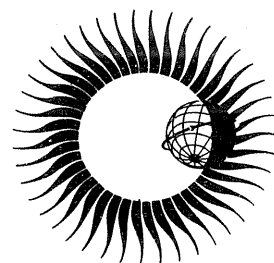


WORLD DATA CENTER A for Solar-Terrestrial Physics



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



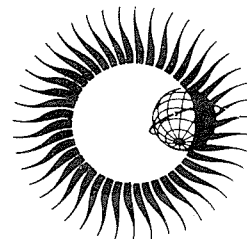
REPORT UAG - 54

CATALOG OF IONOSPHERE VERTICAL SOUNDINGS DATA

April 1976

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ENVIRONMENTAL DATA SERVICE
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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

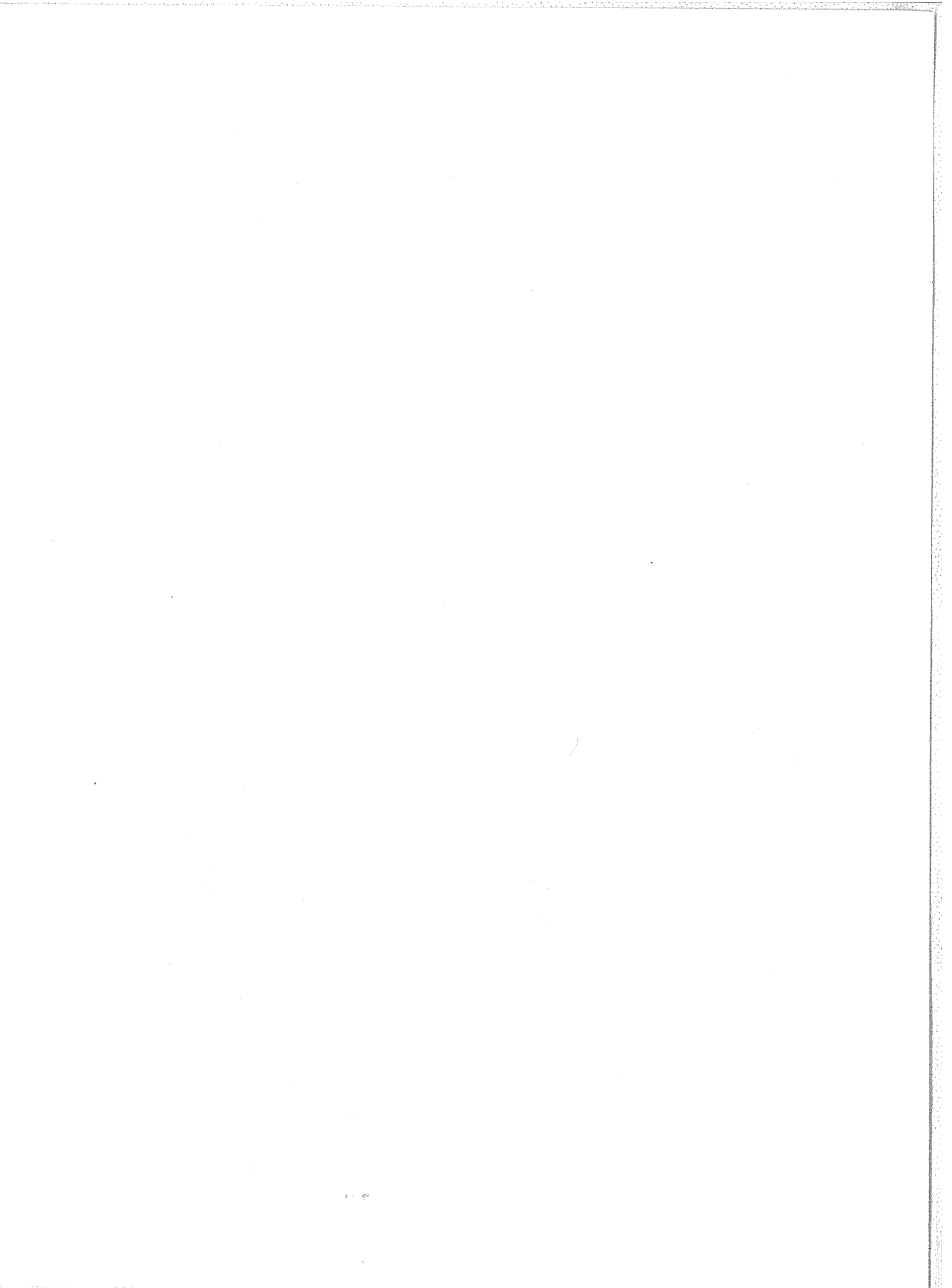
World Data Center A, for which the National Academy of Sciences through the Geophysics Research Board and its Committee on Data Interchange and Data Centers has over-all responsibility, consists of the WDC-A Coordination Office and seven subcenters at scientific institutions in various parts of the United 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 "△", with the name in small letters.

1. ALTERNATE NAME LIST

OTHER NAMES BY WHICH OBSERVATORY IS KNOWN

OBSERVATORY NAMES USED IN THIS CATALOG

OBSERVATORY NAMES USED IN THIS CATALOG

OTHER NAMES BY WHICH OBSERVATORY IS KNOWN

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
Dixon 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	Macao
Meadows	Washington
Mobile Station	Batavia
Monte Capellino	Genova
Mount Stromlo	Canberra
N.A.I.C.	Arecibo
Narssarsuaq	Narssarsuaq
NBS Boulder	Boulder
New Delhi	Delhi
Nichols Field	Manila
Oslo	Kjeller
Paris	Bagneux
Paris-Domont	Domont
Platteville	Erie
Point Barrow	Barrow

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	Leopoldville
Kjeller	Oslo
Leyte	Tolasa
Longyearbyen	Svalbard
Macao	Macao
Manila	Nichols Field
	Quezon City
Maui	Kihei Maui
Maynard	Boston
Mexico City	El Cerrillo
Miedzeszyn	Warsaw
Moscoq	Krasnaya Pakhra
Narssarsuaq	Narssarsuaq
Port Stanley	Falkland Island
	Stanley
Providenya	Providenie Bay
Pruhonice	Prague

(continued on next page)

(continued on next page)

1. Alternate Name List (continued)

OTHER NAMES BY WHICH OBSERVATORY IS KNOWN

Pole Station
Port Lockroy
Prague
Pretoria
Providenie Bay
Quebec
Quezon City
Ramey AFB
Raoul Island
Roma
Rostov-on-Don
Sanae Station
San Alessio
San Francisco
San Juan
Scaramanga Station
Showa
Sky-Hi
Sottens
Syowa Bay
Stanley
Sterling
Svalbard
Taiwan
Taravao
Tiksy Bay (Tiksi)
Tolasa
Trichy
Trivandrum
Waller Field
Warsaw
Weddell Sea
Wilkes
Yuzhno Sakhalinsk

OBSERVATORY NAMES USED IN THIS CATALOG

South Pole
Argentine Island
Pruhonic
Johannesburg
Providenya
Baie St. Paul
Manila
Puerto Rico
Kermadec
Rome
Rostov
Sanae
Rome
Stanford
Puerto Rico
Athens
Syowa Base
Eight
Schwarzenburg
Syowa Base
Port Stanley
Washington
Longyearbyen
Taipei
Tahiti
Tixie Bay
Leyte
Tiruchirapalli
Thumba
Trinidad
Miedzeszyn
Ellsworth
Casey
Yuzhno Sakhal

OBSERVATORY NAMES USED IN THIS CATALOG

Puerto Rico

Rome

Rostov
Sanae
San Jose
Schwarzenburg
South Pole

Stanford
Syowa Base

Tahiti
Taipei

Tananarive
Terre Adelie
Thumba
Tiruchirapalli
Tixie Bay

Togo
Tokyo
Tortosa
Trinidad
Washington

Winnipeg
Yakutsk
Yuzhno Sakhal

OTHER NAMES BY WHICH OBSERVATORY IS KNOWN

Ramey AFB
San Juan
Roma
San Alessio
Rostov-on-Don
Sanae Station
Cachoeira Paulista
Sottens
Amundsen-Scott
Pole Station
San Francisco
Showa
Syowa Bay
Taravao
Chung-Li
Formosa
Taiwan
Ivato
Dumont D'Urville
Trivandrum
Trichy
Bukhta Tiksy
Tiksy Bay (Tiksi)
Dapango
Kokubunji
Ebro
Waller Field
Ft. Belvoir
Kensington
Sterling
Beltsville
Meadows
Kenora
Jakutsk
Yuzhno Sakhalinsk

2. ALPHABETICAL LISTING

STATION NAME	OBS PROG	GEOGRAPHIC			GEOMAGNETIC			STA ID	COMPUTER CODE	GEOGRAPHIC			GEOMAGNETIC			STA ID	COMPUTER CODE
		LAT	LONG	EAST	LAT	LONG	EAST			LAT	LONG	EAST	LAT	LONG	EAST		
ABERYSTWYTH	B01	52.43	355.93		55.82	80.67		AG	005	-72.30	170.20		-74.61	278.46		HT	67K
ACCRA	B01	5.63	359.83		9.56	70.74		AG	005	28.40	279.40		39.63	347.26		CC	929
ADAK	B01	51.90	183.40		47.31	240.43		AD	651	70.17	234.37		73.63	269.60		CF	870
AHMEDABAD	B01	23.02	72.60		13.82	144.37		AH	233	68.90	179.50		62.70	227.11		CE	681
AKITA	B01	39.70	140.10		29.53	205.87		AK	539	-34.10	18.30		-32.89	80.19		CT	13M
ALERT	B01	82.60	237.40		85.78	167.91		AL	J82	-11.00	142.40		-20.66	213.64		07	51J
ALMA ATA	B01	43.25	76.92		33.42	151.11		AA	343	34.60	33.00		31.41	109.66		CV	135
ANCHORAGE	B01	61.20	210.10		61.01	258.60		AN	761	33.60	352.40		38.35	69.49		CA	033
* ARCTICA (NP-8)	B01	80.00	155.00		70.00	205.00		XI		-66.28	110.53		-77.75	180.00		CW	460
* ARCTICA (NP-10)	B01	79.00	155.00		69.16	208.40		XJ		-6.80	290.20		4.49	349.71		CY	90P
* ARCTICA (NP-11)	B01	79.00	155.00		70.04	207.06		XX		-9.10	231.40		2.23	350.98		CM	90R
* ARCTICA (NP-13)	B01	81.00	165.00		71.78	204.03		XL		52.00	113.50		40.54	182.41		CX	452
* ARCTICA (NP-16)	B01	78.00	176.00		67.42	214.24		XM	676	-43.60	172.80		-7.98	253.24		GH	64L
* ARCTICA (NP-19)	B01	78.00	150.00		70.92	200.59		XP		1.90	202.70		2.29	271.75		08	701
* ARCTICA I (NP-6)	B01	82.00	9.00		77.54	143.01		XG		29.40	106.30		17.96	176.13		09	429
* ARCTICAI (NP-7)	B01	86.00	296.00		82.10	177.23		XH		58.80	255.80		68.73	323.32		CH	958
ARGENTINE IS	B01	18.50	293.17		29.96	2.89		AR	J19	70.50	291.40		81.97	2.08		CR	J70
ARKHANGELSK	B01	-65.20	295.70		-53.76	3.67		AI	J6N	28.20	279.40		39.43	347.28		10	928
ASHKHABAD	B01	64.60	40.50		58.89	128.72		AZ	163	-12.20	96.80		-23.33	165.37		CS	31K
ATHENS	B01	37.90	58.30		30.39	133.69		AS	237	64.90	212.20		64.76	256.98		00	764
AUCKLAND	B01	38.00	23.60		36.51	101.76		AT	138	6.90	79.87		-2.99	149.54		11	306
BADGOW	B01	-37.00	175.00		-41.17	253.20		AU	63P	-36.60	287.00		-25.15	356.87		CP	J30
BAGNEX	B01	51.70	.50		54.22	84.90		01	061	23.00	278.00		34.17	346.03		00	923
BAGUIO	B01	48.80	2.30		51.11	85.22		55	039	39.00	121.60		27.71	189.70		12	439
BAIE ST PAUL	B01	16.40	120.60		5.10	189.70		BF	416	14.70	341.60		21.69	54.08		DK	A14
BAKER LAKE	B01	47.38	239.45		58.85	358.59		PL	J48	52.10	5.20		53.67	89.79		DT	053
BANDONG	B01	64.30	264.00		73.79	316.06		BL	964	-63.00	299.30		-1.62	6.40		DE	J6L
BANGKOK	B01	-6.90	107.60		-18.36	176.94		02	40Q	23.60	77.16		18.86	149.31		OH	328
BANGUI	B01	13.83	100.58		2.52	170.33		BK	314	73.50	80.40		62.97	161.71		DI	373
BARBADOS	B01	4.60	18.60		4.89	89.03		BI	104	11.50	42.80		6.98	113.99		DJ	111
BARROW	B01	13.12	300.40		24.41	10.56		BS	J13	49.00	2.30		51.30	85.32		13	062
BATAVIA	B01	71.30	203.20		68.63	241.52		BW	771	50.10	4.60		51.89	88.15		08	049
BATON ROUGE	B01	39.40	275.90		50.42	342.16		03	939	38.57	59.78		29.67	143.19		DU	238
BAUDOUIN	B01	30.50	258.80		41.04	334.98		04	930	30.38	273.30		41.26	340.13		EG	931
BELGRANO	B01	-70.40	23.30		-67.89	62.90		BE	17V	-75.23	282.84		-63.82	355.57		EI	97N
BEVERIDGE	B01	-77.90	321.40		-67.29	16.18		GE	A7Q	37.10	353.27		41.59	71.44			
BILLERICA	B01	-37.29	144.59		-46.46	220.30			145	-11.60	27.50		-12.75	94.50		EZ	11J
BOGOTA	B01	42.60	288.70		54.07	357.70		BC	J43	-77.72	318.90		-66.98	14.98		EL	A7P
BOMBAY	B01	4.50	235.80		15.93	355.10		BG	905	40.01	254.70		48.90	316.99		ER	842
BOSTON	B01	19.00	72.80		9.81	144.04		BM	219	80.00	274.10		86.62	236.39		EU	980
BOULDER	B01	42.60	288.70		54.07	357.70		56	J43	44.79	298.87		56.26	357.88			
BRIBIE IS	B01	40.00	254.70		48.89	317.00		BC	840	-18.00	178.20		-22.01	251.60		14	61Q
BRISBANE	B01	-27.30	153.00		-35.44	227.43				75.90	235.70		78.07	254.46		XC	982
BUDAPEST	B01	-27.50	152.90		-35.65	227.36		BR	52P	9.20	18.35		9.45	89.71		FA	109
BUENOS AIRES	B01	46.40	21.10		45.10	102.33		BU	147	58.10	291.60		59.57	1.62		FC	J58
BUNIA	B01	-34.50	301.50		-23.21	99.83		BA	J3M	40.40	295.50		51.83	354.29		FM	940
BURGHEAD	B01	1.50	30.20		-44	99.77		BN	102	64.90	234.50		69.17	278.44		FN	864
BYRD STATION	B01	57.70	3.50		59.26	91.65		06	063	-3.70	321.20		6.17	30.80		FZ	A0M
CAIRO	B01	-30.00	240.00		-70.59	336.21		BO	88V	57.60	357.90		60.28	86.05		15	065
CALCUTTA	B01	80.00	31.19		27.27	106.77		05	130	48.10	7.60		49.39	90.14		FR	048
CAMPBELL IS	B01	23.00	88.60		12.30	159.40		CU	322	63.80	231.40		75.27	1.51		FB	J63
CANBERRA	B01	-52.50	159.20		-57.19	253.66		CI	65K	COORDINATES VARIABLE							
* DRIFTING STATION	B01	-35.30	149.00		-43.90	224.80		CB	53N	40.60	139.90		30.41	205.58		16	541
										47.30	3.10		49.52	85.33		GY	042

2. Alphabetical Listing (continued)

GEOGRAPHIC				GEOMAGNETIC				GEOGRAPHIC				GEOMAGNETIC					
OBS	STATION NAME	LAT	LONG EAST	STA ID	COMPUTER CODE	OBS	STATION NAME	LAT	LONG EAST	STA ID	COMPUTER CODE	OBS	STATION NAME	LAT	LONG EAST	STA ID	COMPUTER CODE
B01	GENOVA	44.60	9.00	45.76	90.02	GV	044	B01	LANCHOW	36.10	103.80	B01	LANCHOW	24.70	174.02	27	336
B01	GODHAVN	69.30	306.50	79.85	33.49	GC	J69	B01	LANNIC	48.45	356.73	B01	LANNIC	51.87	79.41	LN	047
B01	GOOSE BAY	53.32	299.16	64.61	12.07	GS	J53	B01	LEICESTER	52.00	359.00	B01	LEICESTER	54.81	83.56		
B01	GORKY	56.15	44.28	50.29	127.06	GK	156	B01	LENINGRAD	59.95	30.70	B01	LENINGRAD	56.17	117.70	LD	160
B01	GRAHAMSTOWN	-33.30	26.50	-33.73	88.35	GR	131	B01	LEYTE	11.00	125.00	B01	LEYTE	-12	194.20	28	411
B01	GRAND BAHAMA	26.60	291.80	37.92	350.09	G8	926	B01	LINDAU	51.60	10.10	B01	LINDAU	52.22	94.28	LI	050
B01	GRAZ	47.10	15.50	46.87	97.33	GZ	146	B01	LITTLE AMERICA	-78.20	197.80	B01	LITTLE AMERICA	-74.00	312.19	LA	770
B01	GUAM	13.50	144.87	3.96	213.36	17	513	B01	LONGYEARBYEN	78.20	15.70	B01	LONGYEARBYEN	74.31	131.11	LG	178
B01	HAIFA	32.82	34.98	29.31	111.06	HA	132	B01	LOSHAN	29.50	103.70	B01	LOSHAN	18.10	173.75	29	329
B01	HAINAN	18.30	109.30	6.83	178.82	18	419	B01	LULEA	65.60	22.10	B01	LULEA	62.90	114.96	LU	165
B01	HALLEY BAY	-75.50	333.40	-65.83	24.58	HB	A7N	B01	LIRO	-2.30	28.80	B01	LIRO	-3.89	97.65	LW	10K
B01	HANKOW	30.70	114.30	19.25	183.43	19	432	B01	LYCKSELE	64.70	18.80	B01	LYCKSELE	62.70	111.37	LY	164
B01	HANOVER	43.70	237.80	55.16	356.55	HN	J44	B01	MACAU	22.20	113.60	B01	MACAU	10.74	182.89	MC	422
B01	HEISS IS	80.60	58.00	71.28	156.18	BT	280	B01	MACQUARIE IS	-54.50	159.00	B01	MACQUARIE IS	-60.98	243.64	MQ	55M
B01	HERMANUS	-34.42	19.23	-33.38	80.99	HE	13N	B01	MADRAS	13.10	90.30	B01	MADRAS	3.14	150.59	MD	313
B01	HIGHGATE SPGS	45.01	286.91	56.45	355.37			B01	MAGADAN	60.00	151.00	B01	MAGADAN	50.63	210.77		
B01	HIRAIISO	36.40	140.60	26.30	206.73	20	536	B01	MAKASSAR	5.20	119.30	B01	MAKASSAR	-6.13	188.98	30	40N
B01	HIRATSUKA	35.30	139.30	25.09	205.70	21	533	B01	MANILA	14.70	121.10	B01	MANILA	3.41	190.24	MN	414
B01	HOBBART	-42.90	147.30	-51.61	224.92	HC	54K	B01	MARION IS	-46.87	37.25	B01	MARION IS	-49.09	94.76	MR	140
B01	HOLLANDIA	-2.50	140.80	-12.38	211.04	HL	50K	B01	MAUI	20.80	203.50	B01	MAUI	20.96	268.58	MA	720
B01	HONG KONG	22.33	114.20	10.88	183.46	HK	423	B01	MAYNARD	42.43	238.55	B01	MAYNARD	53.89	357.52	MY	J43
B01	HUANCAYO	-12.00	294.70	-5.59	354.30	HU	91K	B01	MEANOOK	54.60	246.70	B01	MEANOOK	61.88	301.66	ME	355
B01	HUNTSVILLE	34.44	273.65	45.33	340.08	HV	934	B01	MEGURO	35.60	139.70	B01	MEGURO	25.42	206.03	31	534
B01	HYDERABAD	17.35	78.47	7.55	149.26	HY	317	B01	MEXICO CITY	19.40	260.30	B01	MEXICO CITY	29.18	327.05	MX	919
B01	IBADAN	7.40	3.90	10.53	75.12	IB	007	B01	MIEDZESZYHN	52.20	21.20	B01	MIEDZESZYHN	50.62	105.00	MZ	152
B01	ILO	-17.40	298.80	-5.93	358.34	IL	J1P	B01	MILLSTONE HILL	42.60	288.50	B01	MILLSTONE HILL	54.06	357.45	MH	J45
B01	INVERNESS	57.40	355.80	60.51	83.78	IN	056	B01	MIRNY	-66.50	93.00	B01	MIRNY	-77.00	147.73	MI	360
B01	IRKUTSK	52.47	104.03	41.06	174.75	IR	352	B01	MOSCOW	55.50	37.30	B01	MOSCOW	50.82	120.86	MO	155
B01	ISTANBUL	41.13	29.03	38.50	107.85	IS	141	B01	MUNDARING	-31.99	116.31	B01	MUNDARING	-43.39	186.75	MU	43K
B01	JAMAICA	18.00	293.20	29.37	352.00	JA	918	B01	MURMANSK	69.00	33.00	B01	MURMANSK	64.10	126.77	MM	168
B01	JICAMARCA	-11.95	233.14	-5.57	352.77	JI	91J	B01	NAIROBI	-1.28	36.83	B01	NAIROBI	-4.46	105.75	NR	10J
B01	JOHANNESBURG	-26.10	28.10	-27.04	91.83	JO	120	B01	NANKING	32.10	119.00	B01	NANKING	20.74	187.67	32	432
B01	JULIACA	-15.50	289.80	-4.03	359.30	JU	J1N	B01	NARSSARSUAQ	61.20	314.60	B01	NARSSARSUAQ	71.14	37.42	NQ	J61
B01	JULIUSRUH/RUGEN	54.60	13.40	54.40	99.06	JR	055	B01	NATAL	-5.70	324.80	B01	NATAL	3.80	34.16	NL	A0N
B01	KALININGRAD	54.70	20.62	53.10	105.77	KL	154	B01	NHA TRANG	12.25	109.20	B01	NHA TRANG	.73	178.70	33	412
B01	KAMINOGI	35.60	139.60	25.41	205.94	K2	532	B01	NORFOLK IS	-29.00	158.00	B01	NORFOLK IS	-34.66	243.70	NI	63V
B01	KARAGANDA	49.82	73.08	40.31	149.04	KR	250	B01	NORILSK	69.40	88.10	B01	NORILSK	58.50	165.11	NO	369
B01	KERGAUELEN	-49.40	70.30	-57.45	128.63	KG	24R	B01	NOVOKAZALINSK	45.50	52.00	B01	NOVOKAZALINSK	37.35	138.65	NK	246
B01	KERNADEC	-29.20	132.10	-32.21	258.17	KC	62R	B01	NOVOSIBIRSK	54.60	93.20	B01	NOVOSIBIRSK	44.15	158.25	NS	355
B01	KHABAROVSK	48.50	135.10	37.89	200.43	KB	548	B01	NURMIJARVI	60.50	24.60	B01	NURMIJARVI	57.78	112.89	NU	159
B01	KHARTOUM	15.55	32.58	12.87	104.89	K3	115	B01	OKINAWA	26.30	127.80	B01	OKINAWA	15.30	196.02	OK	426
B01	KIEV	50.50	30.30	47.29	112.47	KV	151	B01	OTTAWA	45.40	284.10	B01	OTTAWA	56.78	351.75	OT	945
B01	KINSHASA-BINZA	-4.50	15.20	-3.35	83.88	LB	10M	B01	OUAGADOUGOU	12.40	358.50	B01	OUAGADOUGOU	16.46	70.74	OU	012
B01	KIRUNA	67.80	20.40	65.17	115.88	KI	167	B01	PALAU	7.30	134.50	B01	PALAU	-3.20	203.80	34	407
B01	KJELLER	60.00	11.10	59.88	100.56	OS	059	B01	PALMYRA ISLAND	5.90	197.90	B01	PALMYRA ISLAND	5.26	266.25	35	705
B01	KOCHER	47.70	11.40	48.25	93.66	24	064	B01	PANAMA	9.40	280.10	B01	PANAMA	20.67	349.00	PN	909
B01	KODAIKANAL	10.20	77.50	.54	147.56	KO	310	B01	PARAMARIBO	5.80	304.80	B01	PARAMARIBO	16.91	14.85	PM	J06
B01	KOKUBUNJI	35.70	139.50	25.50	205.84	25	535	B01	PARAMUSHIRO	50.10	155.30	B01	PARAMUSHIRO	41.40	217.03	36	550
B01	KWAJALEIN	9.05	157.20	2.65	235.69	26	609	B01	PARTS-SACLAY	48.10	2.30	B01	PARTS-SACLAY	50.44	84.89	SC	047
B01	LA PAZ	-16.50	291.90	-5.03	1.32	LP	J10	B01	PATRAS	38.23	23.81	B01	PATRAS	36.69	102.03		
B01	LA POSTA	32.68	243.57	40.05	306.52	LT	833	B01	PATRICK AFB	28.20	279.40	B01	PATRICK AFB	39.43	347.28		
B01	LA QUIACA	-22.10	294.40	-10.65	3.65	LQ	J2K	B01	PEIPING	39.90	116.40	B01	PEIPING	28.48	185.12	37	440
B01	LANCASTER	53.00	358.00	55.95	83.11												

