16 mm	
			1959	May 27 - June 1	16 mm	TID, meteor echoes
Thule	N76.40	291.30	1957	Aug. - Dec.	16 mm	Data intermittent
			1958	Jan. - Dec.		" "
			1959	Jan. - Dec.		" "
			1960	Jan. - Dec.		" "
			1961	Jan. - Oct. 19		" "
Wallops Island	N37.90	284.50	1963	May 12-24	35 mm	Drifts
Washington (Sterling)	N38.70	282.90	1947	Aug. 14-16	16 mm	Moderate Ionosphere Storm, J. Watts
			1948	Mar. 13-16	16 mm	Ionosphere Storm, E. J. Wiewara
				Oct. - Nov.		
			1949	May 10-12	16 mm	
Wilkes	S66.90	110.50	1957	July 15	16 mm	

5. Movies

1. A LARGE-SCALE IONOSPHERIC DISTURBANCE OF SHORT DURATION, by Vaughn Agy, NOAA Research Lab., 16 mm color movie film with sound.

2. POLAR BLACKOUTS DURING THE IGY, by Vaughn Agy, NOAA Research Lab., 16 mm color movie with sound.

3. THE EFFECTS OF THE IONOSPHERE ON RADIO PROPAGATION, U. S. Signal Corps training film. 16 mm black and white movie film with sound.

4. BLACKOUT ANIMATION, 35 mm black and white movie film with no sound.

VIII. Data Publications

1. *Ionospheric Data* was a monthly publication of NOAA and its predecessors for 30 years, 1944-1974, and back issues are available as indicated below. A complete index of stations and dates of observations published in *Ionospheric Data* is available free of charge. The basic data which comprised *Ionospheric Data* continue to be available on an individual request basis until such time when regular publication can be resumed. The monthly issues provided monthly median data, by hour, of the ionospheric vertical soundings stations. In 1973-1974 the publication also included detailed monthly data from a single representative station, including daily-hourly values of all measured characteristics, f-plots for Regular World Days, and an N(h) contour graph. When appropriate, selected ionospheric data for a period of major ionospheric disturbance (Retrospective World Interval) were also included. Note that the date of issue does not signify the date of the month or months during which the observations were taken.

   Back issues in booket form are available as long as stocks exist (for most months 1964 to September 1974) at $1.00 per booklet. Back issues on 35 mm microfilm are available for 1944-1972 at $8.00 per year, and on microfiche for 1973-1974 at $10.00 per year. Orders should be sent to World Data Center A for Solar-Terrestrial Physics, NOAA. Boulder CO 80302, USA. Orders must include checks or money orders payable in U.S. currency to *Department of Commerce, NOAA/NGSDC.*

2. *AFCRL Geophysics and Space Data* Bulletin was a quarterly publication containing ionospheric data from Maynard and Goose Bay. These data consisted of height plots of monthly median values of h'F2, h'F, h'E, h'Es and frequency plots of foF2, foF1, foE, foEs. In addition to the plots, tables of hourly values and their medians were published from both of these stations for each characteristic scaled.

   The publication of this Bulletin by the Space Physics Laboratory, Air Force Cambridge Research Laboratories*, L. G. Hanscom Field, Massachusetts, began with the first quarter of 1964 and was terminated at the end of the fourth quarter of 1974. Copies are available from the National Technical Information Service, Springfield, VA, 22151.

3. *USSR Cosmic Data* is published monthly and lists ionospheric data from the USSR network of ionospheric stations. Data published from Moscow (IZMIRAN) are hourly values of the basic ionospheric characteristics: critical frequency of the F2 layer (foF2), maximum usable frequency factor (M(3000)F2), critical frequency of the Es layer (foEs), minimum frequency of reflection (f-min), and the variation of the foF2 around the median (ΔfoF2). Also, three-hourly ΔfoF2 values are plotted on a solar synoptic chart.

   Observations from the remaining USSR stations are published only as monthly median values of selected ionospheric characteristics.

   The monthly Bulletin is published by IZMIRAN, Academy of Sciences of the USSR, and any remarks or requests should be sent to the following address: 142092, IZMIRAN, p/o Akademgorodok, Moscow, USSR.

4. *UAG-Reports* are a series of reports which are published on an irregular schedule. They cover a variety of subjects, including ionospheric phenomena. A limited free distribution is made to contributors to the reports and to others under data exchange agreements; otherwise, these reports are sold, either individually or on an annual subscription basis. Subscriptions or single issues may be ordered through the National Climatic Center, Asheville, NC 28801 U.S.A., Attention: Publications.

* Now Air Force Geophysics Laboratory.

4. World Data Center A for Solar-Terrestrial Physics
UAG Reports Pertinent to Ionospheric Phenomena

UAG-23 "U.R.S.I. Handbook of Ionogram Interpretation and Reduction", Second Edition, November 1972, edited by W. R. Piggott, Radio and Space Research Station, Slough U.K., and K. Rawer, Arbeitsgruppe für Physikalische Weltraumforschung, Freiburg, G.F.R., November 1972, 324 pages, price $1.75.

UAG-34 "Absorption Data for the IGY/IGC and IQSY", compiled and edited by A. H. Shapley National Geophysical and Solar-Terrestrial Data Center, Environmental Data Services, NOAA, Boulder, Colorado, W. R. Piggott, Science Research Council, Appleton Laboratory, Ditton Park, Slough, U.K., and K. Rawer, Arbeitsgruppe Für Physikalische Weltraumforschung, Freiburg, G.F.R., June 1974, 381 pages, price $2.00.

UAG-50 "High-Latitude Supplement to the URSI Handbook on Ionogram Interpretation and Reduction", edited by W. R. Piggott, British Antarctic Survey, c/o SRC, Appleton Laboratory, Ditton Park, Slough England, October 1975.

Reports on Solar-Terrestrial Events:

UAG-5 "Data on Solar Event of May 23, 1967 and its Geophysical Effects", compiled by J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA, February 1969, 120 pages, price 65 cents.

UAG-8 "Data on Solar-Geophysical Activity October 24-November 6, 1968", Parts 1 and 2, compiled by J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA, March 1970, 312 pages, price (includes Parts 1 and 2) $1.75.

UAG-9 "Data on Cosmic Ray Event of November 18, 1968 and Associated Phenomena" compiled by J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, ESSA, April 1970, 109 pages, price 55 cents.

UAG-12 "Solar-Geophysical Activity Associated with the Major Geomagnetic Storm of March 8, 1970", Parts 1, 2 and 3, compiled by J. Virginia Lincoln and Dale B. Bucknam, World Data Center A, Upper Atmosphere Geophysics, NOAA, April 1971, 466 pages, price (includes Parts 1-3) $3.00.

UAG-13 "Data on the Solar Proton Event of November 2, 1969 through the Geomagnetic Storm of November 8-10, 1969", compiled by Dale B. Bucknam and J. Virginia Lincoln, World Data Center A, Upper Atmosphere Geophysics, NOAA, May 1971, 76 pages, price 90 cents.

UAG-21 "Preliminary Compilation of Data for Retrospective World Interval July 26 - August 14, 1972", compiled by J. Virginia Lincoln and Hope I. Leighton, World Data Center A for Solar-Terrestrial Physics, November 1972, 128 pages, price 70 cents.

UAG-24 "Data on Solar-Geophysical Activity Associated with the Major Ground Level Cosmic Ray Events of 24 January and 1 September 1971", Parts 1 and 2, compiled by Helen E. Coffey and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, December 1972, 462 pages, price (includes Parts 1 and 2) $2.00.

UAG-26 "Data Compilation for the Magnetospherically Quiet Periods February 19-23 and November 29 - December 3, 1970", compiled by Helen E. Coffey and J. Virginia Lincoln, World Data Center A for Solar-Terrestrial Physics, May 1973, 129 pages, price 70 cents.

UAG-28 "Collected Data Reports on August 1972 Solar-Terrestrial Events", Parts 1, 2 and 3, edited by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, July 1973, 932 pages, price (includes Parts 1-3) $4.50.

IX. Dates of Special Observational Intervals

Special World Intervals and Retrospective World Intervals (Ionospheric Programs)

Listed below are the Special World Intervals and Retrospective World Intervals announced for ionospheric programs from the IGY onward. These were periods for which special data reductions were requested. The selections were made by the International Ursigram and World Days Service (IUWDS), or in recent years by the Monitoring of the Sun-Earth Environment (MONSEE) program of the Special Committee on Solar-Terrestrial Physics.