2. Alphabetical Listing (continued)

GEOGRAPHIC				GEOGRAPHIC				GEOGRAPHIC				GEOGRAPHIC				
OBS	STATION NAME	LAT	LONG	OBS	STATION NAME	LAT	LONG	OBS	STATION NAME	LAT	LONG	OBS	STATION NAME	LAT	LONG	
PROG				PROG				PROG				PROG				
801	PENANG	5.50	100.40	-5.79	169.87	38	305	801	STANFORD	37.40	237.80	43.70	299.02	ST	837	
801	PESHAWAR	34.00	71.50	24.83	144.88	39	234	801	SVERDLOVSK	56.70	61.10	48.42	141.06	SV	256	
801	PETROPOLAVOVSK	53.02	158.65	44.67	219.03			801	SWAN RIVER	52.10	258.80	61.31	317.70	48	952	
801	PITCAIRN	-25.00	230.00	-19.00	303.44	40	82N	801	SYOWA BASE	-69.00	39.60	-69.75	78.17	SW	16R	
801	PLATTEVILLE	40.01	254.70	48.90	316.99	PV	942	801	TAHITI	-17.70	210.70	-15.34	283.51	TT	71P	
801	POINT ARGUELLO	34.60	239.40	41.24	301.54	PA	836	801	TAIPEI	25.00	121.20	13.71	189.95	CL	424	
801	POITIERS	46.60	.30	49.40	82.20	PT	046	801	TALARA	-4.60	278.70	6.63	348.13	TA	90M	
801	POPOYAN	2.45	283.38	13.83	352.64	PP	902	801	TAMARASSET	22.80	5.53	25.29	80.02	TN	02M	
801	PORT LOCKROY	-64.80	296.50	-53.37	4.26			801	TANANARIVE	-18.80	47.50	-23.65	112.92	IV	21Q	
801	PORT MORESBY	-9.40	147.10	-18.52	218.31	PY	50R	801	TANGKANG	-6.17	106.63	-17.62	175.93			
801	PORT STANLEY	-51.70	302.20	-40.42	9.48	PS	J5J	801	TASHKENT	41.33	59.62	32.30	144.43	TQ	24I	
801	PORTAGELAPRAIRIE	49.90	251.70	59.53	322.23	41	950	801	TBLISI	41.70	44.80	36.22	122.47	TB	142	
801	PRINCE RUPERT	54.30	229.70	58.48	282.96	42	854	801	TEHRAN	35.70	51.40	29.28	126.96	TE	236	
801	PROVIDENYA	64.40	136.60	59.67	236.15	PD	664	801	TERRE ADELIE	-66.70	140.00	-75.60	231.50	DU	560	
801	PRUHOICE	50.00	14.60	49.81	97.77	PQ	052	801	THE PAS	54.00	259.00	63.19	317.04	49	954	
801	PUERTO RICO	18.50	232.80	29.96	2.49	PR	J18	801	THULE/CAMP TUTO	76.40	291.30	87.87	4.87	TH	J76	
801	QUETTA	30.20	57.00	21.61	140.19	QT	230	801	THULE/QANAQ	77.50	230.80	88.97	3.26	TH	J77	
801	RABAT	33.90	353.90	38.36	71.13	RT	034	801	THUMBA	8.60	76.90	-99	146.79	TC	309	
801	RANGOON	16.80	36.50	5.65	166.51	43	316	801	TIRUCHIRAPALLI	10.80	78.70	1.01	148.79	TI	311	
801	RAROTONGA	-21.20	200.20	-20.82	274.09	RA	72J	801	TIAXIE BAY	71.60	128.90	60.50	191.65	TX	47I	
801	RESOLUTE BAY	74.70	255.10	83.07	290.20	R8	974	801	TOGO	10.80	0.00	14.61	71.92	TG	011	
801	REYKJAVIK	64.10	338.20	70.07	71.29	RK	A64	801	TOKYO	35.70	139.50	25.50	205.84	TO	535	
801	ROME	41.90	12.52	42.46	92.42	RO	041	801	TOMSK	56.50	34.90	43.91	159.93	TK	356	
801	ROSTOV	47.20	39.68	42.43	119.58	RV	149	801	TORTOSA	40.80	.30	43.82	79.90	EB	000	
801	SACHS HARBOR	72.00	234.85	75.17	265.87	SH	872	801	TOWNSVILLE	-19.30	146.70	-28.39	219.28	TV	51R	
801	SALEKHARD	66.50	66.70	57.30	149.26	S0	266	801	TOYOHARA	46.90	142.80	36.92	207.15	S0	546	
801	SALISBURY	-34.70	139.60	-44.60	212.91	SR	53M	801	TRELEW	-43.20	294.70	-31.75	3.57	TW	J4L	
801	SALISBURY (RHODES)	-17.80	31.00	-19.51	96.63	SY	11P	801	TRINIDAD	10.75	298.43	22.11	8.38	51	J10	
801	SAN JOSE	-22.70	324.80	-13.09	32.23	BZ	J2L	801	TRIVANDRUM	8.50	77.00	-1.10	146.88	TM	308	
801	SAN JUAN (ARG)	-31.50	294.50	-20.05	3.60			801	TRMSO	69.70	19.00	67.07	117.10	TR	169	
801	SAN SALVADOR	24.10	285.50	35.52	354.36	SS	J24	801	TSITSIHAR	47.30	123.90	36.09	191.19	52	447	
801	SANAE	-70.30	357.60	-63.71	44.50	QM	07V	801	TSUMEB	-19.20	17.70	-18.24	83.28	TS	11R	
801	SAO PAULO	-23.50	313.50	-12.88	21.54	SP	J2L	801	TUCUMAN	-26.90	294.60	-15.45	3.77	TU	J20	
801	SASKATOON	52.10	253.40	60.54	311.06			801	TUNGUSKA	61.60	90.00	50.67	164.74	TZ	362	
801	SCHWARZENBURG	46.60	5.70	48.14	88.59	SZ	045	801	UPPSALA	59.80	17.60	58.44	106.28	UP	158	
801	SCOTT BASE	-77.90	156.80	-78.93	294.76	SB	67P	801	USHUAIA	-54.30	231.70	-43.33	.93	UA	J5M	
801	SDR STROMFJORD	67.00	310.00	77.26	36.20	SM	J67	801	VANIMC	-2.70	141.30	-12.53	211.57	VA	50L	
801	SEATTLE	47.75	237.58	53.71	294.96	SE	847	801	VICTORIA	48.40	236.60	54.16	293.59	VI	848	
801	SEOUL	37.39	126.95	26.33	194.51	SU	437	801	VICTORIA BEACH	50.80	253.95	60.68	324.73	53	951	
801	SHIBATA	37.90	139.30	27.67	205.39	44	537	801	VOSTOK	-78.45	106.87	-89.27	94.25	VO	478	
801	SHIKUKA	49.30	143.00	39.31	206.90	45	549	801	WAKKANAI	45.40	141.70	35.33	206.45	WK	545	
801	SIMFEROPOL	44.80	34.10	41.10	113.74	SF	144	801	WALLOPS IS	37.90	284.50	49.30	352.70	WP	937	
801	SINGAPORE	1.30	103.80	-10.09	173.17	SI	301	801	WASHINGTON	38.70	282.90	50.05	350.71	WA	938	
801	SLOUGH	51.50	359.43	54.25	83.72	SL	051	801	WATHEROO	-30.30	115.90	-41.71	186.21	WT	43V	
801	SLUTSK	59.70	30.50	55.97	117.38	46	151	801	WHITE SANDS	32.30	253.50	41.14	317.47	WS	832	
801	SODANKYLA	54.20	0.00	56.68	85.85	47	050	801	WILKES	-66.90	110.50	-78.37	179.94	WL	460	
801	SODANKYLA	67.40	26.60	63.73	120.32	SO	166	801	WINNIPEG	49.80	265.60	59.88	327.17	WI	949	
801	SOFA	42.60	23.40	41.00	103.08	SO	143	801	WOOMERA	-31.00	136.30	-41.17	209.67	WO	53J	
801	SOUTH GEORGIA	-54.27	323.50	-44.28	26.35	SG	A5M	801	WUCHANG	30.60	114.40	19.15	183.53	54	430	
801	SOUTH POLE	-90.00	0.00	-78.53	0.00	PO	09V	801	YAKUTSK	62.00	129.60	50.99	194.10	YA	462	
801	SOUTH UIST	57.20	352.86	60.90	80.61			801	YANAGAWA	31.20	130.60	20.36	198.25	YG	431	
801	SOYA SHIP	COORDINATES VARIABLE				XD		801	YELLOWKNIFE	62.40	245.60	69.02	293.93	YE	862	
801	ST JOHN'S	47.60	307.30	58.44	21.82	SJ	J47	801	YUZHNO SAKHALI	47.00	143.00	37.03	207.30	SA	547	
801		COORDINATES VARIABLE						801	ZARYA SHIP	COORDINATES VARIABLE						XF

COORDINATES VARIABLE

3. LISTING BY GEOMAGNETIC LATITUDE

GEOGRAPHIC					GEOMAGNETIC					GEOGRAPHIC					GEOMAGNETIC				
OBS PROG	STATION NAME	LAT	LONG EAST	STA ID	COMPUTER CODE	OBS PROG	STATION NAME	LAT	LONG EAST	STA ID	COMPUTER CODE	OBS PROG	STATION NAME	LAT	LONG EAST	STA ID	COMPUTER CODE		
B01	FUJI SHIP	COORDINATES VARIABLE	COORDINATES VARIABLE	XF	X0	B01	KJELLER	60.00	11.10	59.88	100.56	OS	059						
B01	ZARYA SHIP					B01	PROVIDENYA	64.40	186.60	59.67	236.15	PC	664						
B01	SOYA SHIP					B01	PORTAGELAPRAIRIE	49.90	261.70	59.53	322.23	41	950						
B01	THULE/DOANQA	77.50	230.80	88.97	3.26	TH	BURGHEAD	57.70	3.50	59.26	91.65	06	063						
B01	THULE/CAMP TUTO	76.40	231.30	87.87	4.87	TH	ARKHANGELSK	64.60	40.50	58.89	128.72	AZ	163						
B01	EUREKA	80.00	274.10	86.62	236.39	EU	BAIE ST PAUL	47.38	239.45	58.85	358.59	PL	J48						
B01	ALERT	82.60	297.40	85.78	167.91	AL	NORILSK	69.40	88.10	58.50	165.11	NO	369						
B01	RESOLUTE BAY	74.70	265.10	83.07	290.20	R8	PRINCE RUPERT	54.30	229.70	58.48	282.96	42	854						
B01	ARCTICA/II (NP-7)	86.00	236.00	82.10	177.23	XH	UPPSALA	59.80	17.60	58.44	106.28	UP	158						
B01	CLYDE	70.50	231.40	81.97	2.08	CR	ST JCHN'S	47.60	307.30	58.44	21.82	SJ	J47						
B01	GODHAVN	69.30	306.50	79.85	33.49	G0	NURMIJARVI	60.50	24.60	57.78	112.89	NU	159						
B01	FLETCHERS ICE	75.90	235.70	78.07	254.46	XC	SALEKHARD	66.50	56.70	57.30	149.26	SD	266						
B01	ARCTICA I (NP-6)	82.00	9.00	77.54	143.01	XG	OTTAWA	45.40	234.10	56.78	351.75	OT	945						
B01	SDR STROMFJORD	67.00	310.00	77.26	36.20	SM	SNAINTON	54.20	0.00	56.68	85.85	47	050						
B01	FRCBISHER BAY	63.80	231.40	75.27	1.51	FB	HIGHGATE SPGS	45.01	236.91	56.45	355.37								
B01	SACHS HARBOR	72.00	234.85	75.17	265.87	SH	ERROL	44.79	288.87	56.26	357.88								
B01	LONGYEARBYEN	78.20	15.70	74.31	131.11	LG	LENINGRAD	59.95	30.70	56.17	117.70	LD	160						
B01	BAKER LAKE	64.30	264.00	73.79	316.06	BL	SLUTSK	59.70	30.50	55.97	117.38	46	151						
B01	CAPE PARRY	70.17	234.37	73.63	269.60	CF	LANCASTER	53.00	358.00	55.95	83.11								
B01	ARCTICA (NP-13)	81.00	155.00	71.78	204.03	XL	ABERYSTWYTH	52.43	355.93	55.82	80.67								
B01	HEISS IS	80.60	58.00	71.28	156.18	BT	HANOVER	43.70	297.60	55.16	356.55	HN	J44						
B01	NARSSARSSUAQ	61.20	314.60	71.14	37.42	NG	LEICESTER	52.00	359.00	54.81	83.56								
B01	ARCTICA (NP-16)	79.00	176.00	70.42	214.24	XK	JULIUSRUH/RUGEN	54.60	13.40	54.40	99.06	JR	055						
B01	REYKJAVIK	64.10	338.20	70.07	71.29	RM	SLOUGH	51.50	359.43	54.25	83.72	SL	051						
B01	ARCTICA (NP-11)	79.00	155.00	70.04	207.06	XX	BADDOGH	51.70	.50	54.22	84.90	01	061						
B01	ARCTICA (NP-8)	80.00	155.00	70.00	205.00	XI	VICTORIA	48.40	236.60	54.16	293.59	VI	848						
B01	FORT CHIMO	58.10	291.60	69.57	1.62	FC	BOSTON	42.60	288.70	54.07	357.70	56	J43						
B01	FORT NORMAN	64.90	234.50	69.17	278.44	FN	BILLERICA	42.60	288.70	54.07	357.70	80	J43						
B01	ARCTICA (NP-10)	78.00	165.00	69.16	208.40	XJ	MILLSTONE HILL	42.60	288.50	54.06	357.45	80	J45						
B01	YELLCROFT	62.40	245.60	69.02	293.93	YE	MAYNARD	42.43	238.55	53.89	357.52	MY	J43						
B01	CHURCHILL	58.80	265.80	68.73	323.32	CH	SEATTLE	47.75	237.58	53.71	294.96	SE	847						
B01	BARROW	71.30	203.20	68.63	241.52	BM	DE BILT	52.10	5.20	53.67	89.79	DT	053						
B01	ARCTICA (NP-19)	78.00	150.00	67.92	200.59	XP	KALININGRAD	54.70	20.62	53.10	105.77	KL	154						
B01	TROMSO	69.70	19.00	67.07	117.10	TR	LINDAU	51.60	10.10	52.22	94.29	LI	050						
B01	KIRUNA	67.80	20.40	65.17	115.88	KI	DOURBES	50.10	4.60	51.89	88.15	DB	049						
B01	COLLEGE	64.90	212.20	64.76	256.98	CO	LANNION	48.45	356.73	51.87	79.41	LN	047						
B01	GOOSE BAY	53.32	299.16	64.61	12.07	GS	FORT MONMOUTH	40.40	295.90	51.83	354.29	FM	940						
B01	MURMANSK	69.00	33.00	64.10	126.77	MM	DOMONT	49.00	2.30	51.30	85.32	13	062						
B01	SODANKYLA	67.40	26.60	63.73	120.32	SO	BAGNEUX	48.80	2.30	51.11	85.22	55	039						
B01	THE PAS	54.00	259.00	63.19	317.04	49	YAKUTSK	62.00	129.60	50.99	194.10	YA	462						
B01	DIXON	73.50	30.40	62.97	161.71	DI	MOSCOW	55.50	37.30	50.82	120.86	MO	155						
B01	LULEA	65.60	22.10	62.90	114.95	LU	TUNGUSKA	61.60	30.00	50.67	164.74	TZ	362						
B01	LYCKSELE	64.70	18.80	62.70	111.37	LY	MAGADAN	60.00	151.00	50.63	210.77								
B01	CAPE SCHMIDT	68.90	179.50	62.70	227.41	CE	MIEDZESZYN	52.20	21.20	50.62	105.00	MZ	152						
B01	MEANOOK	54.60	246.70	61.88	301.66	ME	PARIS-SACLAY	48.10	2.30	50.44	84.89	SC	047						
B01	SWAN RIVER	52.10	258.80	61.31	317.70	48	BATAVIA	39.40	275.90	50.42	342.16	03	939						
B01	ANCHORAGE	61.20	210.10	61.01	258.60	AN	GORKY	56.15	44.28	50.29	127.06	GK	156						
B01	SOUTH UIST	57.20	352.86	60.90	80.61		WASHINGTON	38.70	232.90	50.05	350.71	WA	938						
B01	VICTORIA BEACH	50.80	263.95	60.68	324.73	53	PRUHNICE	50.00	14.60	49.81	97.77	PQ	052						
B01	SASKATOON	52.10	253.40	60.54	311.06		GARCHY	47.30	3.10	49.52	85.33	GY	042						
B01	INVERNESS	57.40	355.80	60.51	83.78	IN	POITIERS	46.60	.30	49.40	82.20	PT	046						
B01	TIXIE BAY	71.60	128.90	60.50	191.65	TX	FREIBURG/BREISACB01	48.10	7.60	49.39	90.14	FR	048						
B01	FRASERBURGH	57.60	357.90	60.28	86.05	15	WALLOPS IS	37.90	284.50	49.30	352.70	WP	937						
B01	WINNIPEG	49.80	255.60	59.88	327.17	WI	PLATTEVILLE	40.01	254.70	48.90	316.99	PV	842						

3. Listing by Geomagnetic Latitude (continued)

GEOGRAPHIC				GEOGRAPHIC				GEOGRAPHIC				GEOGRAPHIC				GEOGRAPHIC				
OBS	STATION NAME	PROG		LAT	LONG	EAST	STA	COMPUTER		LAT	LONG	EAST	STA	COMPUTER		LAT	LONG	EAST	STA	COMPUTER
							ID	CODE											ID	CODE
801	ERIE			40.01	254.70	48.90	316.99	ER	842	801	FUKAURA		40.60	139.90	30.41	205.58	16	541		
801	BOULDER			40.00	254.70	48.89	317.00	BC	840	801	ASHKHABAD		37.90	58.30	30.39	133.69	AS	237		
801	SVERDLOVSK			56.70	51.10	48.42	141.06	SV	256	801	ARECIBO		18.50	293.17	29.96	2.89	AR	J19		
801	KOCHEL			47.70	11.40	48.25	93.66	24	064	801	PUERTO RICO		18.50	292.80	29.96	2.49	PR	J18		
801	SCHWARZENBURG			46.60	6.70	48.14	88.59	SZ	045	801	DUSHANBE		33.57	58.78	29.67	143.19	DU	238		
801	ADAK			51.90	133.40	47.31	240.43	AD	651	801	AKITA		39.70	140.10	29.53	205.87	AK	539		
801	KIEV			50.50	30.30	47.29	112.47	KV	151	801	JAMAICA		18.00	283.20	29.37	352.00	JA	918		
801	GRAZ			47.10	15.50	46.87	97.33	GZ	146	801	HAIFA		32.82	34.98	29.31	111.06	HA	132		
801	TOMSK			56.50	84.90	45.91	159.93	TK	356	801	TEHRAN		35.70	51.40	29.28	126.96	TE	236		
801	GENOVA			44.60	9.00	45.76	90.02	GV	044	801	MEXIC CITY		19.40	260.30	29.18	327.05	MX	919		
801	HUNTSVILLE			34.44	273.65	45.33	340.08	HV	934	801	PEIPING		39.90	116.40	28.48	185.12	37	440		
801	BUDAPEST			46.40	21.10	45.10	102.33	BU	147	801	DAIRAN		39.00	121.60	27.71	189.70	12	439		
801	PETROPOLVSK			53.02	158.65	44.67	219.03			801	SHIBATA		37.90	139.30	27.67	205.39	44	537		
801	NOVOSIBIRSK			54.60	83.20	44.15	158.25	NS	355	801	CAIRO		30.00	31.19	27.27	106.77	05	130		
801	TORTOSA			40.80	30.30	43.82	79.90	EB	040	801	SEOUL		37.33	126.95	26.33	194.51	SU	437		
801	STANFORD			37.40	237.80	43.70	299.02	ST	837	801	HIRATSU		36.40	140.60	26.30	206.73	20	536		
801	BEOGRAD			44.80	20.50	43.68	101.14	BE	145	801	KOKUBUNJI		35.70	139.50	25.50	205.84	25	535		
801	ROME			41.90	12.52	42.46	92.42	RO	041	801	TOKYO		35.70	139.50	25.50	205.84	T0	535		
801	ROSTOV			47.20	39.68	42.43	119.58	RV	149	801	MEGURO		35.60	139.70	25.42	206.03	31	534		
801	EL ARENOSILLO			37.10	353.27	41.59	71.44			801	KAMINOGE		35.60	139.60	25.41	205.94	22	532		
801	PARAMUSHIRO			50.10	155.30	41.40	217.03	36	550	801	TAMANRASSET		22.80	5.53	25.29	80.02	TN	022		
801	EGLIN AFB			30.38	273.30	41.26	340.13	EG	931	801	HIRATSUKA		35.30	139.30	25.09	205.70	21	533		
801	POINT ARGUELLO			34.60	239.40	41.24	301.54	PA	836	801	PESHAWAR		34.00	71.50	24.83	144.88	39	234		
801	WHITE SANDS			32.30	253.50	41.14	317.47	WS	832	801	LANCHOW		36.10	103.80	24.70	174.02	27	336		
801	SIMFEROPOL			44.80	34.10	41.10	113.74	SF	144	801	BARBADOS		13.12	300.40	24.41	10.56	BS	J13		
801	IRKUTSK			52.47	104.03	41.06	174.75	IR	352	801	TRINIDAD		10.75	298.43	22.11	8.38	51	J10		
801	BATON ROUGE			30.50	268.80	41.04	334.98	04	930	801	DAKAR		14.70	341.60	21.69	54.08	DK	A14		
801	SOFTA			42.60	23.40	41.00	103.08	SQ	143	801	QUETTA		30.20	57.00	21.61	140.19	QT	230		
801	CHITA			52.00	113.50	40.54	182.41	CH	452	801	MAUI		20.80	203.50	20.96	268.58	MA	720		
801	KARAGANDA			49.82	73.88	40.31	149.04	KR	250	801	NANKING		32.10	119.00	20.74	187.67	32	432		
801	LA POSTA			32.68	243.57	40.05	306.52	LT	833	801	PANAMA		9.40	230.10	20.67	349.00	PN	909		
801	CAPE KENNEDY			28.40	279.40	39.63	347.26	CC	929	801	YAMAGAWA		31.20	130.60	20.36	198.25	YG	431		
801	COCOA			28.20	279.40	39.43	347.28	10	928	801	HANKOW		30.70	114.30	19.25	183.43	19	432		
801	PATRICK AFB			28.20	279.40	39.43	347.28			801	WUCHANG		30.60	114.40	19.15	183.53	54	430		
801	SHIKUKA			49.30	143.00	39.31	206.90	45	549	801	DELHI		28.60	77.16	18.86	149.31	DH	328		
801	ISTANBUL			41.13	29.03	38.50	107.85	IS	141	801	LOSHAN		29.50	103.70	18.10	173.75	29	329		
801	RABAT			33.90	353.90	38.36	71.13	RT	034	801	CHUNGKING		29.40	106.30	17.96	176.13	09	429		
801	CASABLANCA			33.60	352.40	38.35	69.49	CA	033	801	PARAMARIBO		5.80	304.80	16.91	14.85	PM	J06		
801	GRAND BAHAMA			26.60	281.80	37.92	350.09	GB	926	801	OUAGADOUGOU		12.40	358.50	16.46	70.74	OU	012		
801	KHABAROVSK			48.50	135.10	37.89	200.43	KB	548	801	BOGOTA		4.50	285.80	15.93	355.10	BG	905		
801	NOVOKAZALINSK			45.50	52.00	37.35	138.65	NK	246	801	OKINAWA		26.30	127.80	15.30	196.02	OK	426		
801	YUZHNO SAKHALI			47.00	143.00	37.03	207.30	SA	547	801	TOGO		10.80	0.00	14.61	71.92	TG	011		
801	TOYOHARA			46.90	142.80	36.92	207.15	50	546	801	POPAYAN		2.45	283.38	13.83	352.64	PP	902		
801	PATRAS			38.23	23.81	36.69	102.03			801	AHMEADABAD		23.02	72.60	13.82	144.37	AH	223		
801	ATHENS			38.00	23.60	36.51	101.76	AT	138	801	TAIPEI		25.00	121.20	13.71	189.95	CL	424		
801	TBILISI			41.70	44.80	36.22	122.47	TB	142	801	KHARTOUM		15.55	32.58	12.87	104.89	23	115		
801	TSITSIHAR			47.30	123.90	36.09	191.19	52	447	801	CALCUTTA		23.00	88.60	12.30	159.40	CU	322		
801	SAN SALVADOR			24.10	285.50	35.52	354.36	SS	J24	801	HONG KONG		22.33	114.20	10.88	183.46	HK	423		
801	WAKKANAI			45.40	141.70	35.33	206.45	WK	545	801	MACAU		22.20	113.60	10.74	182.89	MC	422		
801	CUBA			23.00	278.00	34.17	346.03	CD	923	801	IBADAN		7.40	3.90	10.53	75.12	IB	007		
801	ALMA ATA			43.25	76.92	33.42	151.11	AA	343	801	BOMBAY		19.00	72.80	09.81	144.04	BM	219		
801	TASHKENT			41.33	69.62	32.30	144.43	TQ	241	801	ACCRA		5.63	359.83	09.56	70.74	AG	005		
801	CAPE ZEVCARI			34.60	33.00	31.41	109.66	CV	135	801	FORT ARCHAMBAULT		9.20	18.35	09.45	89.71	FA	109		