		1957	
June	30 - July 3		Oct. 22-23
Aug.	24, 29-30		Nov. 26-27
Sept.	2-4, 12-13		
		1958	
Mar.	5, 15, 23-25, 30-31		Oct. 23-25
June	6-8, 20-22		Nov. 26-27
July	8-9, 30-31		Dec. 13-14
Aug.	17-18, 24, 27-28		
		1959	
Jan.	24-25		June 11-12
Feb.	11-12, 25-26		July 15-16
Mar.	26-28		Sept. 4-5, 20-21
Apr.	10-11		Nov. 23-24, 28-29
May	12-13		Nov. 30 - Dec. 2
		1960	
Feb.	5-6		Aug. 16-18
Mar.	31 - Apr. 3		Sept. 4-6
Apr.	28-30		Oct. 6-8
May	1, 7-9		Nov. 12-17
June	4-6		
		1961	
Mar.	6-7, 27-28		Sept. 24-26, 29-30
May	6-7		Oct. 1-2, 28-29
July	12-18, 27-28		Nov. 3-4
Aug.	30-31		Dec. 1-3
		1962	
Jan.	10-11		Aug. 1-2, 22-23
Feb.	16-17		Sept. 12-13
Mar.	2-3		Oct. 8-9
Apr.	7-8, 22-23		Dec. 18-21
July	26-27		
		1963	
Jan.	13-15, 30 - Feb. 1		Sept. 13-30
May	1-3		Oct. 28-31
Aug.	18-19		
		1964	
Jan.	3-4		Sept. 6-9, 21-24
Mar.	4-5, 27 - Apr. 3		
		1965	
Feb.	5-9		June 14-18
		1966	
Mar.	12-31		Aug. 28 - Sept. 6
July	7-11		
		1967	
Jan.	28-30		May 24-31
		1968	
June	9-13		Nov. 18-20
Oct.	24 - Nov. 6		
		1969	
Mar.	21-26		Nov. 2, 8-10
		1970	
Jan.	24		Sep. 1
Mar.	6-10		Nov. 6-8
		1971	
Jan.	24		Sep. 1
		1972	
Jul.	26 - Aug. 14		
		1973	
June	30 - July 3		

NOTE: These are the dates related to the Symbol W in the main catalog, Section VI.

Regular World Days

A table of the Regular World Days for each year since 1957, selected first by CSAGI and now by IUWDS, is presented below. Beginning in 1961 these are sequences of three days, with the middle day, the Priority Regular World Day, always on a Wednesday.

	1957	1958	1959	1960	1961	1962
J		3,4,19,20	3,4,9,10	12,13,14	17,18,19	16,17,18
F		10,18,19,26	17,18,19	16,17,18	14,15,16	13,14,15
M		20,21,28	17,18,19	15,16,17	21,22,23	20,21,22
A		18,19,20	14,15,16	19,20,21	18,19,20	17,18,19
M		5,18,19	12,13,14	17,18,19	16,17,18	15,16,17
J	27,28,29	9,17,18,24	16,17,18	14,15,16	20,21,22	19,20,21
J	4,26,27	16,17,27	14,15,16	12,13,14	18,19,20	17,18,19
A	12,25,26	7,12,14,15	11,12,13	9,10,11	15,16,17	14,15,16
S	1,23,24,30	6,13,14,20	15,16,17	20,21,22	19,20,21	18,19,20
O	22,23,24	10,11,12,13	1,2,3,9,10,11	18,19,20	17,18,19	16,17,18
N	14,21,22	4,10,11,18	17,18,19	15,16,17	14,15,16	13,14,15
D	13,16,21,22	10,11,13,17	14,15,16,17	13,14,15	19,20,21	18,19,20

	1963	1964	1965	1966	1967	1968
J	22,23,24	14,15,16	12,13,14	11,12,13	17,18,19	16,17,18
F	19,20,21	18,19,20	16,17,18	15,16,17	14,15,16	13,14,15
M	19,20,21	17,18,19	16,17,18	15,16,17	14,15,16	12,13,14
A	16,17,18	14,15,16	20,21,22	12,13,14	11,12,13	16,17,18
M	14,15,16	19,20,21	18,19,20	17,18,19	9,10,11	14,15,16
J	18,19,20	16,17,18	15,16,17	14,15,16	13,14,15	11,12,13
J	16,17,18	14,15,16	20,21,22	12,13,14	18,19,20	16,17,18
A	13,14,15	18,19,20	17,18,19	16,17,18	15,16,17	13,14,15
S	17,18,19	22,23,24	14,15,16	13,14,15	19,20,21	17,18,19
O	15,16,17	20,21,22	19,20,21	11,12,13	17,18,19	15,16,17
N	19,20,21	17,18,19	16,17,18	15,16,17	14,15,16	12,13,14
D	17,18,19	15,16,17	14,15,16	13,14,15	12,13,14	17,18,19