3. Listing by Geomagnetic Latitude (continued)

GEOGRAPHIC				GEOGRAPHIC				GEOGRAPHIC				GEOGRAPHIC			
STATION NAME	OBS PROG	LAT	LONG EAST	STA ID	COMPUTER CODE	LAT	LONG EAST	STA ID	COMPUTER CODE	STATION NAME	OBS PROG	LAT	LONG EAST	STA ID	COMPUTER CODE
HYDERABAD	801	17.35	78.47	07.55	149.26	HY	317	RAROTONGA	801	-21.20	200.20	-20.82	274.09	RA	72J
DJIBOUTI	801	11.50	42.80	06.98	113.99	OJ	111	FIJI	801	-18.00	178.20	-22.01	251.60	14	61Q
HAINAN	801	18.30	109.30	06.83	178.82	18	419	BUENOS AIRES	801	-34.50	301.50	-23.21	9.83	BA	J3M
TALARA	801	-4.60	278.70	06.63	348.13	TA	90M	COCOS IS	801	-12.20	36.80	-23.33	165.37	CS	31K
FORTALEZA	801	-3.70	321.20	06.17	30.80	FZ	40M	TANANARIVE	801	-18.80	47.50	-23.65	112.92	IV	21Q
RANGOON	801	16.80	96.50	05.65	166.51	43	316	CONCEPCION	801	-35.60	287.00	-27.15	356.87	CP	J30
PALMYRA ISLAND	801	5.90	137.90	05.26	266.25	35	705	JOHANNESBURG	801	-26.10	28.10	-27.04	91.83	JC	120
BAGUIO	801	16.40	120.60	05.10	189.70	BF	416	TOWNSVILLE	801	-19.39	146.70	-28.39	219.28	TV	51R
BANGUI	801	4.60	18.60	04.89	89.03	81	104	TRELEW	801	-43.20	234.70	-31.75	3.57	TW	J4L
CHICLAYO	801	-6.80	230.20	04.49	349.71	CY	90P	KERMADEC	801	-29.20	182.10	-32.21	258.17	KC	62R
GUAM	801	13.50	144.87	03.96	213.36	17	513	CAPE TOWN	801	-34.10	18.30	-32.89	80.19	CT	13M
NATAL	801	-5.70	324.80	03.80	34.16	NL	A0N	HERMANUS	801	-34.42	19.23	-33.38	80.99	HE	13N
MANILA	801	14.70	121.10	03.41	190.24	MN	414	GRAHAMSTOWN	801	-33.30	26.50	-33.73	88.35	GR	13L
MADRAS	801	13.10	80.30	03.14	150.59	MD	313	NORFOLK IS	801	-29.00	158.00	-34.66	243.70	NI	63V
KWAJALEIN	801	9.05	157.20	02.65	235.69	26	609	BRIBIE IS	801	-27.30	153.00	-35.44	227.43		
BANGKOK	801	13.83	100.58	02.52	170.33	BK	314	BRISBANE	801	-27.50	152.90	-35.65	227.36	BR	52P
CHRISTMAS IS	801	1.90	202.70	02.29	271.75	08	701	PORT STANLEY	801	-51.70	302.20	-40.42	9.48	PS	5J5
CHIMOTE	801	-9.10	231.40	02.23	350.98	CM	90R	WOOMERA	801	-31.00	136.30	-41.17	209.67	WO	53J
TIRUCHIRAPALLI	801	10.80	78.70	01.01	148.79	TI	311	AUCKLAND	801	-37.00	175.00	-41.17	253.20	AU	63P
NHA TRANG	801	12.25	109.20	00.78	178.70	33	412	WATHEROO	801	-30.30	115.90	-41.71	186.21	WT	43V
KODATKANAL	801	10.20	77.50	00.54	147.56	KO	310	USHUATA	801	-54.80	291.70	-43.33	.93	UA	J5M
LEYTE	801	11.00	125.00	-00.12	194.20	28	411	MUNDARTNG	801	-31.99	116.31	-43.39	186.75	MU	43K
BUNIA	801	1.50	30.20	-00.44	99.77	BN	102	CANBERRA	801	-35.30	149.00	-43.90	224.80	CB	53N
JICAMARCA	801	-11.95	283.14	-00.57	352.77	J1	91J	SOUTH GEORGIA	801	-54.27	323.50	-44.28	26.35	SG	A5M
HUANCAYO	801	-12.00	284.70	-00.59	354.30	HU	91K	SALISBURY	801	-34.70	138.60	-44.60	212.91	SR	53M
THUMBA	801	8.60	76.90	-00.99	146.79	TC	309	BEVERIDGE	801	-37.29	144.59	-46.46	220.30		
TRIVANDRUM	801	8.50	77.00	-01.10	146.88	TM	308	CHRISTCHURCH	801	-43.60	172.80	-47.98	253.24	GH	64L
COLOMBE	801	6.90	79.87	-02.99	149.54	11	306	MARION IS	801	-46.87	37.85	-49.09	94.76	MR	140
PALAU	801	7.30	134.50	-03.20	203.80	34	40M	HOBART	801	-42.90	147.30	-51.61	224.92	HO	54K
KINSHASA-BINZA	801	-4.50	15.20	-03.35	83.88	LB	10M	DECEPCION	801	-63.00	299.30	-51.62	6.40	DE	J6L
LMIRO	801	-2.30	28.80	-03.89	97.65	LM	10K	PORT LOCKROY	801	-64.80	296.50	-53.37	4.26		
JULIACA	801	-15.50	289.80	-04.03	359.30	JU	J1N	ARGENTINE IS	801	-65.20	295.70	-53.76	3.67	AI	J6N
NAIROBI	801	-1.28	36.83	-04.46	105.75	NP	10J	CAMPBELL IS	801	-52.50	169.20	-57.19	253.66	CI	65K
LA PAZ	801	-16.50	291.90	-05.03	1.32	LP	J10	KERGUELEN	801	-49.40	70.30	-57.45	128.63	KG	24R
PENANG	801	5.50	100.40	-05.79	169.87	38	305	MACQUARIE IS	801	-54.50	159.00	-60.98	243.64	MQ	55M
ILO	801	-17.40	298.80	-05.93	358.34	IL	J1P	SANAE	801	-17.30	357.60	-63.71	44.50	QM	07V
MAKASSAR	801	5.20	119.50	-06.13	188.98	30	40N	EIGHTS	801	-75.23	282.84	-63.82	355.57	EI	97N
SINGAPORE	801	1.30	103.80	-10.09	173.17	SI	301	HALLEY BAY	801	-75.50	333.40	-65.83	24.53	HE	A7N
LA QUITACA	801	-22.10	294.40	-10.65	3.65	LQ	J2K	ELLSWORTH	801	-77.72	318.90	-66.98	14.98	EL	A7P
HOLLANDIA	801	-2.50	140.80	-12.38	211.04	HL	50K	BELGRANO	801	-77.90	321.40	-67.29	16.18	GE	A7Q
VANIMO	801	-2.70	141.30	-12.53	211.57	VA	50L	BAUDOUIN	801	-70.40	23.30	-67.89	62.90	BB	17V
ELIZABETHVILLE	801	-11.60	27.50	-12.75	94.50	EZ	11J	SYOWA BASE	801	-69.00	39.60	-69.75	78.17	SW	16R
SAO PAULO	801	-23.50	313.50	-12.88	21.54	SP	J2L	BYRD STATION	801	-90.00	240.00	-70.59	336.21	BD	88V
SAN JOSE	801	-22.70	324.80	-13.09	32.23	BZ	J2L	MAWSON	801	-67.60	62.90	-73.17	103.54	MW	26P
TAHITI	801	-17.70	210.70	-15.34	283.51	TT	71P	LITTLE AMERICA	801	-78.20	197.80	-74.00	332.19	LA	77Q
TUGUAN	801	-26.90	294.60	-15.45	3.77	TU	J20	CAPE HALLETT	801	-72.30	170.20	-74.61	278.46	HT	67K
TANGRANG	801	-6.17	106.63	-17.62	175.93			TERRE ADELIE	801	-66.70	140.00	-75.60	231.50	DU	560
TSUMEB	801	-19.20	17.70	-18.24	83.28	TS	11R	MIRNY	801	-66.50	93.00	-77.00	147.73	MI	360
PORT MOENG	801	-6.90	107.60	-18.36	176.94	02	40Q	CASEY	801	-66.28	110.53	-77.75	180.00	CW	460
PANDOR	801	-9.40	147.10	-18.52	218.31	PY	50R	WILKES	801	-66.90	110.50	-78.37	179.94	WL	460
PITCAIRN	801	-25.00	230.00	-19.00	303.44	40	82N	SOUTH POLE	801	-90.00	0.00	-78.53	0.00	PO	09V
SALISBURY (RHODE)	801	-17.80	31.00	-19.51	96.63	SY	11P	SCOTT BASE	801	-77.90	156.80	-78.93	294.76	SB	67P
SAN JUAN (ARG)	801	-31.50	294.50	-20.05	3.60			VOSTOK	801	-78.45	106.87	-89.27	94.25	VO	47Q
CAPE YORK	801	-11.00	142.40	-20.66	213.64	07	51J								

4. PAIRED OR GROUPED STATIONS

STATION NAME	GEOGRAPHIC LAT LONG EAST		OPENING DATE	CLOSING DATE	STATION NAME	GEOGRAPHIC LAT LONG EAST		OPENING DATE	CLOSING DATE
Bekescaba	46.7	21.2	1/1964		Maynard	42.4	288.5	10/1970	6/1975
Budapest	47.4	19.2	1/1956	12/1959	Billerica	42.6	288.7	11/1965	9/1970
Casey	-66.3	110.5	2/1969	12/1975	Boston	42.6	288.7	3/1945	7/1951
Wilkes	-66.9	110.5	7/1957	1/1969	Mundaring	-32.0	116.2	4/1959	
Argentine Is.	-65.2	295.7	2/1962		Watheroo	-30.3	115.9	1935	3/1959
Port Lockroy	-64.8	296.9	5/1948	12/1961	Popayan	02.4	283.3	5/1970	
Cape Kennedy	28.4	279.4	3/1964	10/1966	Bogota	04.5	285.8	8/1945	6/1967
Cape Canaveral	28.4	279.4	3/1958	2/1964	Thumba	08.6	76.9	11/1964	
Cocoa	28.2	279.4	1/1952	6/1952	Trivandrum	08.5	77.0	1/1957	10/1964
Ft. Monmouth	40.4	285.9	8/1953	12/1965	Kenora	49.8	265.6	10/1963	
Belmar	40.2	296.0	7/1950	8/1953	Winnipeg	49.9	262.9	4/1951	9/1963
Hermanus	-34.4	19.2	6/1971		Thule/Qanak	77.5	290.8	10/1968	
Capetown	-34.1	18.3	9/1944	5/1971	Thule/Tuto	76.4	291.3	8/1960	7/1966
La Paz	-16.5	291.9	12/1959	*	Thule AFB	76.6	291.7	2/1956	7/1960
Juliacca	-15.5	289.8	3/1959	5/1959	Wallops Is.	37.9	284.5	7/1963	
La Paz	-16.5	291.9	10/1957	12/1958	Ft. Belvoir	38.7	282.9	1949	9/1968
Inverness	57.4	355.8	10/1951	6/1963	Sterling	39.0	282.5	8/1943	1949
Fraserburg	57.6	357.9	3/1948	9/1951	Beltsville	39.1	283.9	3/1933	9/1943
Manila	14.7	121.1	1/1964		Meadows	39.0	283.0	3/1933	2/1943
Baguio	16.4	120.6	3/1952	12/1963	Kensington	39.1	282.8	12/1929	3/1933
Manila (Nichols Field)	14.5	120.0	3/1944	5/1947					

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

5. SUPPLEMENT TO MASTER STATION LIST

STATION NAME	OBS PROC	GEOGRAPHIC		GEOMAGNETIC		GEOGRAPHIC		L-VALUE	INVAR LAT	GEOCENTRIC DIP	OPEN	CLOSE DATES
		LAT	LONG EAST	LAT	LONG EAST	LAT	LONG EAST					
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 -	3/1945
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	16.89	96.50	5.65	166.51	2.24	96.45	.93	-1.00	17.23	6/1943 -	12/1945
SALISBURY	B01	-34.70	139.60	-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	136.21	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	62.60	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

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 Note	602	601	600	599	598	597	596	595	594	593	592	591	590	589	588	587	586	585	584	583	582	581	580	579	578	577	576	575	574	573	572	571	570	569	568	567	566	565	564	563	562	561	560	559	558	557	556	555	554	553	552	551	550	549	548	547	546	545	544	543	542	541	540	539	538	537	536	535	534	533	532	531	530	529	528	527	526	525	524	523	522	521	520	519	518	517	516	515	514	513	512	511	510	509	508	507	506	505	504	503	502	501	500	499	498	497	496	495	494	493	492	491	490	489	488	487	486	485	484	483	482	481	480	479	478	477	476	475	474	473	472	471	470	469	468	467	466	465	464	463	462	461	460	459	458	457	456	455	454	453	452	451	450	449	448	447	446	445	444	443	442	441	440	439	438	437	436	435	434	433	432	431	430	429	428	427	426	425	424	423	422	421	420	419	418	417	416	415	414	413	412	411	410	409	408	407	406	405	404	403	402	401	400	399	398	397	396	395	394	393	392	391	390	389	388	387	386	385	384	383	382	381	380	379	378	377	376	375	374	373	372	371	370	369	368	367	366	365	364	363	362	361	360	359	358	357	356	355	354	353	352	351	350	349	348	347	346	345	344	343	342	341	340	339	338	337	336	335	334	333	332	331	330	329	328	327	326	325	324	323	322	321	320	319	318	317	316	315	314	313	312	311	310	309	308	307	306	305	304	303	302	301	300	299	298	297	296	295	294	293	292	291	290	289	288	287	286	285	284	283	282	281	280	279	278	277	276	275	274	273	272	271	270	269	268	267	266	265	264	263	262	261	260	259	258	257	256	255	254	253	252	251	250	249	248	247	246	245	244	243	242	241	240	239	238	237	236	235	234	233	232	231	230	229	228	227	226	225	224	223	222	221	220	219	218	217	216	215	214	213	212	211	210	209	208	207	206	205	204	203	202	201	200	199	198	197	196	195	194	193	192	191	190	189	188	187	186	185	184	183	182	181	180	179	178	177	176	175	174	173	172	171	170	169	168	167	166	165	164	163	162	161	160	159	158	157	156	155	154	153	152	151	150	149	148	147	146	145	144	143	142	141	140	139	138	137	136	135	134	133	132	131	130	129	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
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NAME		IONOSONDE	See Notes																													
			Ref 1	Ref 2	Ref 3	Ref 4	Ref 5	Ref 6	Ref 7	Ref 8	Ref 9	Ref 10	Ref 11	Ref 12	Ref 13	Ref 14	Ref 15	Ref 16	Ref 17	Ref 18	Ref 19	Ref 20	Ref 21	Ref 22	Ref 23	Ref 24	Ref 25	Ref 26	Ref 27	Ref 28	Ref 29	Ref 30
Cape Town	Wadley		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cape York		S	P	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cape Zevgari	Union Radio Mark II	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	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	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Casey	IPS 3D	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	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	X	X	X	X	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	X	X	X	X	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	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Christchurch	P 2	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Christmas Island	Australian MK V	S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Chungking		S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Churchill		S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Clyde	LG 17	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cocor	Cossor	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cocoa	C 3	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cocos Island	IPS 3D	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
College	C 3/4	4	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Colombo		S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Concepcion	C 4	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cuba	AIS	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dairan		S	M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dakar	C 4	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
De Bilt	Panoramic	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Deception	Trio	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Delhi	C 4	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dixon	AIS	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Djibouti	C 4	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Domont		S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Dourbes	Automatic	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Dushanbe	SP-3	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Eights	Cossor	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Elizabethville	Wadley	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Elisworth	C 4	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Eureka	Cossor	S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X</		

NAME	IONOSONDE	See Notes	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217	1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231	1232	1233	1234	1235	1236	1237	1238	1239	1240	1241	1242	1243	1244	1245	1246	1247	1248	1249	1250	1251	1252	1253	1254	1255	1256	1257	1258	1259	1260	1261	1262	1263	1264	1265	1266	1267	1268	1269	1270	1271	1272	1273	1274	1275	1276	1277	1278	1279	1280	1281	1282	1283	1284	1285	1286	1287	1288	1289	1290	1291	1292	1293	1294	1295	1296	1297	1298	1299	1300	1301	1302	1303	1304	1305	1306	1307	1308	1309	1310	1311	1312	1313	1314	1315	1316	1317	1318	1319	1320	1321	1322	1323	1324	1325	1326	1327	1328	1329	1330	1331	1332	1333	1334	1335	1336	1337	1338	1339	1340	1341	1342	1343	1344	1345	1346	1347	1348	1349	1350	1351	1352	1353	1354	1355	1356	1357	1358	1359	1360	1361	1362	1363	1364	1365	1366	1367	1368	1369	1370	1371	1372	1373	1374	1375	1376	1377	1378	1379	1380	1381	1382	1383	1384	1385	1386	1387	1388	1389	1390	1391	1392	1393	1394	1395	1396	1397	1398	1399	1400	1401	1402	1403	1404	1405	1406	1407	1408	1409	1410	1411	1412	1413	1414	1415	1416	1417	1418	1419	1420	1421	1422	1423	1424	1425	1426	1427	1428	1429	1430	1431	1432	1433	1434	1435	1436	1437	1438	1439	1440	1441	1442	1443	1444	1445	1446	1447	1448	1449	1450	1451	1452	1453	1454	1455	1456	1457	1458	1459	1460	1461	1462	1463	1464	1465	1466	1467	1468	1469	1470	1471	1472	1473	1474	1475	1476	1477	1478	1479	1480	1481	1482	1483	1484	1485	1486	1487	1488	1489	1490	1491	1492	1493	1494	1495	1496	1497	1498	1499	1500	1501	1502	1503	1504	1505	1506	1507	1508	1509	1510	1511	1512	1513	1514	1515	1516	1517	1518	1519	1520	1521	1522	1523	1524	1525	1526	1527	1528	1529	1530	1531	1532	1533	1534	1535	1536	1537	1538	1539	1540	1541	1542	1543	1544	1545	1546	1547	1548	1549	1550	1551	1552	1553	1554	1555	1556	1557	1558	1559	1560	1561	1562	1563	1564	1565	1566	1567	1568	1569	1570	1571	1572	1573	1574	1575	1576	1577	1578	1579	1580	1581	1582	1583	1584	1585	1586	1587	1588	1589	1590	1591	1592	1593	1594	1595	1596	1597	1598	1599	1600	1601	1602	1603	1604	1605	1606	1607	1608	1609	1610	1611	1612	1613	1614	1615	1616	1617	1618	1619	1620	1621	1622	1623	1624	1625	1626	1627	1628	1629	1630	1631	1632	1633	1634	1635	1636	1637	1638	1639	1640	1641	1642	1643	1644	1645	1646	1647	1648	1649	1650	1651	1652	1653	1654	1655	1656	1657	1658	1659	1660	1661	1662	1663	1664	1665	1666	1667	1668	1669	1670	1671	1672	1673	1674	1675	1676	1677	1678	1679	1680	1681	1682	1683	1684	1685	1686	1687	1688	1689	1690	1691	1692	1693	1694	1695	1696	1697	1698	1699	1700	1701	1702	1703	1704	1705	1706	1707	1708	1709	1710	1711	1712	1713	1714	1715	1716	1717	1718	1719	1720	1721	1722	1723	1724	1725	1726	1727	1728	1729	1730	1731	1732	1733	1734	1735	1736	1737	1738	1739	1740	1741	1742	1743	1744	1745	1746	1747	1748	1749	1750	1751	1752	1753	1754	1755	1756	1757	1758	1759	1760	1761	1762	1763	1764	1765	1766	1767	1768	1769	1770	1771	1772	1773	1774	1775	1776	1777	1778	1779	1780	1781	1782	1783	1784	1785	1786	1787	1788	1789	1790	1791	1792	1793	1794	1795	1796	1797	1798	1799	1800	1801	1802	1803	1804	1805	1806	1807	1808	1809	1810	1811	1812	1813	1814	1815	1816	1817	1818	1819	1820	1821	1822	1823	1824	1825	1826	1827	1828	1829	1830	1831	1832	1833	1834	1835	1836	1837	1838	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848	1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999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NAME	IONOSONDE	See 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NAME	IONOSONDE	See Notes	Ref 1	Ref 2	Ref 3	Ref 4	Ref 5	Ref 6	Ref 7	Ref 8	Ref 9	Ref 10	Ref 11	Ref 12	Ref 13	Ref 14	Ref 15	Ref 16	Ref 17	Ref 18	Ref 19	Ref 20	Ref 21	Ref 22	Ref 23	Ref 24	Ref 25	Ref 26	Ref 27	Ref 28	Ref 29	Ref 30	Ref 31	Ref 32	Ref 33	Ref 34	Ref 35	Ref 36	Ref 37	Ref 38	Ref 39	Ref 40	Ref 41	Ref 42	Ref 43	Ref 44	Ref 45	Ref 46	Ref 47	Ref 48	Ref 49	Ref 50	Ref 51	Ref 52	Ref 53	Ref 54	Ref 55	Ref 56	Ref 57	Ref 58	Ref 59	Ref 60	Ref 61	Ref 62	Ref 63	Ref 64	Ref 65	Ref 66	Ref 67	Ref 68	Ref 69	Ref 70	Ref 71	Ref 72	Ref 73	Ref 74	Ref 75	Ref 76	Ref 77	Ref 78	Ref 79	Ref 80	Ref 81	Ref 82	Ref 83	Ref 84	Ref 85	Ref 86	Ref 87	Ref 88	Ref 89	Ref 90	Ref 91	Ref 92	Ref 93	Ref 94	Ref 95	Ref 96	Ref 97	Ref 98	Ref 99	Ref 100	Ref 101	Ref 102	Ref 103	Ref 104	Ref 105	Ref 106	Ref 107	Ref 108	Ref 109	Ref 110	Ref 111	Ref 112	Ref 113	Ref 114	Ref 115	Ref 116	Ref 117	Ref 118	Ref 119	Ref 120	Ref 121	Ref 122	Ref 123	Ref 124	Ref 125	Ref 126	Ref 127	Ref 128	Ref 129	Ref 130	Ref 131	Ref 132	Ref 133	Ref 134	Ref 135	Ref 136	Ref 137	Ref 138	Ref 139	Ref 140	Ref 141	Ref 142	Ref 143	Ref 144	Ref 145	Ref 146	Ref 147	Ref 148	Ref 149	Ref 150	Ref 151	Ref 152	Ref 153	Ref 154	Ref 155	Ref 156	Ref 157	Ref 158	Ref 159	Ref 160	Ref 161	Ref 162	Ref 163	Ref 164	Ref 165	Ref 166	Ref 167	Ref 168	Ref 169	Ref 170	Ref 171	Ref 172	Ref 173	Ref 174	Ref 175	Ref 176	Ref 177	Ref 178	Ref 179	Ref 180	Ref 181	Ref 182	Ref 183	Ref 184	Ref 185	Ref 186	Ref 187	Ref 188	Ref 189	Ref 190	Ref 191	Ref 192	Ref 193	Ref 194	Ref 195	Ref 196	Ref 197	Ref 198	Ref 199	Ref 200	Ref 201	Ref 202	Ref 203	Ref 204	Ref 205	Ref 206	Ref 207	Ref 208	Ref 209	Ref 210	Ref 211	Ref 212	Ref 213	Ref 214	Ref 215	Ref 216	Ref 217	Ref 218	Ref 219	Ref 220	Ref 221	Ref 222	Ref 223	Ref 224	Ref 225	Ref 226	Ref 227	Ref 228	Ref 229	Ref 230	Ref 231	Ref 232	Ref 233	Ref 234	Ref 235	Ref 236	Ref 237	Ref 238	Ref 239	Ref 240	Ref 241	Ref 242	Ref 243	Ref 244	Ref 245	Ref 246	Ref 247	Ref 248	Ref 249	Ref 250	Ref 251	Ref 252	Ref 253	Ref 254	Ref 255	Ref 256	Ref 257	Ref 258	Ref 259	Ref 260	Ref 261	Ref 262	Ref 263	Ref 264	Ref 265	Ref 266	Ref 267	Ref 268	Ref 269	Ref 270	Ref 271	Ref 272	Ref 273	Ref 274	Ref 275	Ref 276	Ref 277	Ref 278	Ref 279	Ref 280	Ref 281	Ref 282	Ref 283	Ref 284	Ref 285	Ref 286	Ref 287	Ref 288	Ref 289	Ref 290	Ref 291	Ref 292	Ref 293	Ref 294	Ref 295	Ref 296	Ref 297	Ref 298	Ref 299	Ref 300	Ref 301	Ref 302	Ref 303	Ref 304	Ref 305	Ref 306	Ref 307	Ref 308	Ref 309	Ref 310	Ref 311	Ref 312	Ref 313	Ref 314	Ref 315	Ref 316	Ref 317	Ref 318	Ref 319	Ref 320	Ref 321	Ref 322	Ref 323	Ref 324	Ref 325	Ref 326	Ref 327	Ref 328	Ref 329	Ref 330	Ref 331	Ref 332	Ref 333	Ref 334	Ref 335	Ref 336	Ref 337	Ref 338	Ref 339	Ref 340	Ref 341	Ref 342	Ref 343	Ref 344	Ref 345	Ref 346	Ref 347	Ref 348	Ref 349	Ref 350	Ref 351	Ref 352	Ref 353	Ref 354	Ref 355	Ref 356	Ref 357	Ref 358	Ref 359	Ref 360	Ref 361	Ref 362	Ref 363	Ref 364	Ref 365	Ref 366	Ref 367	Ref 368	Ref 369	Ref 370	Ref 371	Ref 372	Ref 373	Ref 374	Ref 375	Ref 376	Ref 377	Ref 378	Ref 379	Ref 380	Ref 381	Ref 382	Ref 383	Ref 384	Ref 385	Ref 386	Ref 387	Ref 388	Ref 389	Ref 390	Ref 391	Ref 392	Ref 393	Ref 394	Ref 395	Ref 396	Ref 397	Ref 398	Ref 399	Ref 400	Ref 401	Ref 402	Ref 403	Ref 404	Ref 405	Ref 406	Ref 407	Ref 408	Ref 409	Ref 410	Ref 411	Ref 412	Ref 413	Ref 414	Ref 415	Ref 416	Ref 417
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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

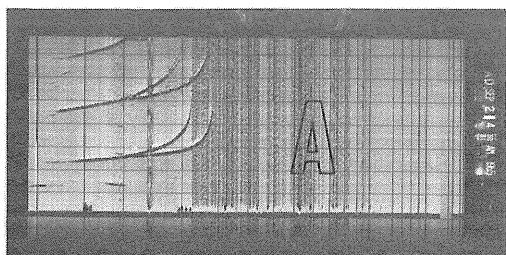
This Section includes samples of the data listed in this Catalog, Sections VI and VII and an explanation of the formats for computer-compatible data.

1. Ionograms

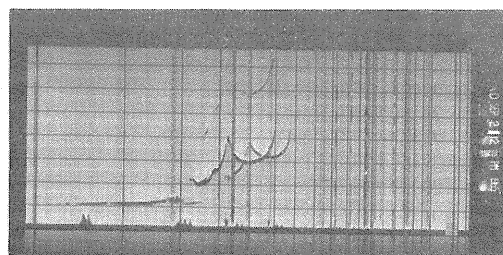
Almost all ionograms (originals and copies) are on 35 mm film. Observations are usually taken at quarter-hourly intervals. Many stations make extra soundings once an hour on low and high as well as medium receiver gain settings. Some stations make soundings only once per hour. Some stations make soundings 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



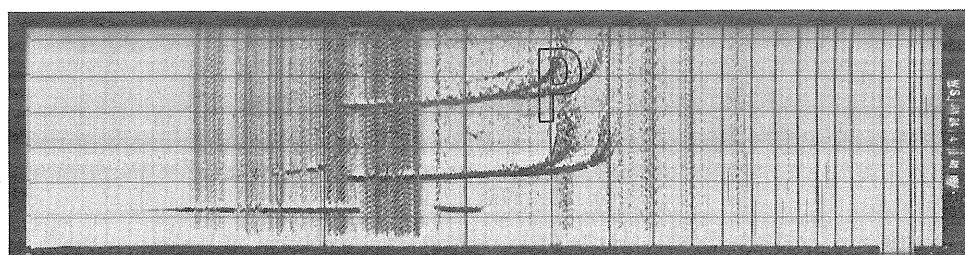
NIGHT



DAY

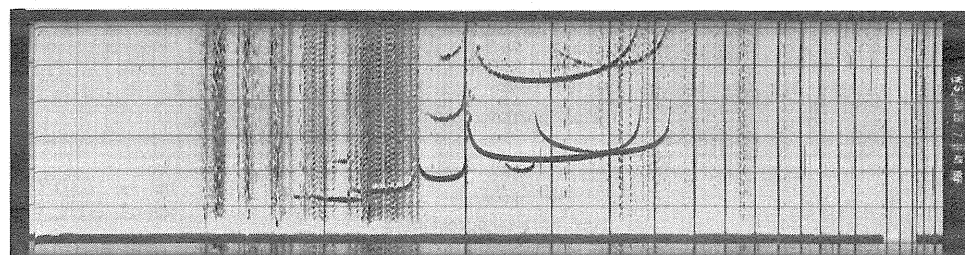
M

IONOGRAMS 0.25-20.0 MHz



NIGHT

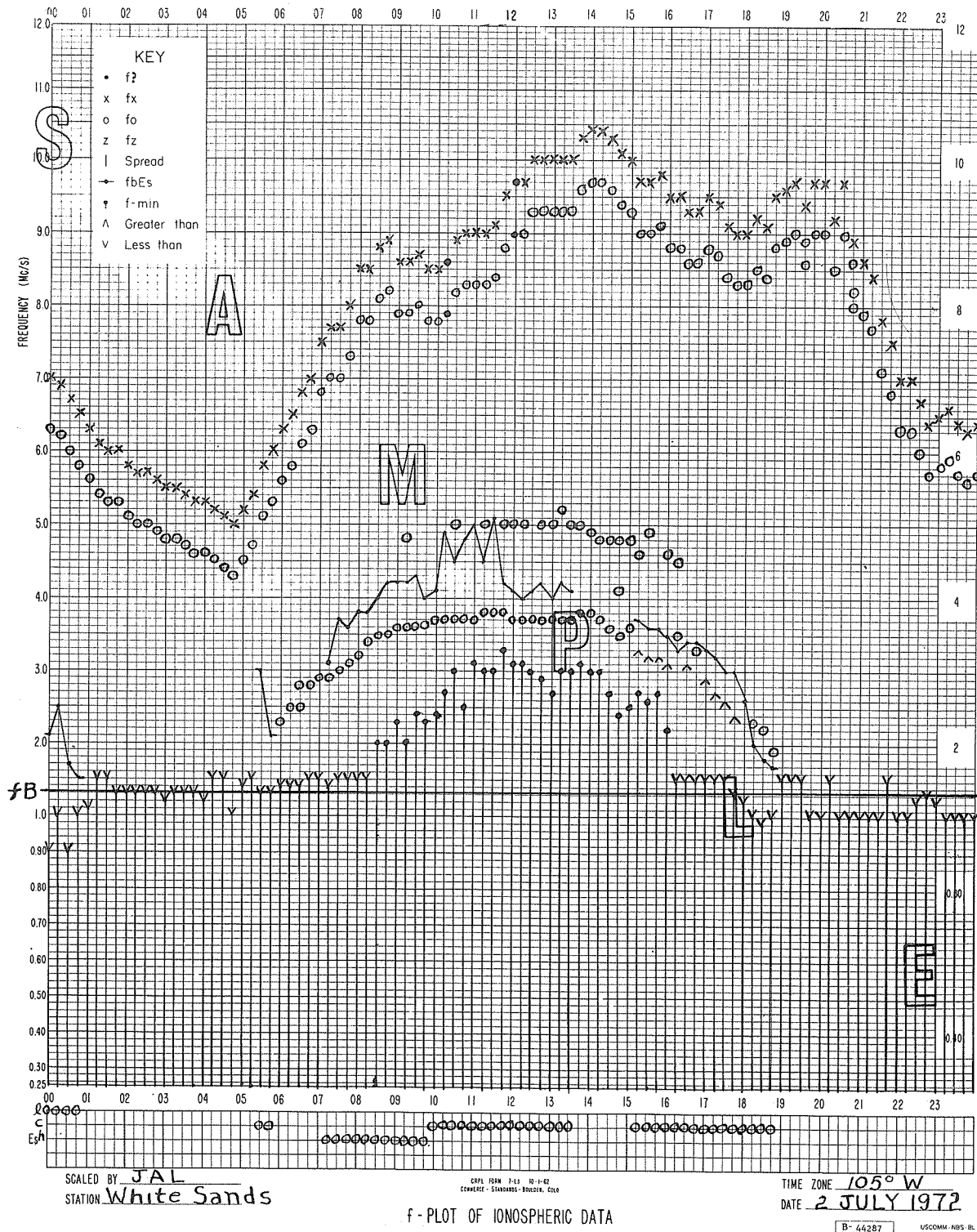
L



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 80502 U.S.A.

*SCALED BY SK-DT DATE SEP 8 1975
 CHECKED BY DT-JK STATION MAUI, HAWAII

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		fo	h'Es	h'Es	h'Es	h'Es	foE	h'E	h'E	h'E	h'E	foE2	h'E2	h'E2	foE2	h'E2	h'E2	foE2	h'E2	h'E2	foE2		h'E2	h'E2	foE2	h'E2	h'E2	foE2	h'E2	h'E2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
00	05	005	005	05	100	L																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							</

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, fEs, 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.

75.0H 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	029	027	027	029	042	051	054	054	053	059	063	065	C	067	067	062	U S	C	061	J S	063	061	053	055	1
2	052	050	050	049	040	034	043	054	060	065	071	079	080	078	080	082	079	073	U S	C	070	U S	061	053	049	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	054	060	069	071	079	083	094	096	098	096	090	087	085	074	U S	072	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	U S	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	095	096	092	U S	078	071	067	061	7	
8	058	059	058	056	054	051	059	068	071	079	081	086	090	100	101	103	100	099	097	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	U S	081	069	066	064	9	
10	061	059	058	055	054	055	064	075	082	083	087	091	098	097	098	096	095	096	098	092	U S	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	097	102	U S	090	078	068	070	12	
13	068	067	060	057	055	051	057	062	064	064	073	080	082	089	088	085	080	089	086	082	U S	072	062	057	055	13	
14	054	055	053	052	050	045	054	067	061	061	068	073	081	081	083	079	077	074	076	072	U R	068	065	066	064	14	
15	060	057		052	054	055	074	072	076	080			081	087	088	082	080	078	079	078	U S	073	068	061	060	15	
16	059	059	058	052	049	046	062	072	082	087	087	087	089	088	085	085	082	086	085	082	U R	071	063	065	061	16	
17	061	060	056	052	050	051	060	066	073	078	081	081	079	086	084	084	081	081	081	081	U R	070	069	063	050	17	
18	057	061	058	055	045	042	051	059	067	066	067	069	069	068	071	076	076	078	083	079	U R	068	057			18	
19								049	052												C	C	C	C		19	
20																					U R					20	
21	066	062	058	051			049	054	053	050	051	054	057	057	058	059	062	060	063	064	U R	057	048	043	042	21	
22	039	038	036	033	029	033	054	062	061	065	071	073	079	078	079	088	089	089	098	100	U R	079	058	048	044	22	
23	043	039	039						071	065	060	070	074	085	091	089	092	093	093	094	U R	082	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	U R	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	088	U R	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	J R	077	068	063	059	26	
27	058	057	054	051	049	048	064	075	075	077	072	077	087	091	093	096	096	094	094	088	U S	084	076	068		27	
28	060	056	051	043	035	033	041	050	064	057	060		065	061	066	064	061	061	059	058	U R	056	050	047	045	28	
29	043	034	032					045									054	055	057	077	076	U R	073	056	052	047	29
30	046	042	039	035	026	032	042	048		050	054	050	054	057						074	071	U R	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	72	76	80	81	86	88	85	84	87	85	82	S	73	63	60	55	MED	
GNT	28	28	27	26	24	23	28	29	25	27	27	27	27	27	25	27	27	28	27	29	U S	29	29	28	25	GNT	
UQ	60	59	058	054	51	051	61	73	79	081	082	086	091	096	98	096	095	95	096	92	U R	80	70	66	61	UQ	
LQ	49	48	046	044	39	038	50	56	63	064	067	070	074	078	80	079	078	78	080	75	U R	68	58	53	50	LQ	
UD	63	61	59	57	55	54	64	78	85	88	93	101	100	104	103	102	100	99	98	96	U R	85	78	68	65	UD	
LD	43	38	34	34	28	33	42	50	57	52	54	57	60	59	69	62	62	61	69	64	U R	58	50	47	45	LD	