	1969	1970	1971	1972	1973	1974	1975	1976
J	14,15,16	13,14,15	12,13,14	18,19,20	16,17,18	15,16,17	14,15,16	20,21,22
F	11,12,13	10,11,12	9,10,11	15,16,17	13,14,15	12,13,14	11,12,13	17,18,19
M	18,19,20	10,11,12	16,17,18	14,15,16	20,21,22	19,20,21	11,12,13	16,17,18
A	15,16,17	14,15,16	13,14,15	18,19,20	17,18,19	16,17,18	15,16,17	13,14,15
M	13,14,15	12,13,14	11,12,13	16,17,18	15,16,17	14,15,16	13,14,15	18,19,20
J	17,18,19	16,17,18	15,16,17	13,14,15	19,20,21	18,19,20	10,11,12	22,23,24
J	15,16,17	14,15,16	20,21,22	11,12,13	17,18,19	16,17,18	15,16,17	13,14,15
A	12,13,14	18,19,20	17,18,19	15,16,17	14,15,16	13,14,15	12,13,14	10,11,12
S	9,10,11	15,16,17	14,15,16	19,20,21	18,19,20	17,18,19	16,17,18	21,22,23
O	14,15,16	13,14,15	19,20,21	17,18,19	16,17,18	15,16,17	14,15,16	19,20,21
N	18,19,20	17,18,19	16,17,18	14,15,16	13,14,15	12,13,14	11,12,13	16,17,18
D	16,17,18	15,16,17,	14,15,16	19,20,21	18,19,20	10,11,12	16,17,18	21,22,23

NOTE: These are the dates related to the Symbol W in the main catalog, Section VI.

X. Addresses of Data Sources

It is only thanks to the voluntary submission of data to the Data Center that we are able to serve as a resource for data requesters. We feel that use of the Data Center system relieves scientists and observers of the burden of copying their data for others saving them time and money. However, it is only proper to acknowledge the current data suppliers -- in many cases the acknowledgment will not include the names of the station observers since data are received in blocks from various institutions or administrations. Therefore, please forgive us for any omission. We would be pleased to receive any changes or corrections for our use and future catalog publications.

Address of Data Source	Stations		
Argentina			
Dr. Jose R. Manzano Laboratorio de Ionosfera Instituto de Fisica Av. Independencia 1800 San Miguel de Tucuman Republica Argentina	Tucuman		
LIARA Avenida del Libertador 327 Vicente Lopez BA Republic Argentina	Belgrano Buenos Aires Trelew Ushuaia		
Australia			
Dr. David Cole Ionospheric Prediction Service Box 702 Darlinghurst 2010 N.S.W. Australia	Brisbane Canberra Casey Hobart	Mawson Mundaring Norfolk Island Salisbury	Townsville Vanimo
Belgium			
Dr. L. Bossy Geophysique Externe Institut Royal Meteorologique Avenue Circulaire 3 1180 Bruxelles, Belgium	Dourbes		
Brazil			
Dr. Fernando de Mendonca General Director Instituto de Pesquisas Espaciais Sao Dos Campos Sao Paulo, Brazil	Fortaleza San Jose		
Bulgaria			
Dr. G. Nestorov Geophysical Institute Bulgarian Academy of Sciences 6 Moskovska Street Sofia, Bulgaria	Sofia		
Canada			
Director General Department of Communications Telecommunications Engineering Branch 1241 Clyde Avenue Ottawa, Ontario K2C 1Y3, Canada	Churchill Ottawa Resolute	St. John's Winnipeg	