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.

```

S      BOULDER 64 03 17 0400
R 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 0.00 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 0 101.88 34.687 147.53 0.236 3.40557+003
     9.747 150 0 105.13 83.564 870.30 0.358 3.87570+003
     9.756 244 OV 109.19 395.968 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 ($2.552 \times F$) 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/cm²) (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

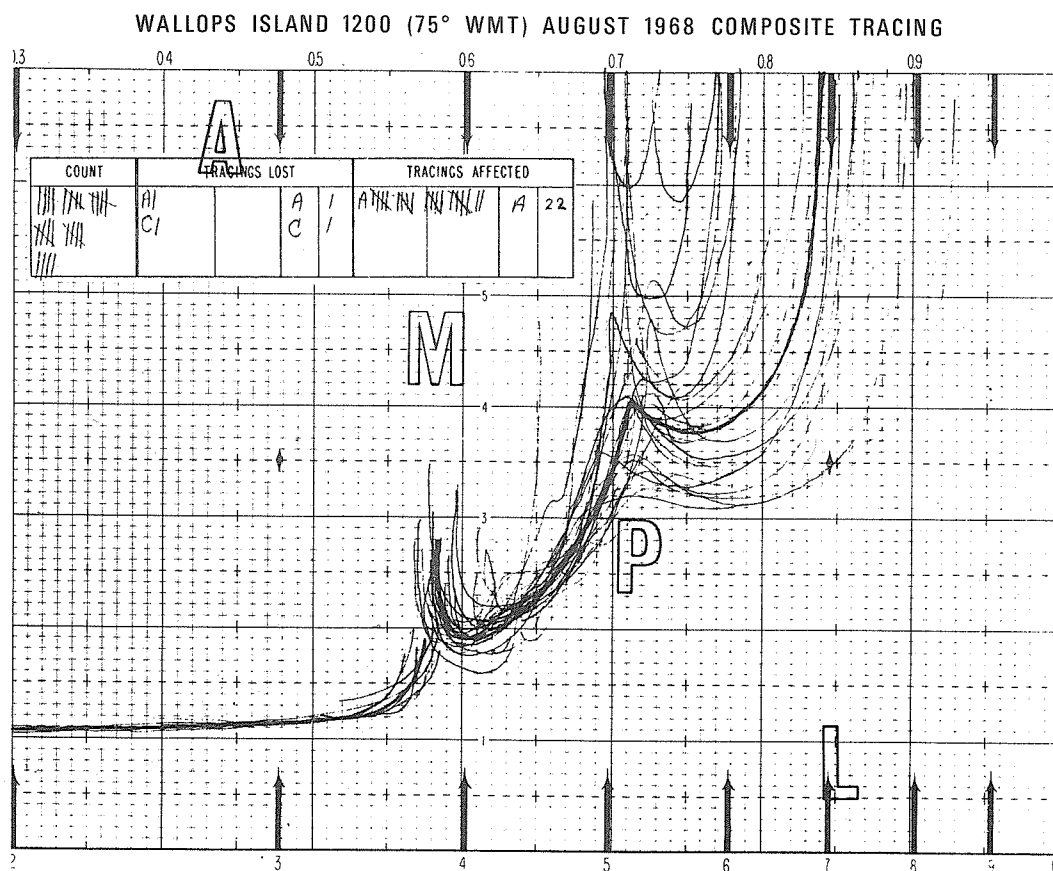


TABLE OF INTERPOLATED COMPOSITE ELECTRON DENSITY PROFILES
(ELECTRON DENSITIES IN $1.0E03$ EL/CC)

STATION: DATE: GRADE: TIME: H(KM)	WP 68082	WP 68082	WP 68083	WP 68082	WP 68082	WP 68082	WP 68083	WP 68082	WP 68082
	800	900	1000	1100	1200	1300	1400	1500	1600
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	0253	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	0449	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	0596	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			0623		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	

HOURLY MEASUREMENT 9/62

STA	YR	MO	T	C	00-12	01-15	02-14	03-15	04-16	05-17	06-18	07-19	08-20	09-21	10-22	11-23																																																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	5																							

Characteristics normally interchanged are marked with an asterisk (*).

31

- (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

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

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

One year's data
    through Station = A,
    Month   = January
    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.

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

51.90 183.40
ADAK
(AD 651)

1.0-25.0MHZ

1945																							
1946			AAA	AAA																			
1947	AAA	AAA	AAA	AAA																			
1948	AAA	AAA	AAA	AAA																			
1949	ANN	NAA	AAA	AAA																			
1950	AAA	AAA	AAA	BBB																			
1951	AAA	AAA	AAA	AAA																			
1952	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA				X							
1953	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA				X							
1954	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA				X							
1955	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA											
1956	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA											
1957	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA											
1958	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA				X	X	X	X				
1959	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA				X	X	X	X				
1960	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA				X	X	X	X				
1961	AAA	AAA	AUU	UAA					AAA	AAA	AUU	UAA				X	X	X	X				
1962	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA				X	X	X	X				
1963	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA				X	X	X	X				
1964	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA				X	X	X	X				
1965	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA				X	X	X	X				
1966	S				S				S							X	X	X	X				

AHMEDABAD
(AH 223)

23.00 72.60

0.6-25.0MHZ

1955																							
1956																							
1957																							
1958																							
1959																							
1960																							
1961																							
1962																							
1963																							
1964																							
1965																							
1966																							
1967																							
1968																							
1969																							
1970																							
1971																							
1972																							
1973																							
1974																							
1975																							

AKITA
(AK 539)

39.70 140.10

1.0-20.0MHZ

1949																							
1950																							
1951																							
1952																							
1953																							
1954																							
1955																							
1956																							
1957																							
1958	WWW	WWW	WWW	WWW					AAA	AAA	AAA	AAA											
1959	WWW	WWW	WWW	WWW					AAA	AAA	AAA	AAA											
1960	PPP	WWW	WWW	WWW					AAA	AAA	AAA	AAA											
1961	WWW	WWW	WWW	WWW					AAA	AAA	AAA	AAA											
1962	WWW	WWW	WWW	WWW					AAA	AAA	AAA	AAA											
1963	WWW	WWW	WWW	WWW					AAA	AAA	AAA	AAA											
1964	WWW	WWW	WWW	WWW					AAA	AAA	AAA	AAA											
1965	WWW	WWW	WWW	WWW					AAA	AAA	AAA	AAA											
1966	PPP	PPP	PPP	PPP					AAA	AAA	AAA	AAA											
1967	PPP	PP	PPP	PPP					AAA	AAA	AAA	AAA											
1968	P								AAA	AAA	AAA	AAA											
1969	PPP	PPP	PPP	PPP					AAA	AAA	AAA	AAA											
1970	PPP	PPP	PPP	PPP					AAA	AAA	AAA	AAA											
1971	PPP	PPP	PPP	PPP					AAA	AAA	AAA	AAA											
1972	PPP	PPP	PPP	PPP					AAA	AAA	AAA	AAA											
1973	PPP	PPP	PPP	PPP					AAA	AAA	AAA	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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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ANCHORAGE
(AN 761)

61.20 210.10

0.25-20.0MHZ

1949		AAA	AAA	AAA											AAA	AAA	AAA			X							
1950	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X							
1951	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X							
1952	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X							
1953	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		X							
1954	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA									
1955	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA									
1956	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA									
1957	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X					
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X					
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X					
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X					
1961	AAA	AAA	ABA	AAA	AAA	AAA	ABA	AAA		AAA	AAA	ABA	AAA		AAA	AAA	ABA	AAA	X	X	X	X					
1962	AAA	AUU	UAA	AAA	AAA	AUU	UAA	AAA		AAA	AUU	UAA	AAA		AAA	AUU	UAA	AAA	X	X	X	X					
1963	AAA	AAA	AAA	AA	AAA	AAA	AAA	BAA		AAA	AAA	AAA	BAA		AAA	AAA	AAA	AA	X	X	X	X					
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X					
1965	AAA	AAA	AAA	AAAB	AAA	AAA	AAA	AAAB		AAA	AAA	AAA	AAAN		AAA	AAA	AAA	AAAB	X	X	X	X					
1966	S				S					S					S												

ARCTICA (NP-6)
(XG)

82.40 9.50

1.0-14.0MHZ

1957		WWW	WWW			HAA	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	AAAB	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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE	JFM	AMJ	JAS	OND

ARCTICA (NP-7)
(XH)

86.40 296.60

1.0-14.0MHZ

1957			WWW	WWW			AAA	AAB	X						AAA	AAA	AAB	X				12			
1958	WWW	WWW	WWW	WWW			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	WWW	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			
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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	WWW	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	WWW	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	BE	BBB	BB																					
1973							BAA	AAA	AAA	AAB					BAA	AAA	AAA	AAB			X	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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

ARGENTINE IS
(AI J6M)

-65.20 295.70

0.67-25.0MHZ

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															AAK	AAA	AAA	AAA	X									6
1958															AAA	AAA	AAA	AAA	X									6
1959															AAA	AAA	AAA	AAA	X									6
1960															AAA	AAA	AAA	AAA	X									6
1961															AAA	AAA	AAA	AAA	X									6
1962															AAA	AAA	AAA	AAA	X									6
1963															AAA	AAA	AAA	AAA	X									6
1964															AAA	AAA	AAA	AAA	X									6
1965															AAA	AAA	AAA	AAA	X									6
1966															AAA	AAA	AAA	AAA	X									13
1967															AAA	AAA	AAA	AAA	X									13
1968															AAA	AAA	AAA	AAA	X									13
1969															AAA	AAA	AAA	AAA	X									12
1970															AAA	AAA	AAA	AAA	X									13
1971															AAA	AAA	AAA	AAA	X									13
1972															AAA	AAA	AAA	AAA	X									14
1973															AAA	AAA	AAA	AAA	X									14
1974															AAA	AAA	AAA	AAA	X									14
1975															AAA	AAA	AAA	AAA	X									14
															AA													3
															MMM													3

ARKHANGELSK
(AZ 163)

64.60 40.50

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	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ							QQQ	QQQ	QQQ	QQQ										
1972	WWW	WWW	WWW	WWW	WWW	WWW	WWW	WWW							QQQ	QQQ	QQQ	QQQ										
1973	QQQ	Q													QQQ	Q												

ASHKHABAD
(AS 237)

37.90 58.30

1.0-18.0MHZ

1956																													
1957																													
1958																													
1959																													
1960																													
1961																													
1962																													
1963																													
1964																													
1965																													
1966																													
1967																													
1968																													
1969																													
1970																													
1971																													
1972																													
1973																													

ATHENS
(AT 138)

38.00 23.60

1.0-20.0MHZ

1960																													
1961																													
1962																													
1963																													
1964																													
1965																													
1966																													
1967																													
1968																													
1969																													
1970																													
1971																													

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		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				14			
1968															AAA	AAA	AAE	AAA	X				3			
1969															AAA	AAA	AAA	BAA	X				3			
1970															ABA	AAA	AAA	AAB	X		X		4			
1971															BAA	AAA	AAA	AAA	X		X		4			
1972															AAA	AAA	AAA	AAA	X		X		4			
1973															BAA	AAA	AAA	AAA			X		4			
1974															AAA	AAA	AAA						4			

BADDOH
(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						13			
1953															AAA	AAA	AAA	AAA					13			
1954															AAA	AAA	AAA	AAA					13			
1955															AAA	AAA	AAA	AAA					13			
1956															AAA	AAA	AAA	AAA					11			
1957															AAA	AAA	AAA	AAA					13			
1958															AAA	AAA	AAA	AAA					13			
1959															AAA	AAA	AAA	AAA					13			
1960															AAA	AAA	AAA	AAA					13			
1961															AAA	AAA	AAA	AAA					13			
1962															AAA	AAA	AAA	AAA					13			
1963															AAA	AAA	AAA	AAA					13			
1964															S								13			

REPLACED BY MANILA

BAIE ST PAUL
(PL J48)

47.38 289.45

1.6-20.0MHZ

1961		BA																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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BAKER LAKE
(BL 964)

64.30 264.00

1.0-20.0MHZ

1949															AA	AAA	AAA	AAA	X				12			
1950															AAA	AAA	AAA	AAA					12			
1951															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 MEDIAN BY CHARACTERISTIC				PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND	HR. VALUES	MEDIAN	MAG. TAPE		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				10				
1958	AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X			10				
1959	W	S						AAS							AAA	AAA	AAA	AAA	X			10				
															AAS				X			10				

BANDOENG
(02 400)

6.90	107.60														BM	MMM	MMM									1.0-16.0MHZ
1943															MMM	BNM	MMM	MB				7				
1944																	S					5				
1945																										

BANGKOK
(0K 314)

13.70	100.60																									1.0-25.0MHZ
1963		BA	AAA					BA	X						AAA	AAA	AAA	AAA	X		X		13			
1964	AAA	AAA	AAA	AAA				BAA	AAA	BBB	AAB	X			AAA	AAA	AAA	AAA	X		X		13			
1965	AAA	AAA	AAA	AAA				ABB	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X		X		13			
1966	AAA	AAA	BAA	AAA				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													AAA	AAA	AAA	AAA	X		X		13			
1969		AAA	AAA												AAA	AAA	AAA	AAA	X		X		13			
1970		B													AAA	AAA	AAA	AAA	X		X		13			
1971															AAA	AAA	AAA	AAA	X		X		13			
1972															AAA	AAA	AAA	AAA	X		X		13			
1973															AAA	AAA	AAA	AAA	X		X		13			
1974															AAA	AAA	MA			X	X		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															AAA	AAA	AAA	AAA	X				12			
1964															AAA	AAA	AAA	AAA	X				12			
1965															AAA	AAA	AAA	AAA	X				12			
1966															AAA	AAA	AAA	AAA	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

BARROW
(BW 771)

71.30	203.20																									0.25-20.0MHZ
1949				A																						
1950	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					12			
1951	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					12			
1952	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					12			
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					12			
1956	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					12			
1957	AAA	AAA	BAB	AAA				AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA					12			
1958	AAB	AAA	BBA	AAA				AAB	AAA	BBA	AAA	X			AAA	AAA	AAA	AAA	X		X	X	11			
1959	AAA	AAA	AAB	AAA				AAA	AAA	AAB	AAA	X			AAA	AAA	AAA	AAA	X		X	X	11			
1960	AAA	AAA	AAA	AAA				AAA	AAA	ABA	AAA	X			AAA	AAA	AAA	AAA	X		X	X	7			

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 MEDIAN BY CHARACTERISTIC				PUNCHED CARDS		MAC. TAPE	NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND	HR. VALUES	MEDIAN			JFM	AMJ	JAS	OND

BARROW (Continued)

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	AAA	NNA	AAA	AAA	AAA	NN	X	AAA	AAA	AAA	NN	AAA	AAA	AAA	NN	X	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

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

1943															EAA	AAA						10				
1944															AAA	AAA	ABA	AAA				11				
1945															AAA	AA	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			AAA	AAA	AAA	AAA	X			12				
																	AS		X			8				

BAUDOUIN
(BB 17v)

-70.40 23.30

1.0-25.0MHZ

1958																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</
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BELGRANO
(GE A7Q)

-77.90 321.40

1.0-25.0MHZ

1958															MM				X	X		4				
1963															AAA				X	X		13				
1964															AAA	AAA	AAA	AAA	X	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

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	AAA	AAA	AAA				2				
1972															AAA	AAA	AAA	AAA				2				

For symbols see page 33

BILLERICA (BO J43)							
42.60	288.70						1.7-14.0MHZ
1965							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

BOGOTA
(BG J05)

REPLACED BY POPAYAN

BOMBAY
(BM 219)

BOSTON
(56 J43)

REPLACED BY BILLERICA IN 1965
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 MEDIAN 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	MEDIAN			JFM	AMJ	JAS	OND						
BOULDER (BC 840)																																	
40.00		254.70																										0.25-20.0MHZ					
1955	A AA A																																
1956	A A																																
1957	A A AA BBB																																
1958	AAA	AAA	AAA	ABA			AA	B	X			BB	BA		AAA	AAA	AA	AAA	X	X	X	X	13										
1959	AAA	AAA	AA	AAA			A	A	B	B	X	AAA	AA	B	AAA	AAA	AAA	AAA	X	X	X	X	13										
1960	AAA	AAA	AAA	AAA			AAA	AAA	B	A	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	X	X	X	13										
1961	AAA	AAA	AAA	AAA			AAA	AAA	B	X		AAA	AAA						X	X	X	X	7										
1962	AAA	AAA	AAA	AAA																													
1963	AAA	AAA	AAA	AAA			AA	AAA	AAA	X		AA	AAA	AAA		AA	AAA	AAA	X	X	X	X	13	AAA	RRR	RRR							
1964	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	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	X	X	X	X	13	RRR	RRR	RRR	RRR						
1966	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	X	X	X	13	RRR	RRR	RRR	RRR						
1967	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	X	X	X	13	AAA	AAA	AAA	AAA						
1968	AAA	AAA	AAA	AAA			AAA	A		AA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	X	X	X	13	AAA	A								
1969	AAA	AAA	AAA	AAA			AAA					AAA	BBB	BBB	BBB					X	X		13										
1970	AAA	AAA	AAA	AAA								BBB	BBB	AAA	AAA					X	X		18										
1971	AAA	AAA	AAA	AAA								AAA	AAA	AAA	AAA	AAA				X	X		18										
1972	AAA	AAA	AAA	AAA								AAA	AAA	AAA	AAA	AAA				X	X		18										
1973	AAA	AAA	AAA	AAA								AAA	AAA	AAA	AAA	AAA				X	X		18										
1974	AAA	AAA	AAA	AAA								AAA	AAA	AAA	AAA	AAA				X	X		18										
1975	AAA	AAA										AAA	AAA	AAA	AAA	AAA				X	X		17										
																							9										

BRISBANE (BR 52P)																											
-27.50	152.90																					1.0-20.0MHZ					
1943																											
1944																											
1945																											
1946																											
1947																											
1948																											
1949																											
1950																											
1951																											
1952																											
1953																											
1954																											
1955																											
1956																											
1957																											
1958																											
1959	WWW	WWW	WWW	WWW			WWW	WWW	WWW	WWW																	
1960	WWW	WWW	WWW	WWW			WWW	WWW	WWW	WWW																	
1961																											
1962																											
1963	B		A																								
1964																											
1965																											
1966																											
1967																											
1968																											
1969																											
1970																											
1971																											
1972																											
1973	B																										
1974																											
1975																											

BUDAPEST (BU 147)																											
46.57	21.17																					0.5-20.0MHZ					
1956																											
1957																											
1958																											
1959																											
1964																											
1965																											
1966																											
1967																											
1968																											
1969																											
1971																											
1972																											
1973																											
1974																											

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				TABLES OF DAILY/HOURLY VALUES AND MEDIAN BY CHARACTERISTIC				PUNCHED CARDS				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		MEDIAN	MAG. TAPE	JFM	AMJ

BUDAPEST (Continued)

1975					W										A								14				
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BUENOS AIRES
(BA J3M)

-34.50 301.50

1.0-25.0MHZ

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															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													12
1961	AAA AAA AAA AAA				AAA AAA AAA AAA X										AAA AAA AAA AAA X													12
1962	AAA AAA AAA AAA				AAA AAA AAA AAA X										AAA AAA AAA AAA X													12
1963	ABA AAA AAA AAA				AAA AAA AAA AAA X										AAA AAA AAA AAA X													12
1964	AAA AAA AAA AAA				AAA AAA AAA A X										AAA AAA BAA AAA X													12
1965	BAA AAA AAA AAA				BAA BBA AAA AAA X										AAA AAA AAA AAA X													12
1966	AAA AAA AAA AAA				AAA BAA BAA AAA										BAA AAA AAA AAA X													12
1967	AAA AAA AAA AAA														AAA BAA AAA AAA X													12
1968	AAA AAA AAA AAA														AAA AAA AAA AAA X													13
1969	AAA ABA AAA AAA														AAA AAA AAA AAA X													13
1970	AAA AAA AAA AAA														AAA AAA AAA AAA X													13
1971	AAA AAA AAA AAA														AAA AAA AAA AAA X													13
1972	AAA AAA AAA AAA																											14
1973															AAA AAA AAA AAA													14
1974															A													14

BUNIA
(BN 102)

1.50 30.20

1.0-20.0MHZ

1957	BB														AAA AAA AAA AAA X													15
1958															AAA AAA AAA AAA X													20
1959															AAA AAA BAA AAA X													20
1960															AAA ABE ABA BAS X													20

BURGHEAD
(06 063)

57.70 356.30

1.0-13.0MHZ

1941															BAB BNE ENB 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													6
1947															AAA AAA AAA AAA X													1

BYRD STATION
(BD 88v)

-80.00 240.00

0.25-20.0MHZ

1957	AA AAA AAA	AAA AAA AAA X	AAA AAA	AAA AAA X	X X X	13
1958	AAA AAA AAA AAA	AAA AAA AAA X	AAA AAA AAA	AAA AAA X	X X X	13
1959	AAA AAA AAA AAA	AAA AAA AAA X	AAA AAA AAA	AAA AAA X	X X X	13
1960	AAA AAA AAA AAA	AAA AAA AAA X	AAA AAA AAA	AAA AAA X	X X X	13
1961	AAA AAA AAA AAA	AAA AAA AAA X	AAA AAA AAA	AAA AAA X	X X X	13
1962	BNN AAA AAA AAA	BNN AAA AAA X	BNN AAA AAA	BNN AAA X	X X X	13
1963	BAA AAA AAA AAA	BAA AAA AAA X	BAA AAA AAA	BAA AAA X	X X X	13
1964	AAA AAA AAA AAA	BBB BBA AAA BAB X	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 X	X X X	13
1966	AAA AAA AAA AAA	AA AAA AAA A	AAA AAA AAA AAA	AAA AAA AAA X	X X	13
1967	AAA AAA AAA AAA		AAA AAA AAA AAA	AAA AAA AAA X	X X	7
1968	AAA AAA AAA AAA	B	AAA AAA AAA AAA	AAA AAA AAA X	X X	7
1969	AAB ABA BBB BBB		BAE AA B			7
1970	AAA AAA AAA ANA					7
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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

30.00 31.19

CAIRO
(05 130)

1945															AAA	AAA	AAA	AA					4				
1946																							4				

CALCUTTA
(CU 322)

23.00 88.60

1.0-25.0MHZ

1944															AAA	AAA	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															ABA	AAA	AAA	AAA	X		X		9				
1958															AAA	BBB	BAC	AAA	X		X	X	9				
1959															AAA	NNN	NBB	BAA	X				9				
1960															AAE	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	AAA	BBE	X		X		9				
1968															AAA	BAA	AAA	AAA	X		X		10				
1969															AAE	AAE	ABA	AAA	X		X	X	10				
1970															AAA	AAA	BAA	AAE	X		X	X	10				
1971															ABA	AAE	BAA	BAA	X		X		10				
1972															BAA	BBA	BAA	AAA	X				10				
1973															AAA	A							10				
1974																MM							10				

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															AAA	AAA	AAA	AAA					14				
1956															AAA	AAA	AAA	AAA					14				
1957															AAA	AAA	AAA	AAA					13				
1958															AAA	AAA	AAA	AAA	X				13				
1959															AAA	AAA	AAA	AAA	X				7				
1960															AAA	AAA	AAA	AAA	X				7				
1961															AAA	AAA	AAA	AAA	X		X	X	7				
1962															AAA	AAA	AAA	AAA	X		X	X	8				
1963															AAA	AAA	AAA	AAA	X		X		8				
1964															AAA	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		3				
1969															AAA	AAA	AAA	AAA	X		X		4				
1970															AAA	AAA	AAA	AAA	X		X	X	4				
1971															AAA	AAA	AAA	AAA	X		X	X	4				
1972															AAA	AAA	AAA	AAA	X		X		4				
1973															AAA	AAA	AAA	AAA	X		X		4				
1974															AAA	AAA	AAA	AAA	X		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 MEDIAN BY CHARACTERISTIC				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	MEDIAN			JFM	AMJ	JAS	OND

CANBERRA
(CB 53N)

-35.30 149.00

1.0-25.0MHZ

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	AAA	AAA	AAA		X			12			
1947															AAA	NAA	AAA	NNA		X			15			
1948															AAA	AAA	AAA	AAA		X			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															AAA	AAA	AAA	AAA	X				13			
1958															AAA	AAA	AAA	AAA	X				13			
1959															AAA	AAA	AAA	AAA	X				8			
1960															NNN	AAA	AAA	AAA	X	X	X		6			
1961															AAA	NNN	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	AAA	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		6			
1973															AAA	AAA	AAA	AAA		X			6			
1974															AAA	AAA	AAA	AAA		X			6			
1975															AAA	AAA	AAA	AAA					6			

CAPE HALLETT
(HT 67K)

-72.30 170.20

1.0-25.0MHZ

1957																AAA	AAA	AAA	AAA	X				13			
1958																AAA	AAA	AAA	AAA	X				13			
1959																AAA	AAA	AAA	AAA	X	X			13			
1960																AAA	AAA	AAA	AAA	X	X			7			
1961																AAA	AAA	AAA	AAA	X	X	X		7			
1962																AAA	AAA	AAA	AAA	X	X	X		8			
1963																AAA	AAA	AAA	AAA	X	X			14			
1964																AAA	AAA	AAA	AAA	X	X			14			

CAPE KENNEDY
(CC 929)

28.40 279.40

1.0-25.0MHZ

1958															A	ABA	AAA	AAA	X				13			
1959															AAA	BAA	AAA	AAA	X				13			
1960															AAA	AAA	AAA	AAA	X				7			
1961															AAA	AAA	AAA	AAA	X				7			
1962															AAA	AAA	AAA	AAA	X				7			
1963															BBA	AAA	AAA	AAA	X				7			
1964															AAA	AAA	AAA	AAA	X				8			
1965															AAA	AAA	AAA	AAA	X	X	X		8			
1966															AAA	AAA	AAA	AAA	X	X	X		8			
1967	B				BS										AAA	AAA	AAA	AAA	X	X	X		8			

CAPE CANAVERAL RENAMED CAPE KENNEDY MARCH 1964

CAPE SCHMIDT
(CE 669)

63.90 179.50

1.0-18.0MHZ

1960																AAA	AAA	AAA	AAA	X				14			
1961																AAA	AAA	AAA	AAA	X				14			
1962																NAA	AAA	AAA	ANA	X				14			

For symbols see page 33

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

CAPE SCHMIDT (Continued)

1963					AA			AA	X				AA	X				X		14				
1964					A	A	AAA	AAA	X				A	A	AAA	AAA	X		X		14			
1968					AA	AAA	AAA	AAA	X				AA	AAA	AAA	AAA	X		X		14			
1969					AA								AA								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										10			
1958					WWW	WWW	W	W	WWW	X					AAA	AAA	X			13			
1959					WWW	W		W	WWW	X					AAA	AAB	ABA	AAA	X	13			
1960	BA	AAB													AAA	BAA	AAA	AAA	X	13			
1961	BA	AAB													AAA	AAA	AAA	BAA	X	13			
1962	A	AA																X		13			
1963										AAA	A	E	NNE					X		10			
1964										AAA	AAA	ABA	AAA	X				X		10			
1965					WWW	WWW	BNN	NNN	X						AAA	AAA	ANN	NNN	X	10			
1966								WWW	WWW	X													
1967															BAA	ABA	ABN	AAA	X	8			
1968															AAA	AAA	ABA	BAA	X	13			
1969					WWW	W		W	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																				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		AAA	AAA	AAA	AAA	X			X			12			
1965					BAA	AAA		AAA	X	AAA	AAA		AAA	X			X			12			
1966					AAA	AAA	AAA	ANA	X	AAA	AAA	AAA	ANA	X			X			12			
1967					AAB	AAB	AB		X	AAB	AAB	AAA	AAA	X			X			12			
1968										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																				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					WS			WWW	WWW	X					AAA	AAA	AAB	AAA	X	12			
1958															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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

CASEY
(CW 460)

-66.28 110.53

1.0-20.0MHZ

1969															A	AAA	AAA	AAA			X	X						
1970															AAA	AAA	AAA	AAA			X	X						
1971															AAA	AAA	AAA	AAA			X	X						
1972															AAA	AAA	AAA	AAA			X							
1973															AAA	AAA	AAA	AAA			X							
1974															AAA	AAA	AAA	AAA										
															A													

REPLACED WILKES. CLOSED, DEC. 1975

CHICLAYO
(CY 90P)

-6.80 280.20

1.0-25.0MHZ

1957			BAA	AAB				BAA	AAB	X				BAA	AAB					X	X	X						
1958	AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X		AAA	AAA	AAA	AAA			X	X	X						
1959	BS							BS				X		BS						X	X							

REPLACED BY ILO

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						
1958	AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X		AAA	AAA	AAA	AAA	X		X	X	X						
1959	AAA	AAS						AAA	AAS			X		AAA	AAS			X		X	X	X						

CHITA
(CX 452)

52.00 113.50

1.0-18.0MHZ

1946															MMM	MMM	MMM											
1956															MM													
1957															M	MM	AAA	ABB	X		X	X						
1958															AAA	AAA	BAA	AAA	X		X	X						
1959															AAA	AAA	AAA	BAA	X		X	X						
1960															AAA	AAA	AAA	AAA	X		X	X						
1961															AAA	AAA	ABA	AAA	X		X	X						
1962															AAA	AAA	AAA	AAA	X		X	X						
1963															BNA	AS			X		X	X						

CHRISTCHURCH
(GH 64L)

-43.60 172.80

1.0-22.0MHZ

1939															MMM	MMM	MMM	MMM										
1940															MMM	MMM	MMM	MMM										
1941															MMM	MMM												
1942																	AA	AAA			X							
1943																	AAA	ANN	AAA	AAA		X						
1944																	AAA	AAA	AAA	AAA								
1945																	AAA	AAA	AAA	AAA								
1946																	AAA	AAA	AAA	AAA								
1947																	AAA	AAA	AAA	AAA								
1948																	AAA	AAA	AAA	AAA								
1949																	AAA	AAA	AAA	AAA		X						
1950																	AAA	AAA	AAA	AAA		X						
1951																	AAA	AAA	AAA	AAA		X						
1952																	AAA	AAA	AAA	AAA								
1953																	AAA	AAA	AAA	AAA								
1954																	AAA	AAA	AAA	AAA								
1955																	AAA	AAA	AAA	AAA								
1956																	AAA	ANN	NBA	AAA								
1957																	AAA	AAA	AAA	AAA								
1958																	AAA	AAA	AAA	AAA	X							
1959																	AAA	AAA	AAA	AAA	X							
1960																	AAA	AAA	AAA	AAA	X							
1961																	AAA	AAA	AAA	AAA	X							
1962																	AAA	AAA	AAA	AAA	X							
1963	B		A														AAA	AAA	AAA	AAA	X							
1964																	AAA	AAA	AAA	AAA	X							
1965																	AAA	AAA	AAA	AAA	X							
1966																	AAA	AAA	AAA	AAA	X							
1967																	AAA	AAA	AAA	AAA	X							
1968																	AAA	AAA	AAA	AAA	X							
1969																	AAA	AAA	AAA	AAA	X							

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 MEDIAN BY CHARACTERISTIC				MICRO	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

CHRISTCHURCH (Continued)

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	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

1944																							10				
1945			AAA	AAA	AAA																		11				
1946	A									AAA	AAA	AAA	AAA										11				

CHUNGKING
(09 429)

29.40 106.30

1.7-20.0MHZ

1945																							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

1943																							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	AAA	X						X			13				
1950										AAA	AAA	AAA	AAA	X						X			14				
1951										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	X									10				
1958										AAA	AAA	AAA	AAA	X									10				
1959										AAA	ABA	AAA	ABA										10				
1960										AAA	AAA	AAA	AAA										11				
1961										AAA	AAA	AAA	ABA							X			10				
1962										AAA	AAA	ABA	AAA							X			11				
1963										BAB	AAA	AAA	AAA							X			11				
1964										AAA	AAA	AAA	AAA							X			11				
1965										AAA	AAA	AAA	AAA							X			11				
1966										AAA	AAA	AAA	AAA	X						X			11				
1967										AAA	AAA	AAA	AAA	X						X			11				
1968										AAA	AAA	AAA	AAA	X						X	X		11				
1969										AAA	AAA	AAA	AAA	X						X	X		11				
1970										AAA	AAA	AAA	AAA							X	X		11				
1971										AAA	AAA	AAA	AAA							X	X		12				
1972										AAA	AAA	AAA	ABA							X	X		12				
1973										AAA	AAA	AAA	AAA							X	X		12				
1974										AAA	AAA	AAA	AAA							X			12				
1975										AAA	AAA	AAA	AAA							X			12				

CLYDE RIVER
(CR J70)

70.50 291.40

1.6-20.0MHZ

1943																							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											8				

For symbols see page 33

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

23.20 279.40

1.0-25.0MHZ

1952	AAA	AAS									AAA	AAS				X			11				
------	-----	-----	--	--	--	--	--	--	--	--	-----	-----	--	--	--	---	--	--	----	--	--	--	--

COCOS IS
(CS 31K)

-12.20 96.80

1.6-20.0MHZ

1961																							
1962																							
1963			B																				
1964																							
1965																							
1966																							
1967																							
1968																							
1969																							
1970																							
1971																							
1972																							
1973																							
1974																							

COLLEGE
(CO 764)

64.90 212.20

0.25-20.0MHZ

1941																							
1942	AAA	AAA	AAA	AA																			
1943	AAA	AAA	AAA	AAA																			
1944	AAA	AAA	AAA	AAA																			
1945	AAA	AAA	AAA	AA																			
1946	AAA	AAA	AA	AAA																			
1947	AAA	AAA	AA	AAA																			
1948	AAA	AAA	AAA	AAA																			
1949	AA	AAA	AAA	AAA																			
1950	AA	AAA	AAA	AAA																			
1951	AAA	AAA	AAA	AAA																			
1952	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	AAA	AAA	AAA	AAA																			
1958	AAA	AAA	AAA	AAA																			
1959	AAA	AAA	AAA	AAA																			
1960	AAA	AAA	AAA	AAA																			
1961	AAA	AAA	AAA	AAA																			
1962	AAA	AAA	AAA	AAA																			
1963	AAA	AAA	AAA	AAA																			
1964	AAA	AAA	AAA	AAA																			
1965	AAA	AAA	AAA	AAA																			
1966	AAA	AAA	AAA	AAA																			
1967	AAA	AAA	AAA	AAA																			
1968	AAA	AAA	AAA	AAA																			
1969	AAA	AAA	AAA	AAA																			
1970	AAA	AAA	AAA	AAA																			
1971	AAA	AAA	AAA	AAA																			
1972	AAA	AAA	AAA	AAA																			
1973	AAA	AAA	AAA	AAA																			
1974	A	A	AAA	AAA																			
1975	A																						

COLOMB0
(11 306)

6.90 79.87

2.0-16.0MHZ

1945																							
1946																							

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 MEDIAN 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	MEDIAN			JFM	AMJ	JAS	OND	
CONCEPTION (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	ABA	X		BBA	AAA	AAA	ABA			AAA	AAA	AAA	AAA	X	X	X	X	13		
1959	AAA	AAA	AAA	AAA			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		E	X	X	X	X	X	11			
1963	AAA	AAA	AAA	AAA			AAE	ABA	ABB	AAA	X	AAE	ABA	ABB	AAA			AAA	AAA	AAA	AAA	X	X	X	X	10		
1964	AAA	AAA	AAA	BAA			AAA	ABE	AAA	BAA	X	AAA	ABE	AAA	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	X	10		
1967	AAA	AAA	AAA	AAA				AAA	ABE	BBB			AAA	AAA	AAA						A		X	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)																							1.0-18.0MHZ	
23.00		278.00																						
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															MM		M							1			
1945																								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															AAA	AAA	AAA	AAA							12		
1958															AAA	AAA	AAA	AAA	X						12		
1959															AAA	ABA	AAA	AAA	X						12		
1960															AAA	AAA	AAA	AAA	X						12		
1961			B	ABB	B										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															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	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		
1974															AAA	AAA	AAA	AAA			X				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

YEAR	IONOGRAMS				f-PLOTS				ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				PUNCHED CARDS				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	MAG. TAPE	JFM	AMJ

DECEPCION
(DE J6L)

-63.00	299.30		(DE J6L)					1.3-18.0MHZ
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		(OH 328)				1.0-25.0MHZ
1942							
1943							
1944				MMM MMM MMM MMM	X		1
1945				AAA AAA AAA AAA	X		1
1946				AAA AAB BBA AAA	X		10
1947				AAA AAA AAA AAA	X		9
1948				AAA AAA AAA AAA	X		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			3
1956				AAA AAA AAA AAA			4
1957				AAA AAA AAA AAA			3
1958				AAA AAA AAA AAA X	X	X	3
1959				AAA AAA AAA AAA X	X	X	7
1960				AAA AAA AAA AAA X	X	X	7
1961				AAA AAA BAB AAA X	X	X	7
1962				AAA AAA AAA AAA X	X	X	7
1963				AAA AAA AAA AAA X	X	X	7
1964				AAA AAA AAA AAA X	X		11
1965				ABB BBA AAB ABA X	X		12
1966				AAA AAA AAA AAA X	X		12
1967				AAA AAA AAA AAA X	X		12
1968				AAA BBA AAA AAB X	X		12
1969				AAA AAE AAA AAA X	X	X	12
1970				AAA AAF ABB AAA X	X	X	12
1971				AAA AAA BAA AAB X	X	X	12
1972				AAA ABA AAA AAA X	X		12
1973				AAA BAA AAB BAA X			12
1974				AAA AAA MMM MAA			12
				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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

73.50 80.40
DIXON
(OI 373)

1.0-10.0MHZ

1957			WWW	WWW				AAA	AAA	X					AAA	AAA	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	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			WWW	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
(OJ 111)

11.50 42.80

1.25-20.0MHZ

1951															AAA	AAA	AAA	AAA					19				
1952															AAA	AAA	AAA	AAA					22				
1953															AAA	AAA	AAA	A A					9				
1954															AAA	A A	AAA	A A					9				
1955															AAA	AAA	AAA	A					12				
1956															AAA	AAA	AAA	AAA	X				12				
1957							WW	W	X						AAA	AAA	AAA	AAA	X				12				
1958															AAA	AAA	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	AAA	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	AAA	AAA	AAA			X		14				
1973															AAA	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
(08 049)

50.10 4.60

1.0-20.0MHZ

1957															AAA	AAA	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		16				
1972															AAA	AAA	AAA	AAA			X		16				
1973															AAA	AAA	AAA	AAA			X		16				
1974															AAA	AAA	AAA	AA			X		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				NO CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS	MAG. TAPE			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																					
1962					AB				A			B																
1964	AA																											
1965	BAA	AAA	AAA	AB		B	AAA	AAB	S				S															

ELIZABETHVILLE
(EZ 11J)

-11.60 27.50

1.0-20.0MHZ

1955																												
1956																												
1957																												
1958																												
1959																												
1960																												

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	X		AAA	AAA	AAA	AAA		AAA	AAA	AAA	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	AAA	AAA	AAA	X		X	13				
1962		AAA	AAA	AAA	AAS												AAA	BAA	AAA	AAA	X		X	13				

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	AWH			B	AAA				B	AAA				E	AAA	X				8					
1958		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	X			8					
1959							AS					AS					AS			X			4					

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

-18.00 178.20
FIJI
(14 61Q)

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	X		X	X	X	13				
1959	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	AAA		X	X	13				
1971															AAA	AAA	AAA	AAA	AAA		X	X	14				
1972															AAA	ABA	ABA	AAA	AAA		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	AAA	AAA					10				
1955															AAA	AAA											
1956															AAA	AAA											
1957															AAA	AAA	AAA	AAA	X								
1958															AAA	AAA	AAA	AAA	X								
1959	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X		X	X	X	12			
1960	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X		X	X	X	12			
1961	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X		X	X	X	12			
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	AAA			AAA	AAA	AAA	AAA	X	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	X		X	X	X	13			
1965	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X		X	X	X	13			
1966	S						S				S				S												

FORT MONMOUTH
(FM J40)

40.40 285.90

1.0-25.0MHZ

1950				A											AAA	AAA	AAA	AAA					12				
1951	AAA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					12				
1952	AA	AAA	AAA	AAA											AAA	AAA	AAA	AAA					12				
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					10				
1957	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	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	X		X	X	X	12			
1959	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X		X	X	X	12			
1960	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X		X	X	X	13			
1961	AAA	AAA	NNB	AAA			AAA	AAA	NNB	AAA	X	AAA	AAA	NNN	AAA	X					X	X	X	13			
1962	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X					X	X	X	13			
1963	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X					X	X	X	13			
1964	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X					X	X	X	13			
1965	AAA	AAA	AAA	AAA			AAA	AAA	BAA	AAA	X	AAA	AAA	AAA	AAA	X					X	X	X	13			
1966	S						S				S				S												

FORT NORMAN
(FN 864)

64.90 234.50

1.6 - 20.0 MHZ

1957		AW	H		A	A		A		A	X												8				
1958		AAA																									

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

FRASERBURGH
(15 065)

57.60 357.90

0.67-15.0MHZ

1948																						
1949																						
1950																						
1951																						

REPLACED BY INVERNESS

FREIBURG
(FR 048)

49.10 7.60

1.0-20.0MHZ

1946																						
1947																						
1948																						
1949																						
1950																						
1951																						
1952																						
1953																						
1954																						
1955																						
1956																						
1957																						
1958																						
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1965																						
1966																						
1967																						
1968																						
1969																						
1970																						
1971																						
1972																						
1973																						
1974																						

FROBISHER BAY
(FB J63)

63.80 291.40

1.6-20.0MHZ

1957																						
1958																						
1959																						

FUKAURA
(16 541)

40.60 139.90

1.0-17.0MHZ

1947																						
1948																						
1949																						

GARCHY
(GY 042)

47.30 3.10

0.25-20.0MHZ

1959																						
1960																						
1961																						
1962																						
1963																						
1964																						
1965																						
1966																						
1967																						
1968																						
1969																						
1970																						
1971																						

For symbols see page 33

1972				AAA AAA AAA AAA	X		14	
1973				AAA AAA AAA AA			14	

(GV 044)

44.60	9.00
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1.0-20.0MHZ

1.0-20.0PH									
1956					AA AAA AAA			2	
1957					AAA AAA AAA X	X		2	
1958					AAA AAA AAA X	X	X	3	
1959					AAA AAA AAA X	X		3	
1960					AAA AAA AAA X	X		5	
1961					AAA AAA AAA X	X		5	
1962					AAA AAA AAA X	X		5	
1963					NNN BAA AAA X	X		5	
1964					AAA AAA AAA X	X		5	
1965					AAA AAA AAA X	X		5	
1966					AAA AAA AAA X	X		5	
1967					AAA AAA AAA X	X		5	
1968					AAA AAA AAA X	X		5	
1969					AAA AAA AAA X	X		5	
1970					AAA AAA AAA	X		5	
1971					BBA AAA AAA	X	X	5	
1972					AAA AAA AAA	X		5	
1973					BBA AAA AAA	X		5	
					AAA AAA AAB			5	

CLOSED, 1975

(GO J69)

69.30 306.50

0,25-20,0MHZ

[illegible]

(GS J53)

54.30 299.67

0.0-16.0MHZ

1972				AA AAA AAA	X		17
1973				AAA AAA AAA AAA	X		17
1974				AAA AAA AAA AA			17

(GK 156)

56.15 44.28

1.0-18.0MHZ

1.0-18.0FFA																
1958	A	AAA	AAA	AAA	A	AAA	AAA	AAA		A	AAA	AAA	AAA	X	X	14
1959	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	3
1960	WWW	WWW	WWW	WWW		ABA	ANA	AAA	X		ABA	ANA	AAA	X	X	14
1961	WWW	WWW	WWW	WWW	ABA	AAA	BBB	AAA	X	ABA	AAA	BBB	AAA	X	X	14
1962	WWW	WWW	WWW	WWW	AAA	BBB	AAA	BBB	X	AAA	BBB	AAA	BBB	X	X	14
1963	WWW	WWW	WWW	WWW	BBB	AAA	BBB	AAA	X	BBB	AAA	BBB	AAA	X	X	14
1964	WWW	WWW	WWW	WWW	AAA	AAA	BBB	ABA	X	AAA	AAA	BBB	ABA	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 MEDIAN BY CHARACTERISTIC				PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND	HR. VALUES	MEDIAN	MAG. TAPE		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		(GR 13L)										0.5-15.0MHZ																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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GRAND BAHAMA
(GB 926)

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1.0-25.0MHZ

GRAZ
(GZ 146)

47.10	15.50																									
1947															MMM	MMM	MMM	MMM					5			
1948															AAA	AAA	AAA	AAA					4			
1949															MMM	MMM	MM	H					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	AAA	AAA					2			
1958															AAA	AAA	AAA	AAA	X				1			
1959															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	X				2			
1964						WWW	WWW	WWW	WWW	X					AAA	AAA	AAA	AAA	X				2			
1965						WWW	WWW	WWW	WWW	X					AAA	AAA	AAA	AAA	X				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					AAA	AAA	AAA	AAA	X				1			
1969						WWW	WWW	WWW	WWW	X					AAA	AAA	AAA	AAA	X				1			
1970						WWW	WWW	WWW	WWW	X					AAA	AAA	AAA	AAA	X				1			
1971						WWW	WWW	WWW	WWW	X					AAA	AAA	AAA	AAA	X				1			
1972						WWW	WWW	WWW	WWW	X					AAA	AAA	AAA	AAA	X				1			
1973															AA	AAA	AAA	AAA	X				1			
1974						WWW	WWW	WWW	WWW	X					AAA	AAA	AA	AAA	X				1			
1975															AA				X				1			

2.0-13.0MHZ

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

13.50 144.87
GUAM
(17 513)

1.0-25.0MHZ

1.0-25.0MH														
1944									B				7	
1945	BNN NNN NNN NNA								BNN NNN NNN NNA X				7	
1946	AA								AAA AAA AAA AAA X				9	
1947	A AAA AAA AAA								AAA AAA AAA AAA X				12	
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				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		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	

32.82 34.98

HAIFA
(HA 132)

1.0-25.0MHZ

1960		B	B			B	BBB																
1961						BBB	BBB	BB															

18.30 109.30

HAINAN IS
(18 419)

1942													M	MMM	MMM					2			
1943													MMM	MMM	S					2			

-75.50 333.40

HALLEY BAY
(HB A70)

0.65-25.0MHZ

1957		WWW	WWW			AAA	AAA	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	14		
1965						AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X		X	X	15		
1966						AAB	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X		X	X	15		
1967						BAA	AAA	AAA	ANN				AAB	AAA	AAA	AAA	X		X	X	15		
1968						NNN	NAA	AAB	A	A			BAA	AAA	AAA	ANN	X		X	X	13		
1969						AAB	AAA	AAA	BAA				NNN	NAA	AAA	AAA	X		X	X	13		
1970						AA	B	AAA	AAA				AAA	AAA	AAA	AAA	X		X	X	13		
1971						AAA	AAA	AAA	AA				AA	AAA	AAA	AAA			X	X	14		
1972						AAA	AAA	AA	AAA				AAA	AAA	AAA	AAA			X		14		
1973													AAA	AAA	AAA	AAA			X		14		
1974													AAA	AA	AM	A	M				14		
1975													MMM			MMM					3		
																					3		

30.70 114.30

HANKOW
(19 432)

1.0-16.0MHZ

1941																							
1943																							
1944																							

43.70 287.80

HANOVER
(HN J44)

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

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

HEISS IS
(BT 280)

80.60 58.00

1.0-10.0MHZ

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									
1944															MMM	MMM	MMM	MMM									
1945															AAA	AAA	AAA	AAA									
1946															AAA	AAA	AAA	A A									
1947															AAA	AAA	AAA	AAA									
1948															AAA	AAA	AAA	AAA									
1949															AAA	AAA	AAA	AAA									
1950															AAA	AAA	AAA	AAA									
1951															AAA	AAA	AAA	AAA									
1952															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															AAA	AAA	AAA	AAA									
1958															AAA	AAA	AAA	AAA									
1959															AAA	AAA	AAA	AAA									
1960															AAA	AAA	AAA	AAA									
1961															AAA	AAA	AAA	AAA									
1962															AAA	AAA	AAA	AAA									
1963															AAA	AAA	AAA	AAA									
1964															AAA	AAA	AAA	AAA									
1965															AAA	AAA	AAA	AAA									
1966															AAA	AAA	AAA	AAA									
1967															AAA	AAA	AAA	AAA									
1968															AAA	AAA	AAA	AAA									
1969															AAA	AAA	AAA	AAA									
1970															AAA	AAA	AAA	AAA									
1971															AAA	AAA	AAA	AAA									
1972															AAA	AAA	AAA	AAA									

HERMANUS
(HE 13M)

-34.42 19.23

1.0-15.0MHZ

1971																											
1972																											
1973																											
1974																											
1975																											

REPLACED CAPETOWN

HIRAISC
(20 536)

36.40 140.60

1.0-16.0MHZ

1936																											
1937																											
1938																											
1940																											
1941																											
1942																											
1943																											
1944																											
1945																											

HIRATSUKA
(21 533)

35.30 139.30

1940																											
1941																											
1942																											
1943																											
1944																											
1945																											

HOBART
(HO 54K)

-42.90 147.30

1.0-20.0MHZ

1945																											
1946																											
1947																											
1948																											
1949																											
1950																											
1951																											

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 MEDIAN BY CHARACTERISTIC				PUNCHED CARDS		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

HOBART (Continued)

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										AAA	AAA	AAA	AAA	X							13				
1958	WWW	WWW	WWW	W						AAA	AAA	AAA	AAA	X							13				
1959										AAA	AAA	AAA	AAA	X							8				
1961										AAA	AAA	AAA	AAA	X							3				
1962										AAA	AAA	AAA	AAA	X							3				
1963	AAA	AAA								AAA	AAA	AAA	AAA	X							3				
1964										AAA	AAA	AAA	AAA	X							11				
1965										AAA	AAA	AAA	AAA	X							11				
1966										AAA	AAA	AAA	AAA	X							5				
1967										AAA	AAA	AAA	AAA	X							5				
1968										AAA	AAA	AAA	AAA	X							5				
1969										AAA	AAA	AAA	AAA	X							5				
1970										AAA	AAA	AAA	AAA	X							7				
1971										AAA	AAA	AAA	AAA	X							7				
1972										AAA	AAA	AAA	AAA	X							6				
1973										AAA	AAA	AAA	AAA	X							6				
1974										AAA	AAA	AAA	AAA	X							6				
1975										AAA	AAA	AAA	AAA	X							6				

HOLLANDIA
(HL 50K)

-2.50 140.80

1.4-20.0MHZ

1945	A	AA								AA											10				
1957																					10				
1958										AAA	AAA	AAA	ABE	X							11				
1959										AAS				X							12				

HONG KONG
(HK 423)

22.33 114.20

1.0-22.0MHZ

1969	AAA	ABE	BA	WWW	WWW	WWW	WWW	ABA	ABE	AAA	BAE	X	X	9
1970	A	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	X	9
1971	AAA	AAA	ABE	AAA	AAA	AAA	AAA	AA				X		11
1972	AAA	AAA	AAA	AAA										
1973	AAA	AAA	AAA											

HUANCAYO
(HU 91K)

-12.00 284.70

0.25-20.0MHZ

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										AAA	AAA	AAA	AAA								6				
1944										AAA	AAA	AAA	AAA								6				
1945										AAA	AAA	AAA	AAA								6				
1946										AAA	AAA	AAA	AAA								6				
1947										AAA	AAA	AAA	AAA								6				
1948	AAA	A	E	AA	AAA					AAA	AAA	AAA	AAA								9				
1949	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA								9				
1950	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA								13				
1951	AAA	AAA	AA	AAA						AAA	AAA	AAA	AAA								13				
1952	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA								17				
1953	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA								17				
1954	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA								17				
1955	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA								17				
1956	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA								12				
1957	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA								13				
1958	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	X							13				
1959	ABN	BA	AAA	AAA	AAA					ABN	BA	AAA	AAA	X							13				
1960	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	X							13				
1961	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	X							13				
1962	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	X							13				
1963	AAA	AAA	AAA	BA	AAA					AAA	AAA	AAA	BA	X							13				
1964	AAA	ABA	AAA	AAA	AAA					AAA	ABA	AAA	AAA	X							10				
1965	AAA	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	X							10				
1966	AAA	AAA	ABE	AAA	AAA					AAA	AAA	ABE	AAA	X							10				
1967	BBA	ABA	ABA	AAA	AAA					BBA	ABA	ABA	AAA	X							10				
1968	AAB	ABA	AAA	ABA	AAA					AAB	ABA	AAA	ABA	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 MEDIAN BY CHARACTERISTIC				MICRO	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

JOHANNESBURG (Continued)

1962															AAA	AAA	AAA	AAA	X				12				
1963															AAA	AAA	AAA	AAA	X				10				
1964	B				BB					WWW	WWW	W			AAA	AAA	A						10				
1965	BB				B																						
1966					BBB																						
1967																											
1968															AAA	AAA	AAA	AAA					12				
1969	B		B	BB						WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA					13				
1970										WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA					13				
1971															AAA	AAA	AAA	AAA					13				
1972															AAA	AAA	AAA	AAA					13				
1973															AAA	AAA	AAA	AAA					13				
1974															AAA	A		A	AMM				13				
1975															M												

JULIACA
(JU J1N)

-15.50 289.80

1.0-25.0MHZ

1959	B	ABS			B	ABS		X		B	ABS				B	ABS		X		X	X	X	13				
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JULIUSRUH/RUGEN
(JR 055)

54.60 13.40

0.5-20.0MHZ

1957																											
1958										WWW	WWW	WWW	WWW														
1959										WWW	WWW	WWW	WWW														
1960																											
1961										WWW	WWW	WWW	WWW														
1962										WWW	WWW	WWW	WWW														
1963										WWW	WWW	WWW	WWW														
1964										WWW	WWW	WWW	WWW														
1965										W	WWW	WWW	WWW														
1966										WWW	WWW	WWW	WWW														
1967										WWW	WWW	WWW	WWW														
1968										WWW	WWW	WWW	WWW														
1969										WWW	WWW	WWW	WWW														
1970										WWW	WWW	WWW	WWW														
1971										WWW	WWW	WWW	WWW														
1972																											
1973																											
1974																											

KALININGRAD
(KL 154)

54.70 20.62

1.0-20.0MHZ

1972					BB					BB																		
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KAMINOGE
(22 532)

35.60 139.60

1.0-16.0MHZ

1945															BMM	MME	BBS			X			2				
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KARAGANDA
(KR 250)

49.82 73.08

1.0-18.0MHZ

1964																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</
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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 MEDIAN BY CHARACTERISTIC				MICRO	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

-49.35 70.24 KERGUELEN (KG 24R) 0.25-20.0MHZ

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															AAA	AAA	AAA	AAA	X		X					12	
1965															BAA	AAE	ABN	NNN	X		X					12	
1966						WWW	WWW	WWW	WWW						NNN	AAA	AAA	AAA			X	X				12	
1967						WWW	WWW	WWW	WWW						BAA	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	AAA								14	
1973															AAA	AAA	AAA									14	

-29.20 182.10 KERMADEC (KC 62R) 1.8-12.8MHZ

1943																M	MMM	MMM								8	
1944															MMM	MAA	AAA	AAA								10	
1945															AMM	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															BAE	NNN	NNN	NNN			X					3	
1970															NBA	ABB	AAA	AAA			X	X				3	
1971															ABB	BBB	AAA	BBB			X	X				3	
1972															AAB	AAA	AAB	S			X					3	

48.50 135.10 KHABAROVSK (KB 548) 1.0-20.0MHZ

1959																QQ	QQQ									
1960															QQQ	QQQ	QQN	QQQ								
1961															AAA	AAA	ABA	AAA	X		X					14
1962															AAA	AAA	ABB	AAA	X		X					14
1963															BBA	ABA	AAA	AAA	X		X					14
1964	W	W	WW		W	WWW									AAA	AAA	ABA	AAA	X		X					14
1965	WWW														AAA	AAA	AAA	AAA	X		X					14
1966	WWW	WWW	WWW	WWW											ABA	ABA	AAA	AAA	X		X					14
1967	WWW	WW			WWW										AAA	AAA	NNN	NNA	X		X					14
1968	W	WW	WWW	WWW											NBN	NAA	AAA	AAA	X		X	X				14
1969	WWW	WWW	WW	WW											AAA	AAA	AAA	AAA	X		X	X				14
1970	WW	WWW	WWW	WW											AAA	AAA	AAA	AAA	X		X	X				14
1971	WW	WWW	WWW	W											AAA	AAA	AAA	AAA	X		X	X				14
1972	WWW	W		WB	WWW										AAA	AAA	AAA	AAA	X		X					14
1973	WWW	WWW	WWW	WWW											AAA	AAA	AAA	AAA	X		X					14
1974	WWW	WW		W	WWW										AAA	AAA	AAA	AAA	X							14
1975	W	W													AA				X							14

15.55 32.58 KHARTOUM (23 115) 0.67-25.0MHZ

1952															A	AA	A	A	ABA							4
1953															BAB	MM	MAA	BAB								8
1954															MES											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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

KIEV
(KV 151)

50.72 30.30

1.0-20.0MHZ

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	AAA	AAA	X					AAA	AAA	AAA	AAA	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

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									20				
1961										AAA	AAA	AAA	AAA	X						X			20				
1962										AAA	AAA	AAA	AAA	X						X			20				
1963										AAA	AAA	NNN	NNN	X						X			20				
1964										AAA	AAA	NNN	NNN	X						X			20				
1965										BAN	NNA	AAB	AAA							X			20				
1966										ABE	EEA	NNA	AAA							X	X		20				
1967										AAA	AAA	NAB	NAA							X			20				
1968										AAA	BNA	AAA	ABN							X	X		14				
1969										NBB	AAA	AAA	AAA							X	X		9				
1970										ABA	AAE	AAA	AAA							X	X		9				
										AAA	AAA	AAA								X	X		11				

KIRUNA
(KI 167)

67.84 20.42

0.6-15.0MHZ

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	AAA	AAA										11				
1955										AAA	AAA	AAA	AAA										11				
1956										AAA	AAA	AAA	AAA										10				
1957										AAA	AAA	AAA	AAA	X									11				
1958										AAA	AAA	AAA	AAA	X									12				
1959										AAA	AAA	AAA	AAA	X									12				
1960										AAA	AAA	AAA	AAA	X									12				
1961										AAA	AAA	AAA	AAA	X									12				
1962										AAA	AAA	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			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						X	X		18				
1974										AAA	AAA	AAA	AAA	X						X	X		18				
1975										AAA	AAA	AAA	AAA	X						X	X		18				

KJELLER
(OS 059)

60.00 11.10

0.7-25.0MHZ

1945																							5				
1946										A	A	A											4				
1948																							7				
1949										AAA	AAA	AAA	AAA										8				
1950										AAA	AAA	AAA	AAA										8				

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			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							9	
1958					WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA	X						11	
1959					WS					AS	AAA	AAA	AAA	AAA						11	

KOCHEL
(24 064)

47.70 11.40

1.2-10.4MHZ

1945										A										3	
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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						11	
1958	B				WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA	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	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										AAA	AAA	AAA	AAA	X			X			9	
1968										AAA	AAA	AAA	AAA	X			X			11	
1969										AAA	AAA	AAA	AAA	X			X	X		9	
1970										AAA	AAA	AAA	AAA	X			X	X		9	
1971										AAA	AAA	AAA	AAA	X			X	X		9	
1972										ABA	AAA	AAA	AAA	X			X	X		9	
1973										AAA	AAA	AAA	AAA	X			X	X		11	
1974										AAA	A									11	

KOKUBUNJI
(25 535)

35.70 139.50

1.0-16.0MHZ

1943										MM	MM										2	
1944										MMM	MM	MM	BME				X			2		

REPLACED BY TOKYO

KWAJALEIN
(26 609)

9.05 167.20

1945										MM											7	
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LANCHOW
(27 336)

36.10 103.80

2.4-16.0MHZ

1946																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

48.45 356.73

LANNION
(LN 047)

1.2 - 17.0 MHz

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

0.25-20.0M																										
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	NNB	NNN	NNB X	NNN	NNN	NNN	13						
1960	AAA	BBA	AAA	AAA	AAA	BBA	AAA	AAA X	AAA	BBA	AAA	AAA	AAA	BBA	AAA	AAA X	X	X	X	13						
1961	BAB	NNN	UNN	NNN	BAB	NNN	UNN	NNN X	BAB	NNN	UNN	NNN	NNN	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	BBB X	X	X	X	13						
1963	UAA	AAA	BBN	NNN	BAB	AAA	BBN	NNN X	BAB	AAA	BBN	NNN	NNN	BBN	NNN X	X	X	X	13							
1964	NAA	BAM	BAA	ABB	NAB	BBB	BBA	BBB X	NAA	BBB	BBU	BBB	NNN	BBB	NNN X	X	X	X	13							
1965	AAA	BBA	AAB		AAA	BBA	AAB		AAA	BBA	UAB				AAA X	X	X	X	13							
1966					BB				BB				A				X	X	X	13	A					
1967																					12	AAA AAA AA				
1968																					10					
1969																					10					
1970	B																									

OPERATED AT JULIACA MARCH-NOVEMBER 1959

LA QUIACA
(LQ J2K)

-22.10 294.40

1.3-18.0MHz

												1.3-18.0MH																
1958																												
1959															S		B	AA8	X							12		

LENINGRAD
(LD 160)

59.95 30.70

0.5-20.0MHz

1945																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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LEYTE
(28 411)

11.00 125.00

1.6-16.0MHz

														1.E-16.0MH			
1945	A AAA																
1946	AAA AAA AAA AAA								A AAA AAA								
1947	AAA AAA AAA AAA								AAA AAA AAA AAA								
1948	AAA AAA S								A AA				8				
For symbols see page 22														6			
														6			
														5			

For symbols see page 33

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

51.60 10.10

LINDAU
(LI 050)

1.0-16.0MHZ

1947																							
1948																							
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1951																							
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1972					WWW	WWW	WWW WWW																
1973					WWW	WWW	WWW WWW																
1974					WWW	WWW	W																

LITTLE AMERICA
(LA 77Q)

-78.20 197.80

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 X		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

1956													9	
1957				WWW WWW				A					11	
1958				WWW WWW				AAA AAA	AAA X				11	
1959				WWW WWW	WWS			AAA AAA	ABS X				11	

LOSHAN
(29 329)

29.50 103.70

1946								AAA AS				10	
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LULEA
(LU 165)

65.60 22.10

0.65-25.0MHZ

1951														
1952														7
1953														8
1954														8
1955														11
1956														8
1957														10
1958	ABA AAA	BA					W WW							10
1959	AAA AAA	AAA AAA			WWW	WWW	WWW WWW							10
1960	B													12
1961	AAA AA													12
1962	AAA AAA	BA AAA			WWW	WWW	WWW							12
1963	AAA B	BA												12
1964							W WWW WW							12
1965					WW	W WWW N W								12
1966	A AAA	AAA AAA			WW	W WWW W								12

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

LULEA (Continued)

1967																										
1968																										
1969																										

LWIRO
(LW 10K)

-2.30 28.80

1.25-20.0MHZ

1952																										
1953																										
1954																										
1955																										
1956																										
1957																										
1958																										
1959																										
1960																										
1961																										
1962																										
1963																										
1964																										
1965																										
1966																										
1967																										

LYCKSELE
(LY 164)

64.70 18.80

0.33-20.0MHZ

1957																										
1958																										
1959																										
1960																										
1961																										
1962																										
1963																										
1964																										
1965																										
1966																										
1967																										
1968																										
1969																										
1970																										
1971																										
1972																										
1973																										
1974																										
1975																										

MACAU
(MC 422)

22.20 113.60

1.6-20.0MHZ

1958																										
1959																										
1960																										
1961																										

MACQUARIE IS
(MQ 55M)

-54.50 159.00

1.0-13.0MHZ

1950																										
1951																										
1952																										
1953																										
1954																										
1955																										
1956																										
1957																										
1958																										

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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

MADRAS
(MD 313)

13.10 80.30

2.5-20.0MHZ

1944																												
1945															MMM	MMM	MMM	MMM					2					
1946															MMM	MMM	MMM	MMM					4					
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	AAA	AAA					3					
1956															MMM	MMM	MMM	MMM					3					
1957															AAA	AAA	AAA	AAA	X	X	X		3					
1958															AAA	AAA	AAA	AAA	X	X	X		5					
1959															AAA	AAA	AAA	AAA	X	X	X		5					
1960															AAA	AAA	ABB	BBB	X	X	X		5					
1961															ABA	EAA	AAA	AAB	X	X	X		5					
1962															ABA	EAA	EAA	AAA		X	X		5					
1963															AAA	AAA	AAB	BBB		X			5					
1964															AAA	BBB	NNN	NNN		X			5					
1965															NNN	NNN	NNN	NNN										
1966															NNN	NBB	EBB	BNN	X				3					

MAKASSAR
(30 40N)

-5.20 119.50

1.0-16.0MHZ

1944															MMM	MMM	MMM	BS					5					
------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-----	-----	-----	----	--	--	--	--	---	--	--	--	--	--

MANILA
(MN 414)

14.60 121.00

1.0-25.0MHZ

1944															B	MMM	PMM	MBS					5					
1946																												
1947																AA	S						12					
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			11					
1968															AAA	AAA	AAA	AAA	X	X			14					
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	X		16					
1973															AAA	AAA	AAA	AAA		X			18					
1974															AAA	AAA	AAA	AAA		X			18					
1975															AAA	A				X			18					

REPLACED BAGUIO

MARION IS
(MR 140)

-46.87 37.85

1.6-19.0MHZ

1957																												
1958															BBB	NBS	AAB	BBB	X				12					
																			X				6					

MAUI
(MA 720)

20.30 203.50

0.25-20.0MHZ

1944															A	AAA	AAA	AAA		X			14					
1945															AAA	AAA	AAA	AAA		X			10					
1946															AAA	AAA	AAA	AAA		X			9					
1947															AAA	AAA	AAA	AAA					12					
1948															AAA	AAA	AAA	AAA		X			12					
1949															AAA	AAA	AAA	AAA		X			12					
1950															AAA	AAA	AAA	AAA		X			12					
1951															AAA	AAA	AAA	AAA		X			12					
1952															AAA	AAA	AAA	AAA		X			12					
1953															AAA	AAA	AAA	AAA		X			12					
1954															AAA	AAA	AAA	AAA					12					
1955															AAA	AAA	AAA	AAA					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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

MAUI (Continued)

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		WWW	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	WWW	WWW	WWW	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	13			
1966	AAA	AAA	AAA	AAA		WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	15			
1967	AAA	AAA	AAA	AAA		WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	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	X	15			
1969	AAA	AAA	AAA	AAA		WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	15			
1970	AAA	AAA	AAA	AAA		WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	18			
1971	AAA	AAA	AAA	AAA		WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	18			
1972	AAA	AAA	AAA	AAA		WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	18			
1973	AAA	AAA	AAA	AAA		WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	18			
1974	AAA	AAA	AAA	AAA		WWW	WWW	WWW	WWW	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	18			
1975	AAA	A				WWW	W				AAA	A								X	X			18			

MAWSON
(MW 26P)

-67.60 62.90

1.6-20.0MHZ

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	NNN	AAA	AAA	X		X						11				
1961					AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X	X					11				
1962					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	WWW	HBW		AAA	AAA	AAA	AAA			X						11				
1966					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	AAA	AAA	AAA			X						12				
1973										AAA	AAA	AAA	AAA			X						12				
1974										AAA	AAA	AAA	AAA			X						12				
1975										A						X						12				

MAYNARD
(MY J43)

42.43 288.55

1.5-12.0MHZ

1970																X	X					17				
1971																X	X					17				
1972																X						17				
1973																X						17				
1974																X						17				
1975																X						17				

REPLACED BILLERICA

MEANOOK
(ME 855)

54.60 246.70

1.6-20.0MHZ

1957																										
1958	AAA	AAA	AAA	AAA						B					B					A	X		10			
1959	WS					BAA	AAA	AAA	AAA						BAA	AAA	AAA	AAA				X	8			
						AS									AS								7			

MEGURO
(31 534)

35.60 139.70

1934																										
1935																										