Address of Data Source	Stations		
Chile			
Professor Harald Sagner Departamento de Geofisica Universidad de Concepcion Casilla 947 Concepcion, Chile	Concepcion		
China			
Professor C. M. Huang Dept-Electrical Engineering National Taiwan University Taipei Taiwan, Rep. of China	Taipei		
Colombia			
Estacion Ionosferica Facultad de Electronica Universidad del Cauca Popayan, Colombia	Popayan		
Czechoslovakia			
Czechoslovak Academy of Sciences Geophysical Institute Praha 4 - Sporilov, Bocni II Czechoslovakia	Pruhonice		
Denmark			
Jorgen Taagholt Ionosphere Laboratory Technical University of Denmark DK 2800 Lyngy, Denmark	Godhavn Narssarssuaq Sondre Stromfjord Thule		
Finland			
The Finnish P.T.T. Radio Division Box 511 SF-00101 Helsinki 10, Finland	Nurmijarvi Sodankyla		
France			
L'Ingenieur General des Telecommunications Dept. M.I.R. C.N.E.T. 22301 Lannion, France	Dakar Djibouti Garchy Kerguelen	Lannion Ouagadougou Poitiers Tahiti	Tamanrassett Terre Adelie
Greece			
Ionospheric Institute Nat'L. Observatory of Athens Theseum Athens 306, Greece	Athens		
Germany			
Dr. J. Taubenheim Heinrich-Hertz Inst. DDR 1199 Berlin-Adlershof Rudower Chaussee 5 German Dem. Rep	Juliusruh/Rugen		

Address of Data Source	Stations		
Germany			
Max-Planck-Inst. fur Aeronomie Postfach 20, 3411 Lindau/Harz German Fed. Rep.	Lindau Tsumeb		
Ionospharen Institute 7814 Breisach/Rhein German Fed. Rep.	Freiburg		
Hong Kong			
Dr. G. O. Walker Physics Department Hong Kong University Hong Kong	Hong Kong		
Hungary			
Central Institute of Meteorology Post Box 38 H-1525 Budapest 114, Hungary	Budapest		
India			
Dr. A. P. Mitra Nat'l. Physical Laboratory of India Hillside Road New Delhi 12, India	Ahmedabad Bombay Calcutta New Delhi	Hyderabad Kodaikanal Madras Thumba	Tiruchirapalli
Italy			
Professor M. Bossolasco, Director Instituto Geofisico and GeoD. P.O. Box 3145 16100 Genova, Italy	Genova		
Instituto Nazionale Di Geofisico Reparto Ionosferico Via Ruggero Bonghi, 11/B 00184 Roma, Italy	Rome		
Japan			
Dr. I. Kasuya World Data Center C2 for Ionosphere Radio Research Labs. Ministry of Posts & Telecommunications Koganei-shi, Tokyo 184, Japan	Akita Okinawa Tokyo Wakkanai Yamagawa		
Korea			
Woo Hoang Kee Radio Research Laboratory Ministry of Communications Seoul (AN-YANG) 171, Korea	Seoul		
Mexico			
Direccion General de Telcomunicaciones Subdireccion General de Permisos y de Asunto Internacionales Depto. de Frecuencias Radioelectricas Torre Central de Telecommunicaciones Mexico 12, D.F. Mexico	Mexico		

Address of Data Source	Stations
Netherlands	
Geophysical Division Royal Netherlands Meteorological Inst. 297 Utrechtseweg De Bilt, Netherland	De Bilt Paramaribo
New Zealand	
Mr. R. S. Unwin Superintendent Geophysical Observatory P.O. Box 2111 Christchurch, New Zealand	Auckland Christchurch Campbell Island Rarotonga Scott Base
Norway	
The Auroral Observatory P.O. Box 953 N-9001 Tromso, Norway	Tromso
Radio Wave Propagation Bureau Division for Electronics Norwegian Defense Research Estab. P.O. Box 25 N-2007 Kjeller, Norway	Kjeller
Peru	
Ing. Alberto A. Giesecke Director General Instituto Geofisico del Peru Apartado 46, Lima, Peru	Huancayo
Poland	
Institute of Telecommunications 04-894 Warsaw, Poland	Miedzeszyn
Puerto Rico	
Cornell University National Astronomy - Ionospheric Center Barrio Esperanza P.O. Box 995 Arecibo, Puerto Rico	Arecibo
South Africa	
Professor J. A. Gledhill Department of Physics Rhodes University Grahamstown, South Africa	Sanae Base Grahamstown
The Director Nat'l. Inst. for Telecommunications Research P.O. Box 3718 Johannesburg, 2000, Rep. of South Africa	Hermanus Johannesburg
Spain	
Father Edward Galdon, S.J. Observatory of Ebro Roquetas (Tarragona), Spain	Tortosa