1936																										
1937																										
1938																										
1939																										
1940																										

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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG TAPE		JFM	AMJ	JAS	OND

19.40 260.30

MEXICO CITY
(MX 919)

0.25-20.0MHZ

1958										BBB	NBN	BBB																
1959					AA	BAA	AAA	AAA	X	AAA	BAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X		13					
1960					ABA	AAA	AAA	AAA	X	ABA	AAA	AAA	AAA		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					
1964					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X		13					
1965					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X		X		13					
1966					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X		13					
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					
1969					AAA	AAA	BAA	AAA	X	AAA	AAA	BAA	AAA		AAA	AAA	AAA	AAA	X		X		13					
1970					AAA	ABA	BAA	AAA	X	AAA	ABA	BAA	AAA		AAA	AAA	AAA	AAA	X		X		14					
1971					AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X		X		16					
1972					BAA	AAA	AAA	AAA	X	BAA	AAA	AAA	AAA		BAA	AAA	AAA	AAA			X		16					
1973					AAA	ABB	BBB	BBB	X	AAA	ABB	BBB	BBB		AAA	AAA	AAA	AAA			X		16					
1974					BBB	BBB	BBB	BBB		BBB	BBB	BBB	BBB		AAA	AAA	AAA	AAA			X		16					
1975					BBB					BBB					AAA						X		16					

52.20 21.20

MIEDZESZYN
(MZ 152)

1.0-18.0MHZ

1958																												
1959					WWW	W				WWW	WWW	WWW	WWW															
1960					WWW	W				WWW	WWW	WWW	WWW															
1961																												
1962																												
1963																												
1964																												
1965																												
1966																												
1967																												
1968																												
1969																												
1970																												
1971																												
1972																												
1973																												
1974																												

42.60 288.50

PILLSTONE HILL
(MH J45)

1.0-12.0MHZ

1963																												
1964					AAA	AAA	AAA	AAA																				
1965					AAA	AAA	AAA	AAA																				
1966					NAA	AAA	AAA	AAA																				
1967					AAA	AAA	AAA	AAA																				
1968					BAA	ABA	AAA	AAA																				
1969					AAA	BBB	AAA	AAA																				
1970					AAA	AAA	AAA	AAA																				
1971					AAA	AAA	AAA	AAA																				
1972					AAA	AAA	AAA	AAA																				
1973					AAA	AAA	AAA	AAA																				
1974					AAA	AAA	BAA	AAA																				
1975					AAA																							

-66.50 93.00

MIRNY
(MI 360)

1.0-13.0MHZ

1957																												
1958					WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X		X		12					
1959					WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X		X		14					
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	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

YEAR	IONOGRAMS				f-PLOTS				MICRO	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO	TABLES OF DAILY/HOURLY VALUES AND MEDIANS BY CHARACTERISTIC				PUNCHED CARDS		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

MIRNY (Continued)

1969	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X						
1970	WWW	WWW			AAA	AAA			X						AAA	AAA			X						
1973	S				S										S										

MOSCOW
(MO 155)

55.50 37.30

1.0-20.0MHZ

1944															M	MM	MM	MM							1
1945															AMA	AAA	AAA	AAA							5
1946															AAA	AAA	AAA	AAA							8
1956															AAA	AAA	AAA	AAA							14
1957			WWW	WWW				AAA	AAA						MMM	MMM	AAA	AAA	X						14
1958	WWW	WWW	WWW	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	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	AAA	AAA	AA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	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	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	X				14
1974	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X				14

MUNDARING
(MU 43K)

-31.99 116.31

1.6-20.0MHZ

1959															AAA	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	X					7
1969															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	X				7
1973															AAA	AAA	AAA	AAA	X	X					6
1974															AAA	AAA	AAA	AAA	X	X					6
1975															AAA	AAA	AAA	AAA	X	X					6

REPLACED WATHEROO

MURMANSK
(MM 168)

69.00 33.00

1.0-20.0MHZ

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	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				15
1961	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X				15
1962	WWW	WWW	WWW	WWW	AAA	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	AAA	X	X	X				15
1964	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X				15
1965	WWW	B	W	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X				15
1966	BWB	BWB	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	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X				15
1969	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X				15
1970	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X				15
1971	WWW	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X				15
1972	WWW	WWW	W	WWW	AAA	AAA	A	A	X						AAA	AAA	A	A	X	X					15
1973									X										X						15
1974	B				AA				X										X						15
1975									X						A				X						10

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

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIAN BY CHARACTERISTIC				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	MEDIAN			JFM	AMJ	JAS	OND

NHA TRANG
(33 412)

12.25 109.20

1.25-20MHZ

1951															AAA	AAA	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	AAA	AAA	AAA	X	X		5				
1968															AAA	AAA	AAA	AAA		X	X	5				
1969															AAA	AAA	AAA	AAA		X	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	X	7				
1974															AAA	AAA	AAA	AAA		X		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

1.0-16.0MHZ

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	AAA	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	QNO									QQQ	QQQ	QQQ	QNO								
1971			Q	Q	Q	Q									Q	Q	Q	Q								
1972			Q	QQQ	Q8Q		X			B		X			Q	QQQ	QQQ					14				

NURMIJARVI
(NU 159)

60.50 24.60

1.0-16.0MHZ

1957															AAA	AAA	AAA	AAA	X			10				
1958															AAA	AAA	AAA	AAA	X			10				
1959															AAA	AAA	AAA	AAA	X			10				
1960															AAA	AAA	AAA	AAA	X			10				
1961															AAA	AAA	AAA	AAA	X			11				
1962															AAA	AAA	AAA	AAA	X	X		11				
1963															AAA	AAA	AAA	AAA	X	X		11				

YEAR	IONOGRAMS				f-PLOTS				ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				TABLES OF DAILY/HOURLY VALUES AND MEDIAN BY CHARACTERISTIC				PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	MICRO.	JFM	AMJ	JAS	OND	MICRO.	HR. VALUES	MEDIAN	MAG. TAPE	JFM	AMJ		JAS	OND		
NURMIJARVI (Continued)																								
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																							
1946	AAA	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	NNN	NAA		X			5				
1950	B	NNN	NNA	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		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				
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		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			A
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				A
1967	AAA	AAA	AAA	AA	AAA	AAA	AAA	AAE	X	AAA	AAA	AAA	AAE		AAA	AAA	AAA	AA	X	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	X	13				
1969	NNB	NNN	NNN	BNA	NNB	NNN	NNN	BNB		NNB	NNN	NNN	ANB		NNA	NNN	NNN	NNA	X	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	X	13				
1971	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X	13				
1972	AAA	AAE	PPP	PPP	AAA	AAA	AAA	AAA		AAA	AAE			X		A	AAA	AAA	X	X			12				
1972	AAA	AAE	PPP	PPP	AAA	AAA	AAA	AAA		AAA	AAE			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	AAA	AAA	AAA	X				14				

OTTAWA
(OT 945)

45.40 284.10																0.25-20.0MHZ											
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									12
1950															AAA	AAA	AAA	AAA									13
1951															AAA	AAA	AAA	AAA									14
1952															AAA	AAA	AAA	AAA									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									10
1958															AAA	AAA	AAA	AAA									12
1959															AAA	AAA	AAA	AAA									11
1960															AAA	AAA	AAA	AAA									10
1961															AAA	AAA	AAA	AAA									10
1962															AAA	AAA	AAA	AAA									10
1963															AAA	AAA	AAA	AAA									10
1964															AAA	AAA	AAA	AAA									10
1965															AAA	AAA	AAA	AAA									10
1966															AAA	AAA	AAA	AAA									11
1967															AAA	AAA	AAA	AAA									11
1968															AAA	AAA	AAA	AAA									11
1969															AAA	AAA	AAA	AAA									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			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	MAG. TAPE	JFM	AMJ

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	BAA	AAA	BAA	BAA	BAA	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																				X	X	12				
1967																				X	X	12				
1968																				X	X	12				
1969																				X	X	12				
1970																				X	X	12				
1971																				X	X	13				
1972																				X	X	14				
1973																				X		14				

PALAU IS
(34 40T)

7.30 134.50

1939																						1				
1940																						1				
1941																						5				
1942																						5				
1943																						5				
1944																						5				

PALMYRA
(35 705)

5.38 197.82

1.0-18.0MHZ

1946				AA																		12				
1947	A	A	AAA	A	A	AAA																12				
1948	AAA	AAA	AAA	AAA	AAA																	12				
1949	AAA	AAA	AAA	AAA	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 X				AAA AAA AAA AAA				AAA AAA AAA X				X	X	X	13								
1959	S				S				S				S															

PARAMARIBO
(PM J86)

5.80 304.80

0.6-20.0MHZ

1957																							15			
1958																						12				
1959																						12				
1960																						12				
1961																						12				
1962																						12				
1964																						14				
1965																						14				
1966																						14				
1967																						14				
1968																						14				
1969																						14				
1970																						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 MEDIAN BY CHARACTERISTIC				MICRO	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

PARAMUSHIRO
(36 550)

50.10 155.30

1.0-16.0MHZ

1943																												
1944															MM								3					
															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 AAA 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															B B BA X													
1964															ABA ABA ABB BBA X													
1965															AAA AAA AAA ABB X													

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			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS	MAG. TAPE		JFM	AMJ	JAS	OND

POINT ARGUELLO (Continued)

1966	AAA	AAA	AAA	AAA	BAA	AAA	AUA	AAA	X	AAA	AAA	AAA	AAA	X									5	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	AAA	AAA	AAA						AAA	AAA	AAA	AAA	X									8				
1971	AAA	AAA	AAA	AAA					WWW	AAA	AAA	AAA	AAA	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	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

										1.6-17.0MHz																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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POPAYAN
(PP 902)

2.45 283.38

0.25-20.0MHZ

													0.25-20.0M																																
1970	BB BBA AAB AA										UU U																				13														
1971	B BB BBA																																												
1972	BB B BB															B BBB																				13									
1973	BBB BB 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

1961										BB	AAA	AAA	X			X	X					11				
1962										AAA	AAA	AAA	AAA	X			X					7				
1963				B						AAA	AAA	AAA	AAA	X			X					7				
1964										AAA	AAA	AAA	AAA	X			X					11				
1965										AAA	AAE	AAA	AAA	X			X					11				
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	NBN	BAA	AA	B			X	X				7				
1970										AAA	AAA	AAA	ANB				X	X				7				
1971										AAA	AAA	AAA	ABB				X	X				7				
1972										BAA	AA	AS					X	X				7				

PORTAGE LA PRAIRIE
(41 950)

49.90 261.70

1.2-16.0MHZ

1946																						12				
1947																						13				
1948																						13				
1949																						13				
1950																						13				
1951																						12				

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

-51.70 302.20 PORT STANLEY (PS J5J) 0.25 - 20.25 MHz

1945																												
1946																												
1947																												
1948																												
1949																												
1950																												
1951																												
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1964																												
1965																												
1966																												
1967																												
1968																												
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1970																												
1971																												
1972																												
1973																												
1974																												
1975																												

PRINCE RUPERT
(42 854)

54.30 229.70 1.0-10.0 MHz

1945																												
1946																												
1947																												
1948																												
1949																												
1950																												
1951																												
1952																												
1953																												
1954																												

PROVIDENYA
(PD 664)

64.40 186.60 1.0-18.0 MHz

1957																												
1958																												
1959																												
1960																												
1961																												
1962																												
1963																												
1964																												
1965																												
1966																												
1967																												
1968																												
1969																												
1970																												
1971																												
1972																												

PRUHONICE
(PQ 052)

50.00 14.56 1.0-18.0 MHz

1958																												
1959																												
1960																												

For symbols see page 33

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

PRUHNICE (Continued)

1961											AAA	AAA	AAA	AAA	X		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		10				
1969											AAA	AAA	AAA	AAA	X		X	X	10				
1970											AAA	AAA	AAA	AAA	X		X		10				
1971											AAA	AAA	AAA	ABB	X		X	X	10				
1972											NNA	AAA	ABA	AAA	X		X	X	10				
1973											AAA	AAA	AAA	AAA			X		10				
1974											AAA	AAA	AAA	AAA			X		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				11				
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	AAA	X		X			12				
1952	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	AAA	X		X			12				
1953	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	AAA	X		X			12				
1954	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	AAA	X					12				
1955	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	AAA	X					12				
1956	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	AAA	X					10				
1957	AAA	AAA	AAA	AAA				WB	AAA	AAA	AAA	AAA	AAA	X		X	X	X	13				
1958	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	AAA	X		X	X	X	13				
1959	AAA	AAA	AAA	AAA					AAA	AAA	AAA	AAA	AAA	X		X	X	X	8				
1960	AAA	AAA	AAA	AAA					A	AAA													
1961	AAA	AAA	AAA	AAA																			
1962	AAA	AAA	AAA	NBA																			
1963	AAA	AAA	S																				

QUETTA
(QT 230)

30.20 67.00

0.7-24.0MHZ

1957											MMM	MMM	MMM	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	NNN	MNN	NNN	X				12				

RABAT
(RT 034)

33.90 353.90

1.7-16.0MHZ

1958						WW	WWW	WWW	WWW	X									12				
1959										W	X								12				
1960						W					X								12				
1961																							
1962																							

RANGOON
(43 316)

16.80 96.50

1.0-16.0MHZ

1943											B	NNN	MMM						6				
1944											MMM	NNN	MMM	MMM					4				
1945											S												

For symbols see page 33

YEAR	IONOGRAMS				f-PLOTS				ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				TABLES OF DAILY/HOURLY VALUES AND MEDIAN 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			JFM	AMJ	JAS	OND

-21.20 200.20

RAROTONGA
(RA 72J)

1.0-22.0MHZ

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						WWW	WWW	WWW	WWW				AAA	AAA	AAA	AAA	X		X		14			
1967													AAA	AAA	AAA	ABA	X		X		14			
1968			BB										AAA	AAA	AAA	AAA	X		X		2			
1969													AAA	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				X		11			

RESOLUTE BAY
(RB 974)

74.70 265.10

0.25-20.0MHZ

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				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		10			
1964	AAA	AAA	A	B	ABA		AAA	AAA	ABB	BBA			AAA	AAA	AAA	BAA	X		X		11			
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	AAA	AAA	X		X	X	11			
1969	AAA	AAA	BAB	NNN		AAA	AAA	BAB	NNN	X			AAA	AAA	AAA	AAA	X		X	X	11			
1970	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA			X	X	11			
1971	AAA	AAA	AAA	ABA		AAA	AAA	AAA	ABA	X			AAA	AAA	AAA	ABA			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

1944	A	AAA	AAA	AAA									AA	AAA	AAA	AAA					12			
1945	AAA	AAA	A										AAA	AAA	A						10			
1950	AAA	AAA	AAA	AAA									AAA	AAA	AAA	AAA					12			
1951	AAA	AAA	AAA	AAA									AAA	AAA	A	A	AAA				12			
1952	AAA	AAA	AAA	AAA									AAA	AAA	AAA	AAA	X				12			
1953	AAA	AAA	AAA	AAA									AAA	AAA	AAA	AAA	X		X		12			
1954	AAA	AAA	AAA	AAA									AAA	AAA	AAA	AAA	X				12			
1955	AAA	AAA	AAA	AAA									AAA	AAA	AAA	AAA	X				12			
1956	AAA	AAA	AAA	AAA									AAA	AAA	AAA	AAA	X				9			
1957	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X		X	X	12			
1958	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	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 MEDIAN BY CHARACTERISTIC				MICRO	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

REYKJAVIK (Continued)

1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	X	X	X	13				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	X	X	X	13				
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	X	X	X	13				
1963	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	X	X	X	13				
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA	X	X	X	X	13				
1965	S				S				X	S				X	S				X	X	X	X	13				

RCME
(RO 041)

41.90 12.52

1.4-15.0MHZ

1951										AAA	AA												9				
1957																							8				
1958																							9				
1959																							9				
1960																							9				
1961																							9				
1962																							9				
1963																							9				
1964																							9				
1965																							9				
1966																							9				
1967																							9				
1968																							9				
1969																							9				
1970																							9				
1971																							11				
1972																							11				
1973																							11				
1974																							11				
1975																							11				

ROSTOV
(RV 149)

47.20 39.68

1.0-18.0MHZ

1956																												
1957																												
1958																												
1959																												
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1972																												
1973																												
1974																												

SALEKHARD
(SD 266)

66.50 66.70

1.0-18.0MHZ

1957																												
1958																												
1959																												
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1961																												
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1972																												
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			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS	MAG. TAPE		JFM	AMJ	JAS	OND

SAO PAULO (Continued)

1962					WW			W	WWW						AAA	AAA	ABA	BBA	X		X	X	13				
1963								W							BBA	NBE	BAM	MBB		X	X		13				

SCHWARZENBURG
(SZ 045)

46.60 6.70

0.25-20.0MHZ

1950																												
1951																												
1952																												
1953																												
1954																												
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1969																												
1970																												
1971																												
1972																												

SCOTT BASE
(SB 67Q)

-77.90 166.80

1.0-22.0MHZ

1957																												
1958																												
1959																												
1960																												
1961																												
1962																												
1963																												
1964																												
1965																												
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1972																												
1973																												
1974																												

SEATTLE
(SE 847)

47.75 237.58

1.0-25.0MHZ

1958																												
1959																												
1960																												

SEOUL
(SU 437)

37.39 126.95

1.0-20.0MHZ

1967																												
1968																												
1969																												
1970																												
1973																												
1974																												

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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

37.90 139.30 SHIBATA (44 537) 1.0-17.0MHZ

1946															AAA	AAA	AAA	AAA	AA		X		10				
1947															AAA	AAA	AAA	AAA			X		10				
1948															AAA	AAA	AAA	AAA			X		10				
1949															AAA	AAA	AAA	S			X		11				

49.30 143.00 SHIKUKA (45 549)

1940																			BMB				1				
1941															MMM	MMM	MMM	MMB					5				
1942															S												

44.80 34.10 SIMFEROPOL (SF 144) 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					

1.40 103.70 SINGAPORE (SI 301) 0.67-25.0MHZ

1943																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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51.50 359.43 SLOUGH (SL 051) 1.0-20.0MHZ

1930															AA	AAA							2				
1931															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	AAA	AAA	X				6				
1940															AAA	AAA	AAA	AAA	X				8				
1941															AAA	AAA	AAA	AAA	X				8				
1942															AAA	AAA	AAA	AAA	X				10				

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		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									AAA	AAA	AAA	AAA					4				
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				6				
1960			W												AAA	AAA	AAA	AAA	X		X		6				
1961															AAA	AAA	AAA	AAA	X				6				
1962															AAA	AAA	AAA	AAA	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			AAA	AAA	AAA	AAA	X		X		12				
1966			WWW	WWW	WWW	WWW			WWW	WWW	WWW	WWW		AAA	AAA	AAA	AAA	X		X		13					
1967			WWW	WWW	WWW	WWW			WWW	WWW	WWW	WWW			AAA	AAA	AAA	AAA	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	WWW			AAA	AAA	AAA	AAA			X		14				
1975			WWW						WWW	WWW	WWW	W			AAA	AAA	AAA	AAA					14				
															AA								14				

SLUTSK
(46 15I)

59.70 30.50

1945															AAA	AAA	AAA	AAA					6			
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SNANTON
(47 05D)

54.20 0.00

2.0-16.0MHZ

1944															AA								1			
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SODANKYLA
(SO 166)

67.40 26.60

1.0-16.0MHZ

1957																										
1958																										
1959																										
1960																										
1961																										
1962																										
1963																										
1964			WWW	WWW	WWW	WWW																				
1965			WWW	WWW																						
1966			WWW	WWW																						
1967																										
1968																										
1969																										
1970																										
1971																										
1972																										
1973																										
1974																										
1975																										

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 MEDIAN BY CHARACTERISTIC				PUNCHED CARDS		NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND	HR. VALUES	MEDIAN		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																			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			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	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	AA	NNB	AAA	ANA	AAA	NNB	AAA	ANB	X	AA	NNB	AAA	ANB		AA	NNE	AAA	AN	X	X	X	X				13
1964	AAA	AAA	AAA	ABA	B	AAA	AB	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	X				15
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	A		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X				15
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA			AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X	X				7
1968	ABB		B	BBS																						

SOYA SHIP
(XD)

-60.00 -0.00

1.0-20.0MHZ

1956																										10
1957															AAA	B		BA								9
1958																	BA	X								9
1959															B		AA	X								9
1960															BAA	B		BA	X							9
1961															AB	B		X								9
1962															BBA	BS		X								

ST JOHN'S
(SJ J47)

47.60 307.30

1.0-16.0MHZ

1944																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIAN BY CHARACTERISTIC				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	MEDIAN			JFM	AMJ	JAS	OND

ST JOHN'S (Continued)

1970	AAA	BBA	AAA	AAA	AAA	BBA	AAA	AAA	X					AAA	BBA	AAA	AAA	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	BAA	AAA	AAA			X		11				
1975														AAA	A					X		11				

STANFORD
(ST 837)

37.40 237.80

1.0-25.0MHZ

1942																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
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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										M	M	MMM	AAA	AAA	X		X		14			
1958	WWW	WWW	WWW	WWW										AAA	AAA	AAA	AAA	X		X		14				
1959	A	A	A											AAA	AAA	AAA	AAA	X		X		14				
1960			W	WWW	WWW									AAA	AAA	AAA	AAA	X		X	X	14				
1961	WWW	WWW	WWW	WWW										AAA	AAA	AAA	AAA	X		X	X	14				
1962	WWW	WWW	WWW	WWW										AAA	AAA	AAA	AAA	X		X	X	14				
1963	W	W	WWW	WWW	WWW									AAA	AAA	AAA	AAA	X		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	X	14				
1966	WWW	WWW	WWW	WWW										AAA	AAA	AAA	AAA	X		X	X	14				
1967	WWW	W	W	W	W									AAA	AAA	AAA	AAA	X		X	X	14				
1968	WWW	W	WWW	WWW										AAA	AAA	AAA	AAA	X		X	X	14				
1969	WWW	WWW	WWW	WWW										AAA	AAA	AAA	AAA	X		X	X	14				
1970	WWW	WWW	W	W	W									AAA	AAA	AAA	AAA	X		X	X	14				
1971	WWW	WWW	WWW	W										AAA	AAA	AAA	AAA	X		X	X	14				
1972	WWW	WWW	WWW	WWW										AAA	AAA	AAA	AAA	X		X		14				
1973	WWW	WWW	WWW	WWW										AAA	AAA	AAA	AAA	X		X		14				
1974			W	WWW	W									AAA	AAA	AAA	AAA	X				14				
1975						A								AA				X				14				

SWAN RIVER
(48 952)

52.10 258.80

1.2-16.0MHZ

1946														BA	AAS							12				
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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 MEDIAN'S BY CHARACTERISTIC				MICRO.	PUNCHED CARDS		NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN'S		MAG. TAPE	JFM	AMJ	JAS
SYOWA BASE (SW 16R)																										
-69.00 39.60																										
0.4-15.0MHZ																										
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											AEA	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	9			
1971	PPP	PPP	PPP	PPP											AAA	AAA	AAA	AAA			X	X	10			
1972	PPP	PPP	PPP	PPP											AAA	AAA	AAA	AAA			X		10			
1973	P				WWW	WWW	WWW	WWW							AAA	AAA	AAA	AAA					10			

TAHITI (TT 71P)																									
-17.70 210.70 1.2-17.0MHZ																									
1957				B																		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			12			
1961															AAA	AAA	AAA	AAA	X	X	X	12			
1962															AAA	AAA	AAA	AAA	X	X		12			
1963															AAA	AAA	AAA	AAA	X	X		12			
1964															AAA	AAA	AAA	AAA	X	X		12			
1965															AAE	ABN	ABE	BBB	X	X		12			
1966															BBB	BBB	AAA	AAA	X	X		12			
1967				A											ABE	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	X		12			
1971															AAA	AAA	AAA	AAA	X			12			
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																									
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										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	WWW	WWW										AAA	AAA	AAA	AAA	X			11			
1960	WWW	W													AAA	AAA	AAA	AAA	X			13			
1961															BAA	AAA	AAA	AAA	X	X		13			
1962				BB											AAA	AAA	AAA	AAA	X	X		13			
1963															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		15			
1966	WWW	AAA	AAA	AAA											AAA	AAA	AAA	AAA	X	X		15			
1967	AAA	AAA	WWW	WWW											AAA	AAA	AAA	AAA	X	X		15			
1968	WWW	WWW	WWW	WWW											AAA	AAA	AAA	AAA	X	X		13			
1969	WWW	WWW	WWW	WWW											AAA	AAA	AAA	AAA	X	X	X	13			
1970															AAA	AAA	AAA	AAA	X	X	X	15			
1971															AAA	AAA	AAA	AAA	X	X	X	15			
1972															AAA	AAA	AAA	AAA	X	X		15			
1973															AAA	AAA	AAA	AAA	X	X		15			
1974															AAA	AAA	AAA	AAA	X	X		15			

TALARA (TA 90M)																									
-4.60 278.70 1.0-25.0MHZ																									
1954				B																		13			
1955	B	A	AAA	AAA	AAA										AAA	AAA	AAA	AAA				16			
1956	AAA	AAA	AAA	AAA	AAA										AAA	AAA	AAA	AAA				10			
1957	AAA	AAA	AAA	AAA	AAA										AAA	AAA	AAA	AAA				10			
1958	AAA	AAA	AAA	AAA	AAA										AAA	AAA	AAA	AAA	X	X	X	13			
1959	AAA	AAA	AAA	AAA	AAA										AAA	AAA	AAA	AAA	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 MEDIAN BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

TALARA (Continued)

1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	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	AAA	X	X	X	X	13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	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	AAA	X	X	X	X	13				
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	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	AAA	X	X	X	X	13	AAA	AAA	AAA	AAA
1966	S				S					S					S					X	X	X					

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															AAB	ABE	BBA	AAA	X	X	X		12				
1962															BAB	NNN	NNN	BAB	X	X	X		12				
1963															AAA	AAA	KNA	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	BBE	EBB	BBE		X	X		12				
1969															AAA	AAB	BBA	AAA		X			12				
1970															B								13				

CLOSED, DATE UNKNOWN

TANANARIVE
(IV 210)

-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															AAA	AAA	AAA	AAA	X	X			12				
1966															AAA	AAA	AAA	AAA	X	X	X		12				
1967															AAA	AAA	AAA	AAA	X	X			12				
1968															AAA	AAA	AAA	AAA	X	X	X		12				
1969															AAA	AAA	AAA	AAA	X	X	X		12				
1970															AAA	AAA	AAA	ABE		X	X		12				
1971															AAN	AAA	AAA	AAA		X			12				
1972															AAA	A				X			12				

TASHKENT
(TQ 241)

41.33 69.62

1.0-18.0MHZ

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

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 MEDIAN'S BY CHARACTERISTIC				MICRO.	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN'S	MAG. TAPE		JFM	AMJ	JAS	OND

41.70 44.80 TBILISI (TB 142) 1.0-10.0MHZ

1963																												
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	BBB	X						AAA	AAA	AAA	BBB	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	AAA	X						AAA	BBB	BAA	AAA	X	X			14					
1968	WWW	WWW	WWW	WWW	AAA	BBB	BBB	BBB	X						AAA	BBB	BBB	BBB	X	X			14					
1969					AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X		14					
1970	N	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	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	WWW	WWW	WWW	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X			14					
1974	WW	W		WW	AAA	AA	AAA	A	X						AAA	AA	AAA	A	X				14					

35.70 51.40 TEHRAN (TE 236) 1.0-15.0MHZ

1963																												
1964															AAA	AAA	AAA	AAA	X	X			8					
1965															AAA	AAA	AAA	AAA	X	X			2					
1966															BNA	AAA	AAA	NAA	X	X			2					

-66.66 140.02 TERRE ADELIE (DU 560) 0.25-20MHZ

1949																												
1950															AA													
1951															AA	AAA	AAA	AAA										
1952															A													
1956																												
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			12					
1965															AAA	AAA	AAA	AAA	X	X	X		12					
1966															ABA	ABA	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			X			14					

54.00 259.00 THE PAS (49 954) 1.2-16.0MHZ

1946																												
1950															M M								12					
1951															AAA	AAA	AAA	AAA					13					
1952															AAA	AAA	AAA	AAA					13					
1953															AAA	AAA	AAA	AAA					13					

77.50 290.80 THULE (TH J77) 0.25-20.0MHZ

1956	AA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA									8					
1957	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X		11					
1958	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X		13					
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X		13					
1960	AAA	AAA	BBB	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X		13					
1961	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X		13					
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X		13					
1963	ABA	AAA	ABB	AAA	ABA	AAA	ABB	AAA	X						AAA	AAA	AAA	AAA	X	X	X		13					
1964	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X		13					
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X						AAA	AAA	AAA	AAA	X	X	X		13					
1966	AAA	AAA	S		AAA	AAA	S		X						AAA	AAA	S		X	X	X		13					

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

THULE (Continued)

1969	BBB	BBB	BBB	BBB																							
1970	AAA	AAA	AAA	AAA																							
1971	BAA	AAA	AAA	AAA																							
1972	AAA	AAA	AAA	AAA																							
1973	AAA	AAA	AAA	AAA																							
1974	AA		AA																								