Address of Data Source	Stations		
Sweden			
Research Institute of National Defence Section 346 S-104 50 Stockholm, Sweden	Kiruna Lycksele Uppsala		
Thailand			
Dr. Pradish Cheosakul Research Director General Scientific Research Corp. of Thailand 196 Phaholythin Road Bangkok 9, Thailand	Bangkok		
United Kingdom			
R. W. Smith World Data Center C1 Appleton Laboratory Science Research Council Ditton Park Slough,Bucks, United Kingdom SL3 9JX	Argentine Island Graz Halley Bay Ibadan	Port Stanley Slough South Georgia	
United States			
Miss J. Virginia Lincoln World Data Center A for STP National Oceanic and Atmospheric Administration U. S. Department of Commerce Boulder, CO 80302	Boulder College Manila Maui	Pt. Arguello Wallops Island White Sands	
Air Force Geophysics Laboratory Hanscom AFB, MA 01731	Goose Bay		
Dr. John V. Evans Millstone Radar Lincoln Laboratory P.O. Box 73 Lexington, MA 02173	Millstone Hill		
U.S.S.R.			
Dr. V. P. Golokov, Director for Solar-Terrestrial Physics World Data Center B2 Molodezhnaya 3 Moscow 117 296, U.S.S.R.	Alma Ata Ashkhabad Cape Schmidt Dixon Gorky Heiss Island Irkutsk Kaliningrad Karaganda Khabarovsk	Kiev Leningrad Mirny Moscow Murmansk Norilsk Novokazalinsk Novosibirsk Providenya Rostov	Salekhard Sverdlovsk Tashkent Tbilisi Tomsk Tunguska Vostok Yakutsk
Yugoslavia			
Ionospheric Observatory Institute "Mihailo Pupin" Beograd, Yugoslavia	Beograd		
Zaire			
Mr. Kashala Lukasu Mbayabo Le Directeur-chef de Service FF Dept. des Transcoms La Meteorologie Illeme Division Kinshasa, Rep. du Zaire	Kinshasa-Binza		

XI. Note on Preparation of Catalog

An institutional document like this catalog is nonetheless compiled and prepared by human beings. Some users may like to know who some of them are, since personal contacts in many cases enhance the efficiency and effectiveness of the data services provided as a result of the catalog. The major work, the main catalog in Section VI, is mostly due to H. Irene Brophy, while Newbern Smith pulled together most of the information on pre-IGY data. The N(h) profile catalog is the work of Marwin Martinez. The keypunching was by Ruth Dahlke and Cynthia Bruen, and programming by Deborah A. Dunham. The manuscript typing was by May Starr and drafting by Charles Shanks.

The formatting of the catalog and preparation of the text was done by Raymond O. Conkright and J. Virginia Lincoln. Helen E. Coffey was involved in the final editing. All of these individuals are staff members of the National Geophysical Solar-Terrestrial Data Center which operates World Data Center A for Solar-Terrestrial Physics. Theirs was a major effort.

A. H. SHAPLEY, Director, NGSDC

UAG Series of Reports

Prepared by World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, Colorado, U.S.A.

These reports are for sale through the National Climatic Center, Federal Building, Asheville, NC 28801, Attn: Publications. Subscription price: $25.20 a year; $12.00 additional for foreign mailing; single copy price varies. These reports are issued on an irregular basis with 6 to 12 reports being issued each year. Therefore, in some years the single copy rate will be less than the subscription price, and in some years the single copy rate will be more than the subscription price. Make check or money order payable to: Department of Commerce, NOAA.

Some issues are now out of print and are available only on microfiche as indicated. Requests for microfiche should be sent to World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, Co 80302, with check or money order made payable to Department of Commerce, NOAA.

UAG-1 "IQSY Night Airglow Data", price $1.75.
UAG-2 "A Reevaluation of Solar Flares, 1964-1966", price 30 cents.
UAG-3 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 6 July 1966 through 8 September 1968", microfiche only, price 45 cents.
UAG-4 "Abbreviated Calendar Record 1966-1967", price $1.25.
UAG-5 "Data on Solar Event of May 23, 1967 and its Geophysical Effects", price 65 cents.

UAG-6 "International Geophysical Calendars 1957-1969", price 30 cents.
UAG-7 "Observations of the Solar Electron Corona: February 1964-January 1968", price 15 cents.
UAG-8 "Data on Solar-Geophysical Activity October 24-November 6, 1968", price (includes Parts 1 and 2) $1.75.
UAG-9 "Data on Cosmic Ray Event of November 18, 1968 and Associated Phenomena", price 55 cents.
UAG-10 "Atlas of Ionograms", price $1.50.

UAG-11 "Catalogue of Data on Solar-Terrestrial Physics" (now obsolete).
UAG-12 "Solar-Geophysical Activity Associated with the Major Geomagnetic Storm of March 8, 1970", price (includes Parts 1-3) $3.00.
UAG-13 "Data on the Solar Proton Event of November 2, 1969 through the Geomagnetic Storm of November 8-10, 1969", price 50 cents.
UAG-14 "An Experimental, Comprehensive Flare Index and Its Derivation for 'Major' Flares, 1955-1969", price 30 cents.
UAG-15 "Catalogue of Data on Solar-Terrestrial Physics" (now obsolete).

UAG-16 "Temporal Development of the Geographical Distribution of Auroral Absorption for 30 Substorm Events in each of IQSY (1964-65) and IASY (1969)", price 70 cents.
UAG-17 "Ionospheric Drift Velocity Measurements at Jicamarca, Peru (July 1967-March 1970)", microfiche only, price 45 cents.
UAG-18 "A Study of Polar Cap and Auroral Zone Magnetic Variations", price 20 cents.
UAG-19 "Reevaluation of Solar Flares 1967", price 15 cents.
UAG-20 "Catalogue of Data on Solar-Terrestrial Physics" (now obsolete).

UAG-21 "Preliminary Compilation of Data for Retrospective World Interval July 26 - August 14, 1972", price 70 cents.
UAG-22 "Auroral Electrojet Magnetic Activity Indices (AE) for 1970", price 75 cents.
UAG-23 "U.R.S.I. Handbook of Ionogram Interpretation and Reduction", price $1.75.
UAG-24 "Data on Solar-Geophysical Activity Associated with the Major Ground Level Cosmic Ray Events of 24 January and 1 September 1971", price (includes Parts 1 and 2) $2.00.
UAG-25 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 9 September 1968 through 9 December 1971", price 35 cents.

UAG-26 "Data Compilation for the Magnetospherically Quiet Periods February 19-23 and November 29 - December 3, 1970", price 70 cents.
UAG-27 "High Speed Streams in the Solar Wind", price 15 cents.
UAG-28 "Collected Data Reports on August 1972 Solar-Terrestrial Events", price (includes Parts 1-3) $4.50.
UAG-29 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1968", price 75 cents.
UAG-30 "Catalogue of Data on Solar-Terrestrial Physics", price $1.75.

UAG-31 "Auroral Electrojet Magnetic Activity Indices AE (11) for 1969", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, February 1974, 142 pages, price 75 cents.

UAG-32 "Synoptic Radio Maps of the Sun at 3.3 mm for the Years 1967-1969", by Earle B. Mayfield and Kennon P. White III, San Fernando Observatory, Space Physics Laboratory and Fred I. Shimabukuro, Electronics Research Laboratory, Laboratory Operations, The Aerospace Corporation, El Segundo, California, 90245, April 1974, 26 pages, price 35 cents.

UAG-33 "Auroral Electrojet Magnetic Activity Indices AE(10) for 1967", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, May 1974, 142 pages, price 75 cents.

UAG-34 "Absorption Data for the IGY/IGC and IQSY", compiled and edited by A. H. Shapley, National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, Colorado, U.S.A., W. R. Piggott, Science Research Council, Slough, U.K., and K. Rawer, Arbeitsgruppe für Physikalische Weltraumforschung, Freiburg, G.F.R., June 1974, 381 pages, price $2.00.

UAG-35 "Catalogue of Digital Geomagnetic Variation Data at World Data Center A for Solar-Terrestrial Physics", prepared by Environmental Data Service, NOAA, Boulder, Colorado, July 1974, 20 pages, price 20 cents.

UAG-36 "An Atlas of Extreme Ultraviolet Flashes of Solar Flares Observed Via Sudden Frequency Deviations During the ATM-SKYLAB Missions", by R. F. Donnelly and E. L. Berger, NOAA Space Environment Laboratory, Lt. J. D. Busman, NOAA Commissioned Corps, B. Henson, NASA Marshall Space Flight Center, T. B. Jones, University of Leicester, UK, G. M. Lerfald, NOAA Wave Propagation Laboratory, K. Najita, University of Hawaii, W. M. Retallack, NOAA Space Environment Laboratory, and W. J. Wagner, Sacramento Peak Observatory, October 1974, 95 pages, price 55 cents.

UAG-37 "Auroral Electrojet Magnetic Activity Indices AE(10) for 1966", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, December 1974, 142 pages, price 75 cents.

UAG-38 "Master Station List for Solar-Terrestrial Physics Data at WDC-A for Solar-Terrestrial Physics", by R. W. Buhmann, World Data Center A for Solar-Terrestrial Physics, Juan D. Roederer, University of Denver, Denver, Colorado, M. A. Shea and D. F. Smart, A.F.C.R.L., Hanscom AFB, Massachusetts, December 1974, 110 pages, price $1.60.

UAG-39 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1971", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, February 1975, 144 pages, price $2.05.

UAG-40 "H-Alpha Synoptic Charts of Solar Activity For the Period of Skylab Observations, May, 1973-March, 1974", by Patrick S. McIntosh, NOAA Environmental Research Laboratory, February 1975, 32 pages, price 56 cents.

UAG-41 "H-Alpha Synoptic Charts of Solar Activity During the First Year of Solar Cycle 20 October, 1964 - August, 1965", by Patrick S. McIntosh, NOAA Environmental Research Laboratory, and Jerome T. Nolte, American Science and Engineering, Cambridge, Massachusetts, March 1975, 25 pages, price 48 cents.

UAG-42 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-80 MHz 10 December 1971 through 21 March 1975", by James W. Warwick, George A. Dulk, and Anthony C. Riddle, Department of Astro-Geophysics, University of Colorado, Boulder, Colorado 80302, April 1975, 49 pages, price $1.15.

UAG-43 "Catalog of Observation Times of Ground-Based Skylab-Coordinated Solar Observing Programs", compiled by Helen E. Coffey, World Data Center A for Solar-Terrestrial Physics, May 1975, 159 pages, price $3.00.

UAG-44 "Synoptic Maps of Solar 9.1 cm Microwave Emission from June 1962 to August 1973", by Werner Graf and Ronald N. Bracewell, Radio Astronomy Institute, Stanford University, Stanford, California 94305, May 1975, 183 pages, price $2.55.

UAG-45 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1972", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, May 1975, 144 pages, price $2.10.

UAG-46 "Interplanetary Magnetic Field Data 1963-1974", by Joseph H. King, National Space Science Data Center, NASA Goddard Space Flight Center, Greenbelt, Maryland 20771, June 1975, 382 pages, price $2.95.

UAG-47 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1973", by Joe Haskell Allen, Carl C. Abston and Leslie D. Morris, National Geophysical and Solar-Terrestrial Data Center, Environmental Data Service, June 1975, 144 pages, price $2.10.

UAG-48A "Synoptic Observations of the Solar Corona during Carrington Rotations 1580-1596 (11 October 1971 - 15 January 1973)", [Reissue with quality images] by R. A. Howard, M. J. Koomen, D. J. Michels, R. Tousey, C. R. Detwiler, D. E. Roberts, R. T. Seal and J. D. Whitney, E. O. Hulbert Center for Space Research, NRL, Washington, D. C. 20375 and R. T. and S. F. Hansen, C. J. Garcia and E. Yasukawa, High Altitude Observatory, NCAR, Boulder, Colorado 80303, February 1976, 200 pages, price $4.25

UAG-49 "Catalog of Standard Geomagnetic Variation Data", prepared by Environmental Data Service, NOAA, Boulder, Colorado, August 1975, 125 pages, price $1.85.

UAG-50 "High-Latitude Supplement to the URSI Handbook on Ionogram Interpretation and Reduction", by W. R. Piggott, British Antarctic Survey, c/o SRC, Appleton Laboratory, Ditton Park, Slough, England, October 1975, 292 pages, price $4.00.

UAG-51 "Synoptic Maps of Solar Coronal Hole Boundaries Derived from He II 304Å Spectroheliograms from the Manned Skylab Missions", by J. D. Bohlin and D. M. Rubenstein, E. O. Hulbert Center for Space Research, Naval Research Laboratory, Washington, D. C. 20375 U.S.A., November 1975, 30 pages, price 54 cents.

UAG-52 "Experimental Comprehensive Solar Flare Indices for Certain Flares, 1970-1974", compiled by Helen W. Dodson and E. Ruth Hedeman, McMath-Hulbert Observatory, The University of Michigan, 895 Lake Angelus Road North, Pontiac, Michigan 48055 U.S.A., November 1975, 27 pages, price 60 cents.

USCOMM-NOAA-ASHEVILLE-4-76-1800