1975																											

THUMBA
(TC 309)

8.60 76.90

1.0-25.0MHZ

1964																											
1965																											
1966																											
1967																											
1968																											
1969																											
1970																											
1971																											
1972																											
1973																											
1974																											

REPLACED TRIVANDRUM

TIRUCHIRAPALLI
(TI 311)

10.80 78.70

2.5-20.0MHZ

1949																											
1950																											
1951																											
1952																											
1953																											
1954																											
1955																											
1956																											
1957																											
1958																											
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1967																											
1968																											
1969																											
1970																											
1971																											
1972																											
1973																											
1974																											

TIXIE BAY
(TX 471)

71.60 129.80

1.0-18.0MHZ

1957																											
1958																											
1959																											
1960																											
1961																											
1964																											
1965																											
1966																											
1967																											
1968																											
1969																											
1970																											
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 MEDIAN'S BY CHARACTERISTIC				PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES				
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND	MICRO.	HR. VALUES	MEDIAN'S		MAG. TAPE	JFM	AMJ	JAS	OND
TOGO (TG 011)																											
10.90 .40																											
1.0-20.0MHZ																											
1965													BBB BAE NBB										16				
1966													BBB BBB BBB ABB										17				
1967													AS										16				

35.70 139.50 TOKYO (TO 535) 1.0-20.0MHZ																									
1945															AAA	AAA	AAA	AAA				2			
1946															AAA	AAA	AAA	AAA				8			
1947															AAA	AAA	AAA	AAA				10			
1948															A	A	AAA	AAA				10			
1949															AAA	AAA	AAA	AAA				11			
1950															AAA	AAA	AAA	AAA				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	AAA	AAA	AAA				12			
1956															AAA	AA	A	AAA				12			
1957			AAA	AAA				AAA	AAA						AAA	AAA	AAA	AAA				12			
1958	AAB	ABB	BBB	BBB	BBB			AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X			14			
1959	BBB	BBB	BBB	BBB	BBB			AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X			14			
1960	BBB	BBB	BBB	BBB	BBB			AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X			14			
1961	BBB	BBB	BBB	BBB	BBB			AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X			14			
1962	BBB	BBB	BBB	BBB	BBB			AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X		X	14			
1963	BBB	BBB	BBB	BBB	BBB			AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X		X	14			
1964	BBB	BBB	BBB	BBB	BBB			AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X		X	14			
1965	BBB	BBB	BBB	BBB	BBB			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	14			
1971	PPP	PPP	PPP	PPP				AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	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		X	14			
1974								AAA	AAA	AAA	A				AAA	AAA	AAA	AAA	X			14			
1975								AAA	AAA	AAA	AAA				AAA	AAA	AAA	AAA	X			14			

REPLACED KOKUBUNJI

56.50 84.90 TOMSK (TK 356) 1.0-18.0MHZ																									
1944															MMM	MM	MMM	MMM				6			
1945															MMM	MM	MMM	MMM				6			
1946															MMM	MM	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	AAA	AAA	X			M	M	MMM	AAA	AAA	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	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	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	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	WWW						AAA	AAA	AAA	AAA	X			AAA	AAA	AAA	AAA	X		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	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	X	14		
1974	WWW	WWW	WWW					AA	AA	AAA		X			AA	AA	AAA		X		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			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIANS	MAG. TAPE		JFM	AMJ	JAS	OND

TORTOSA
(EB 040)

40.90 .50

0.25-20.0MHZ

1957															AA	AAA	ABA	X					12				
1958															AAA	AAA	AAA	AAA	X	X			12				
1959															AAA	ABE	AAH	AAE	X	X	X		12				
1960															AAA	AAA	AAA	AAA	X	X	X		12				
1961															AAA	AAA	AAA	AAH	X	X	X		12				
1962															AAA	AAA	AAA	AAA	X	X	X		12				
1963															AAA	AAA	AAA	AAE	X	X	X		12				
1964															BNN	NBA	AAH	BAA	X	X			12				
1965															AAA	AAA	AAA	AAA	X	X			13				
1966															AAA	AAE	NNN	NNH	X	X			13				
1967															AAA	AAA	AAA	AAA	X	X			13				
1968															AAA	AAE	AAA	AAA	X	X			13				
1969															AAA	AAA	AAA	AAA	X	X			13				
1970															AAA	ANN	AAA	AAA	X	X			13				
1971															AAA	AAH	NNA	AAH	X	X			13				
1972															NNN	AAH	NNH	NAA	X	X			13				
1973															AAA	NNH	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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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TOYOHARA
(50 546)

46.90 142.80

1942																											
1943																											
1944																											

TRELEW
(TW J4L)

-43.20 294.70

1.3-18.0MHZ

1958															AAA	ABA	AAA	X					11				
1959															BAA	AAH	BAA	BNA	X	X			11				
1960															BBB	NBA	BBH	NNA	X	X			11				
1961															AAA	AAA	AAA	AAE	X	X			12				
1962															AAA	BBE	NBB	BBB	X	X	X		7				
1963															NNN	NNH	NNH	NNH									
1964															BAA				X				12				
1965															BA				X				11				

YEAR	IONOGRAMS				f-PLOTS				MICRO.	ONE SHEET PER DAY OF ALL HOURLY CHARACTERISTICS				MICRO.	TABLES OF DAILY/HOURLY VALUES AND MEDIAN BY CHARACTERISTIC				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	MICRO.	HR. VALUES			MEDIAN	JFM	AMJ	JAS	OND

TRELEW (Continued)

1966																											
1967																											
1968															QQQ	QQC	QQQ	QQQ									

TRINIDAD
(51 J10)

10.75 298.43

1.2-19.5MHZ

1944																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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TRIVANDRUM
(TM 308)

8.50 77.00

1.5-18.0MHZ

1957															AAA	AAA	AAA	AAA	X		X		3			
1958															AAA	AAA	AAA	AAA	X		X		5			
1959															AAA	AAA	AAA	AA	X		X		5			
1960															AAA	AAA	BBB	BBB	X		X		5			
1961															ABA	AAA	AAA	AAA	X		X		5			
1962															AAA	AAA	AAA	AAA	X		X		5			
1963															BBB	AAA	AAA	AAA	X		X		5			
1964															AAA	AAA	BBB	S	X		X		5			

REPLACED THUMBA

TROMSO
(TR 169)

69.70 19.00

0.25-20.0MHZ

1945															A	B	A						3			
1946															NNA	AAA	AAA	AAA					5			
1947															AAA	NNN	NNN	NNN					4			
1951															AAA	AAA	AAA	AAA					8			
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					10			
1957															AAA	AAA	AAA	AAA	X				12			
1958															AAA	AAA	AAA	AAA	X				12			
1959															AAA	AAA	AAA	AAA	X				12			
1960															AAA	AAA	AAA	AAA	X				12			
1961															AAA	AAA	AAA	AAA	X				12			
1962															AAA	AAA	AAA	AAA	X				12			
1963															AAA	AAA	AAA	AAA	X				12			
1964															AAA	AAA	AAA	AAA	X				12			
1965															AAA	AAA	AAA	AAA	X				12			
1966															AAA	AAA	AAA	AAA	X				12			
1967															AAA	AAA	AAA	AAA	X				12			
1968															AAA	AAA	AAA	AAA	X				12			
1969															AAA	AAA	AAA	AAA	X				12			
1970															AAA	AAA	AAA	AAA	X				12			
1971															AAA	AAA	AAA	AAA	X				12			
1972															AAA	AAA	AAA	AAA	X				13			
1973															AAA	AAA	NNB	AAA		X	X		13			
1974															QQQ	QQQ	QQQ	QQQ		X	X					
															QQQ	QQQ	QQQ	QQQ								

TSITSIHAR
(52 447)

47.30 123.90

1.0-16.0MHZ

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	MMM	MMM					7			

For symbols see page 33

-19.20		17.70		TSUMEB (TS 11R)				1.0-16.0MHZ	
1957			WWW WWW			AAA AAA X			12
1958		WWW WWW WWW			AAA AAA AAA X				12
1959		WWW WWW WWW			AAA AAA AAA X				12
1964		NNN NNN WWW			NNN NNA AAA X	X			12
1965		WWW WWW WWW			AAA BAA AAA BAB X	X			12
1966		WWW NNN NNN			EEE NNN NNN X	X			12
1967		NNN WWW WWW			NNN AAA AAA	X	X		12
1968		WWW WWW WWW			AAA AAA AAA	X	X		12
1969		WWW WWW NNN			AAA AAN NNN	X	X		12
1970		NNN WWW WWW			NNN NAA AAA	X			12
1971		WWW WWW WWW			AAA AAA AAA	X			12
1972					Q QQQ				
1973		WWW W			AAA A				12

-25.90 294.60		TUCUMAN (TU J20)		1.0-25.0MHZ	
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	AAE AAA BAA X	X	11
1960		AAB BBA AAB NNN	AAA AAA AAB NNE X	X X	12
1961		AAA BBB BBA NNN	AAA AAA BBB NNN X	X X	12
1962	A	NNN NNN NN	NNN NNN NNE 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 BBA BAA AAA X	X X	13
1967			AAA AAA ABE 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			3

TUNGUSKA (TZ 362)														1.0-18.0MHZ			
61.60		90.00															
1968	QQ	Q	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ				
1969	QQQ	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	QQQ				
1971	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ				
1972	QQQ	QQQ	QQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ	QQQ			12	
1973					QQQ												

59.80 17.60		UPPSALA (UP 158)		0.33-20.0MHZ	
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 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 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

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

-54.80 291.70 USHUAIA (UA J5M)

1.3-18.0MHZ

1957															AAA NNN	BN	X						12				
1958															AAA NNN	BN	ABA	X					12				
1959															BN NNN	NNN	NNN	X		X	X		11				
1961															NNN	BN	NNB	BN	X		X	X	12				
1962															BBB	BBB	AAA	ABA		X	X	X	12				
1963															BBB	BBB				X	X		12				
1964																					X		12				
1966															AAA		A	AAA					13				

VANIMO (VA 50L)

-2.70 141.30

1.0-20.0MHZ

1964															AAA NNN	BBB	AAB	X					11				
1965															AAA NNN	BBB	BAA	X					11				
1966															AAA NNN	BBB	BAA			X	X		5				
1967															AAA NNN	BBB	BAA			X	X		5				
1968															AAA NNN	BBB	BAA			X	X		5				
1969															AAA NNN	BBB	BAA			X	X		7				
1970															AAA NNN	BBB	BAA			X	X		7				
1971															AAA NNN	BBB	BAA			X	X		7				
1972															AAA NNN	BBB	BAA			X	X		6				
1973															AAA NNN	BBB	BAA			X	X		6				
1974															AAA NNN	BBB	BAA			X	X		6				
1975															AAA NNN	BBB	BAA			X	X		6				

VICTORIA (VI 848)

48.40 236.60

1.6-20.0MHZ

1957															AAA NNN	BBB	AAB	X					10				
1958															AAA NNN	BBB	BAA	X					8				
1959															AAA NNN	BBB	BAA	X		X			8				

VICTORIA BEACH (53 951)

50.80 263.95

1945															AM								7				
------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	----	--	--	--	--	--	--	--	---	--	--	--	--

CLOSED IN 1945

VOSTOK (VO 47P)

-78.40 106.90

1.0-18.0MHZ

1958															AAA NNN	BBB	AAB	X					12				
1959															AAA NNN	BBB	BAA	X		X			13				
1960															AAA NNN	BBB	BAA			X	X		13				
1961															AAA NNN	BBB	BAA			X	X		13				
1964															AAA NNN	BBB	BAA			X	X		13				
1965															AAA NNN	BBB	BAA			X	X		13				
1966															AAA NNN	BBB	BAA			X	X		13				
1967															AAA NNN	BBB	BAA			X	X		13				
1968															AAA NNN	BBB	BAA			X	X		13				
1969															AAA NNN	BBB	BAA			X	X		13				

WAKKANAI (WK 545)

45.40 141.70

1.0-20.0MHZ

1947															AAA NNN	BBB	AAB	X					10				
1948															AAA NNN	BBB	BAA	X					10				
1949															AAA NNN	BBB	BAA						11				
1950															AAA NNN	BBB	BAA						11				
1951															AAA NNN	BBB	BAA						11				
1952															AAA NNN	BBB	BAA						11				
1953															AAA NNN	BBB	BAA						11				
1954															AAA NNN	BBB	BAA						11				
1955															AAA NNN	BBB	BAA						3				
1956															AAA NNN	BBB	BAA						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 MEDIAN BY CHARACTERISTIC				MICRO	PUNCHED CARDS			NO. CHAR.	HOURLY COMPOSITE PROFILES			
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		JFM	AMJ	JAS	OND		HR. VALUES	MEDIAN	MAG. TAPE		JFM	AMJ	JAS	OND

WAKKANAI (Continued)

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				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	X	12				
1973	PPP	PPP	PPP	PPP	AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		13				
1974					AAA	AAA	AAA	AAA							AAA	AAA	AAA	AAA	X		X		13				
1975															AAA	AAA	AAA	AAA	X		X		14				

WALLOPS IS
(WP 937)

37.90 284.50 0.25-20.0MHZ

1963			AA	AAA			AA	BBB	X														15				
1964	AAB	AAA	AAA	AAA	BBB	AAA	AAA	AAA	X														15		AA	AAA	
1965	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X														15		AAA	AAA	AAA
1966	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X														15		AAA	AAA	AAA
1967	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	A	A	MMH	A					X	X		15		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
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
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
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
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
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
1974	AAA	AAA	AAA	AAA	AA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		18		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

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				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	EEE	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			12				
1957	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X			11				
1958	AAA	AAA	AAA	AAA						AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X			13				
1959	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	X	X	X		13				
1960	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	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		13				
1962	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	X	AAA	AAA	AAA	AAA		AAA	AAA	AAA	AAA	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		13				
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	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

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

WATHEROO (WT 43v)										1.0-16.0MHZ				
-30.30	115.90													
1937	B					MMM	MMM	MMM	MMM				4	
1938						MMM	NMA	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						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			14		
1958				WWW	WWW	WWW	WWW	AAA	X			13		
1959						AAB	S		X			8		

REPLACED BY MUNDARING

WHITE SANDS (WS 832)																									0.25-20.0MHZ														
32.30	253.50																																						
1946	A AAN AAA																																		9				
1947	NNA AAA NNA AAA																																		12				
1948	WWW WWW WWW WWW																																		12				
1949	WWW WNW WWW WNW																																		12				
1950	WWW WWW WWW WWW																																		12				
1951	AAA AAA AAA AAA				AAA AAA AAA AAA																X				12														
1952	AAA AAA AAA AAA				AAA AAA AAA AAA																X				12														
1953	AAA AAA AAA AAA				AAA AAA AAA AAA																X				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																				10														
1957	AAA AAA AAA AAA				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				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				X				X X X				13																		
1961	AAA AAA AAA AAA				AAA AAA AAA AAA				AAA AAA AAA AAA				X				X X X				13																		
1962	AAA AAA AAA AAA				AAA AAA AAA AAA				AAA AAA AAA AAA				X				X X X				13																		
1963	ABA AAA BBB BUA				ABA AAA BBB BUA				ABA AAA BBB BUA				A X				X X X				13	R R R RRR R R																	
1964	BBA AAA AAA ABA				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				AAA AAA AAA AAA				X				X X X				13	AAA AAA RAA AAA																	
1966	BAA AAA AAA AAA				BAA AAA AAA AAA				BAA AAA AAA AAA				X				X X X				13	RRR RRR RRR RRR																	
1967	AAA AAA AAA AAA				AAA AAA AAA AAA				AAA AAA AAA AAA				X				X X X				13	RRR																	
1968	AAA AAA AAA AAA				AAA AAA AAA AAA				AAA AAA AAA AAA				X				X X X				13																		
1969	AAA AAA AAA AAA				AAA AAA AAA AAA				AAA AAA AAA AAA				X				X X X				13																		
1970	AAA AAA AAA AAA				AAA AAA AAA AAA				AAA AAA AAA AAA				A				X				13																		
1971	AAA AAA AAA AAA				AAA AAA AAA AAA												X				13																		
1972	AAA AAA AAA NNN				AAA AAA AU												X				13																		
1973	BAN ABA BAB ANB				UU				UU				U				A				18																		
1974	ABN BNB EAA																																		18				

WILKES (WL 460)																									0.25-20.0MHZ			
-66.90		110.50																										
1957	B	AAA	AAA	AAA																								
1958	AAA	NBB	AAA	AAA	AAB	NBA	AAA	UAA																				
1959	AAA	AAA	AAA	AAA	A				AA	NBA	AAA	UAA																
1960	AAA	AAA	AAA	AAA		AA	AAA	BAA																				
1961	AAA	AAA	AAA	AAA																								
1962	AAA	AAA	AAA	AAA																								
1963	B			AAA																								
1964	AAA	AAA	AAA	AAA	BAA	AAA	AAA	AAA																				
1965	AAA	AAA	AAA	AAA	A			AA																				
1966					AAA	AAA	AAA	AAA																				
1967					AA	AA	AAA	B																				
1968																												
1969	S																											

REPLACED BY CASEY
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 MEDIAN 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	MEDIAN			JFM	AMJ	JAS	OND

YAMAGAWA
(YG 431)

31.20 130.60

1.0-20.0MHZ

1946																												
1947															AAA	AAA	AAA	AAA			X							8
1948															AAA	AAA	AAA	AAA			X							10
1949															AAA	AAA	AAA	AAA			X							10
1950															AAA	AAA	AAA	AAA			X							11
1951															AAA	AAA	AAA	AAA			X							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															AAA	AAA	AAA	AAA										3
1958															AAA	AAA	AAA	AAA										3
1959															AAA	AAA	AAA	AAA										12
1960															AAA	AAA	AAA	AAA										12
1961															AAA	AAA	AAA	AAA										12
1962															AAA	AAA	AAA	AAA										12
1963															AAA	AAA	AAA	AAA										12
1964															AAA	AAA	AAA	AAA										12
1965															AAA	AAA	AAA	AAA										12
1966															AAA	AAA	AAA	AAA										12
1967															AAA	AAA	AAA	AAA										12
1968															AAA	AAA	AAA	AAA										12
1969															AAA	AAA	AAA	AAA										12
1970															AAA	AAA	AAA	AAA										12
1971															AAA	AAA	AAA	AAA										12
1972															AAA	AAA	AAA	AAA										12
1973															AAA	AAA	AAA	AAA										12
1974															AAA	AAA	AAA	AAA										14

YELLOW KNIFE
(YE 862)

62.40 245.60

1.6-20.0MHZ

1957																												
1958															AAA	AAA	AAA	AAA										6
1959															AAA	AAA	AAA	AAA										6

YUZHNO SAKHALI
(SA 547)

47.00 143.00

1.0-18.0MHZ

1956																												
1957																												
1958																												
1959																												
1960																												
1961																												
1962																												
1963																												
1964																												
1965																												
1966																												
1967																												
1968																												
1969																												

ZARYA SHIP
(XF)

-0.00 -0.00

1.0-18.0MHZ

1959																												
1960																												
1961																												
1962																												
1963																												
1964																												
1965																												
1966																												

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
	1961	12	4
		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

STATION	YEAR	MONTH	NUMBER OF PROFILES
Barrow	1962	11	447
		12	446
		1	371
		2	386
	1958	12	10
		6	3
		12	3
		4	5
	1962	12	2
		6	9
	1963	7	5
		11	1
	1966	12	3
		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
	1961	12	371
		1	409
		2	140
		3	131
	1962	4	95
		11	4
		12	17
		1	7
Boulder	1963	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
	1967	9	12
		10	12
		11	13
		12	15
Boulder	1958	1	12
		6	39
	1960	11	41
		3	76
	1961	11	5
		4	12
		6	1
		7	63
	1962	8	5
		9	1
		2	8
		6	14
	1963	7	26
		8	61

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Boulder (Continued)	1964	9	3
		10	15
		11	1
		1	10
		2	6
	1965	3	277
		4	2
		6	182
		9	459
		12	682
	1966	3	1
		10	18
		11	1
	1968	12	3
		10	10
		11	2
	1969	12	78
		3	2
		5	3
		6	1
		8	5
	1970	10	4
		11	11
		1	4
		2	5
		3	22
	1971	4	7
		5	2
		6	5
		7	1
		8	1
		9	2
		10	14
		12	2
		4	30
		5	18
	1972	6	31
		7	15
		8	11
		10	40
		12	6
		1	10
		2	63
		3	5
		4	26
		5	48
	1973	6	10
		9	9
		10	9
		11	6
		1	47
		2	13
		4	9
		5	4
		6	7
		7	52
	1974	8	4
		9	35
		10	32
		11	1
		12	10
		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
	1967	6	6
		7	12
		8	12
		9	12
		10	12
		11	12
		12	12
		1	12
		3	12
Byrd Station	1958	6	12
	1966	9	12
		11	1
Campbell Is.	1958	6	67
	1966	12	3
Canberra	1958	6	48
	1964	1	8
	1965	2	18
		4	2
		7	24
		2	36
		3	18
	1966	7	92
		6	100
		8	79
		9	116
		11	54
	1967	4	90
		5	48
		7	15
		8	38
		9	127
	1968	11	146
		1	71
		6	105
	1969	1	138
		5	58
		7	196
		8	150
Cape Hallett	1958	3	12
	1961	9	12
		12	12
Cape Kennedy	1958	6	71
	1959	2	105
	1960	2	3
	1961	9	2
		10	73
		11	74
		12	43
		1	71
		2	46
		3	240

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Cape Kennedy (Continued)	1962	4	114
		5	47
		6	37
		7	42
		8	5
		9	12
		10	10
		11	12
		12	2
		4	1
		6	1
		10	2
	1963	11	1
		12	24
		1	4
		5	2
		6	13
		10	1
	1964	11	4
		12	2
		1	4
	1965	9	36
		4	17
		5	5
	1966	6	6
		7	1
		8	2
		11	3
		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
		7	4
	1964	11	29
		2	3
	1965	9	10
		11	9
	1966	2	2
		7	12
	1967	8	1
		9	9
		11	1
		12	3
	1968	7	7
		12	3
	1969	4	8
		5	15
		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
	1967	10	12
		11	13
		12	15
		1	12
Concepcion	1958	9	2
	1959	9	6
		10	34
	1960	11	11
		12	2
		10	7
		11	10
		12	7
	1961	1	1
		3	5
		4	4
	1962	5	10
		6	30
		7	3
		4	3
		6	1
	1963	12	18
		1	4
		6	15
	1964	10	4
		11	2
		3	201
		6	225
		9	406
	1965	11	1
		12	475
		5	42
		11	5
		11	1
	1966	12	3
		2	12
	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
	1972	7	6
		10	13
		2	7
		4	1
	1973	5	22
		6	30
		9	17
		10	19
	1973	11	20
		12	59
		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
	1961	12	110
		1	565
		2	523
		3	640
		4	467
		5	452
		6	309
		7	629

STATION	YEAR	MONTH	NUMBER OF PROFILES
Freiburg		8	613
		9	220
		10	424
		11	519
	1962	12	326
		10	3
		11	1
		6	15
	1963	7	45
		11	3
	1964	3	29
		10	2
	1965	3	10
	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
	1961	12	350
		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)	1962	11	626
		12	514
		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
		3	109
	1944	6	180
		12	112
		3	26
	1954	12	26
		7	294
	1957	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
		11	3
		7	5
	1966	11	158
		12	3
		10	1
	1967	3	2
		4	80
		12	11
	1969	2	2
		5	17
		8	6
	1958	9	28
		11	13
		6	47
	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)	1965	8	63
		9	446
		10	108
		11	104
		12	314
		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
		4	2
		1964	1
		6	12
		7	41
		3	75
		7	30
		8	55
		12	18
		1	131
		3	10
		5	49
	1965	7	244
		8	223
		11	15
		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	
Little America	1962	12	3	
	1963	6	21	
	1966	12	3	
	1958	3	12	
		6	73	
		9	12	
Longyearbyen		12	12	
	1957	12	15	
	1958	6	23	
Lulea		9	24	
	1958	1	24	
		6	23	
Macau		9	24	
	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
	1970	12	2
		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
	1974	11	2
		12	4
		1	2
	1975	4	62
		5	33
		5	1
Meanook	1958	1	23
		6	24
		9	24
Mexico City	1960	10	3
		7	4
		8	1
		9	3
		10	3
		12	15
	1962	1	2
	1963	6	19
		3	59
		6	185
	1964	9	355
		12	638
	1965	6	1
		11	2
		12	2
Midway	1969	11	1
		11	1
Millstone Hill	1958	7	3
		8	397
		8	1
	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

STATION	YEAR	MONTH	NUMBER OF PROFILES	
Mundaring	1971	9	1	
		12	5	
	1944	12	102	
		1948	6	133
	1950	9	150	
		12	100	
		6	175	
		9	203	
		12	113	
		6	139	
	1954	9	146	
		1958	6	70
	1963	11	4	
	1968	11	1	
1973	2	9		
Narssarssuaq	1957	12	23	
	1958	6	115	
	1962	9	23	
		12	18	
	1963	6	26	
	1965	11	7	
	1966	12	1	
	1969	2	1	
	1970	11	2	
		2	1	
	Natal	1967	11	3
1969		6	3	
1973		1	5	
1974		2	76	
		2	5	
New Delhi	1958	7	55	
Norfolk Is.	1965	6	1	
Nurmijarvi	1962	4	1	
Okinawa	1959	6	239	
		7	241	
	1960	8	216	
		9	183	
		10	256	
		11	160	
		12	202	
		1	259	
	1962	2	142	
		3	115	
	1963	4	1	
		7	21	
	1964	12	2	
		3	221	
	1969	6	41	
		9	454	
		12	599	
		12	4	
		1972	2	1
		Ottawa	1958	1
	6			24
	1961		9	24
3			159	
1962	4		101	
	4		1	

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Ottawa (Continued)	1963	12	10
		1	2
		6	11
		7	4
		9	20
	1964	10	4
		1	36
		2	68
		3	50
		4	45
		5	53
		6	56
		7	50
		8	26
		9	57
		10	60
		11	33
	1965	12	27
		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
	1971	7	1
		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
		1	4
	1964	2	4
		3	125
		4	8
		6	177
		9	222
		12	327
	1965	4	16
		6	3
		8	1

STATION	YEAR	MONTH	NUMBER OF PROFILES
Port Stanley	1966	10	1
		11	3
		2	1
		7	2
		11	2
	1969	12	3
		9	3
		10	3
		11	1
	1974	1	11
		5	2
	1958	6	45
		6	2
	1962	12	3
		1	1
	1963	6	4
		11	1
	1966	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
	1960	12	689
		1	658
		2	627
		3	682
		4	557
		5	570
		6	574
		7	553
		8	594
		9	586
	1961	10	651
		11	639
		12	633
		1	606
		3	647
		4	635
		5	523
		6	482
		7	374
		8	532
	1962	9	594
		10	587
		11	611
		12	624
		1	597
		2	552
		3	684
		4	34
		5	12
		6	25
	1962	7	7
		8	12
		9	12
		11	11

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Puerto Rico (Continued)	1963	12	34
		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
Reykjavik	1970	2	1
	1962	4	1
		6	1
		12	9
Roma	1963	6	12
	1962	6	1
		7	1
		12	11
Salisbury	1963	1	1
		6	3
	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
	1964	12	4
		1	6
		9	83
	1962	12	10
		1	2
		6	11
Singapore	1962	12	10
	1963	1	2
Slough	1950	6	11
		1	712
		7	644
	1953	9	661
		6	519
		9	673

STATION	YEAR	MONTH	NUMBER OF PROFILES
South Pole	1958	12	647
		6	44
		1959	4
		1962	4
		1973	5
		7	1
		8	1
		9	2
		3	12
		6	53
St. John's	1963	9	12
		12	12
		10	2
		11	2
		12	3
	1957	11	2
		6	49
		9	2
		10	1
	1960	11	2
		1	1
		7	1
		8	1
		1962	4
		1966	11
Sverdlovsk	1971	12	3
		2	1
		1970	2
		1971	1
		1	10
		2	10
		3	12
		4	10
		12	64
	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
	1959	9	218
		10	202
		11	265
		12	218
		9	8
		10	24
		11	9
		12	31
	1960	1	512

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
Talara (Continued)	1961	2	459
		3	482
		4	489
		5	585
		6	589
		7	603
		8	562
		9	595
		10	473
		11	438
		12	443
		1	397
	1962	2	443
		3	474
		4	573
		5	563
		6	522
		7	503
		8	474
		9	448
		10	408
		11	386
		12	357
		1	327
	1963	2	346
		3	466
		4	18
		6	1
		7	7
		12	24
		6	501
		10	4
		11	4
	1964	3	211
		6	215
		9	365
	1965	12	527
		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
		1	4
	1969	5	55
		7	177
		8	165
Townsville	1958	6	31

STATION	YEAR	MONTH	NUMBER OF PROFILES
	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)	1963	10	27
		11	1
		12	15
		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
	1963	12	4
		4	1
		5	1
		7	29
	1964	9	10
		10	7
		1	2
		2	1
		3	1
		4	2
		5	78
		6	59
		7	95
		8	59
	1965	9	111
		10	66
		11	82
		12	79
		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
	1969	11	1
		1	1
		2	1
		4	35

STATION	YEAR	MONTH	NUMBER OF PROFILES
White Sands	1970	6	1
		9	2
		10	2
		11	3
		12	1
		2	1
		3	165
	1971	7	24
		8	23
		9	24
		10	24
	1972	11	24
		12	25
		1	48
		3	24
	1973	7	44
		5	2
		4	8
	1974	10	3
	1958	6	69
		3	366
		4	634
		5	576
		6	473
		7	475
		8	499
		9	592
		10	653
		11	625
	1960	12	336
		1	494
		2	583
		3	652
		4	545
		5	464
		6	463
		7	461
		8	470
		9	543
	1961	10	494
		11	494
		12	430
		1	258
		2	342
		3	587
		4	587
		5	386
		6	16
		7	400
	1962	8	490
		9	545
		10	574
		11	494
		12	551
		1	506
		4	10
		6	1
		7	53
		12	175
	1963	2	20
		6	20
	1964	8	1
		1	10
		2	3
		3	164

1. Individual N(h) Profiles

STATION	YEAR	MONTH	NUMBER OF PROFILES
White Sands (Continued)	1965	4	2
		6	170
		8	1
		9	479
		12	648
		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
		9	61
	1966	10	63
		11	26
Yamagawa	1958	6	44
	1962	4	1
	1973	2	13

2. Composite Tracings

Station	Interval	Station	Interval
Adak	March-April 1962; June 1962-December 1965.	Manila	October 1963; January 1964-July 1967; October 1967-March 1968.
Anchorage	September 1962-May 1963; August-September 1963; January 1964-February 1965.	*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.
Bogota	January, April, June 1963; January-February 1964; April 1964-April 1965; June 1965-June 1967.	Narssarssuaq	December 1961; January 1962; April-December 1962; April-September 1963; October-November 1964; January 1965-March 1968.
Boulder	February-September 1960; November-December 1960; June 1961; January-March, July-August 1962; October 1962-August 1963; January 1964-April 1968.	Okinawa	January-December 1965; March-October 1967; January-February 1968.
Cape Kennedy	April 1964-October 1966.	Point Arguello	January-February, May 1964; January 1965-May 1966.
Ft. Monmouth	February-March, May 1960; July 1960-June 1961; September-December 1961; March-April, June-September 1962; January 1964-December 1965.	San Salvador	April 1964-February 1965.
Godhavn	November 1961-June 1964; November 1964-March 1968.	Talara	January 1964-June 1965; August-November 1965.
Grand Bahama	March-April, June, August, October-November 1962; January 1963-June 1965; August 1965-June 1967; September 1967-March 1968.	Taipei	April-December 1964.
*Huancayo	January-June 1964; January 1965-August 1967; October 1967-September 1975.	Thule	April-July 1960; September 1960-June 1962; September 1962-June 1966; November 1966.
Jamaica	June 1964; January-February 1965; November 1966.	*Wallops Island	August-September 1963; December 1963-June 1964; August 1964-December 1975.
La Paz	October 1964; February-August 1965.	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		IONOGRAMS			REMARKS
	LAT	LONG EAST	YEAR	MONTHS AND DAYS		
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		
Bedford	N42.48	288.72	1967	Feb. 14-17		
Bocayuva	S17.1	316.9	1964	May 8-11		
			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.	
Carthage	N40.8	268.8	1965	Jan. 6-22; Feb. 6-22		
Charleston	N34.	285.0	1953	Sept. - Nov.	Data are incomplete	
Churchill	N58.80	265.80	1964	June 26-30, July 1-17		
Columbia	N34.	279.0	1963	July 16-24	Eclipse of July 20	
			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	
			1971	Feb.-July, Oct. - Dec.	conducted for a few hours on	
			1972	Jan. - Dec.	selected days.	
			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 Expedition - 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		IONOGRAMS		REMARKS
	LAT	LONG EAST	YEAR	MONTH AND DAYS	
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	Eclipse of July 20
St. John's	N47.60	307.30	1963	June 30 - July 22	
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	Special sunrise effects, data not continuous
			1956	Jan., Nov., Dec.	
			1957	Jan. - Dec.	
			1958	Jan. - Dec.	
			1959	Jan., June, July, Aug., Nov., Dec.	
Tenerife	N28.80	344.70	1960	Jan., Apr., June - Dec.	Aug. 7, 8, 15, 27 are also on 16 mm film
			1961	Feb. - July, Sept.	Data are incomplete June 15, 16, 17, 20
					Special sunrise effects. 1 min. intervals
					Data are incomplete
					Low Frequency (0.25-2.0 MHz)
University of Illinois	N40.0	272.00	1959	Sept. 25 - Oct. 7	Soundings on selected days
Wallops Island	N37.9	284.50	1965	Oct. 19-31; Nov. 1-9	Eclipse
			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		IONOGRAMS		REMARKS
	LAT	LONG EAST	YEAR	MONTHS AND DAYS	
Adak Anchorage.	N51.90 N61.20	183.40 210.10	1954	Feb. 19	16 mm TID Activity
			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	
Baker Lake	N64.30	264.00	1949	Aug. 19	16 mm Spread F Precip. Activity
			1950	Sept. 3, 16	16 mm E Sporadic, Nighttime E, Total absorption
				Nov. 15	16 mm Eclipse
				Dec. 2, 3	16 mm Color bottomside soundings
				Mar. 7, 9	16 mm Color, July 13 TID, Spread, Es, G-condition
Bocayuva Boulder	S17.1 N40.00	316.9 254.70	1947	Apr. 28 - May 24	16 mm Color bottomside soundings
			1960	Feb. 21, 26, 27	16 mm Color, July 13 TID, Spread, Es, G-condition
			1961	July 13, 14-16	16 mm Color bottomside soundings
Chiclayo	S 6.80	280.20	1968	Jan. 16-19	16 mm
			1957	Sept. 28 - Oct. 22	16 mm
				Dec. 11-21	
			1958	Mar. 17-26	16 mm
				Sept. 19 - Oct. 13	
Chimbote	S 9.10	281.40		Nov. 3-28	
				Dec. 26-30	
			1957	Dec. 12-22	16 mm
			1958	Mar. 17-26	
				May 18 - August 18	
Churchill	N58.80	265.80		Nov. 3-29	
				Dec. 12-31	
			1959	May 26 - June 1	
			1956	Nov. 15	35 mm Runs of 1 minute intervals with approximately 7 intervals per day
			1957	July 15, 16	35 mm Drifts
Concepcion Ellsworth	S36.60 S77.72	287.00 318.90	1958	Feb. 4, 24	16 mm
			1965	May 8-10	
			1957	Oct. 23	
			1958	June 21 - Sept. 17	
			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
Huancayo	S12.00	284.70	1960	No times given	35 mm Amplitude Recordings
			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		IONOGRAMS		REMARKS
	LAT	LONG EAST	YEAR	MONTHS AND DAYS	
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 Sept. 6 - Nov. 18	16 mm Both reels are 1961 - Study of an event not identified
Pt. Arguello	N34.60	239.40	1965	Dec. 13	16 mm Spread F, Nighttime E, TID's
South Pole	S90.00	0.00	1966	Apr. 18	16 mm Spread F, TID's
			1957	Apr. 27 - June 22 July 30 - Aug. 26, 29, Sept., Oct. 7-23	16 mm
			1958	Feb. - May June 6 - Aug. 29 Sept. 18 - Dec. 18	16 mm Sept. Data Intermittent
			1959	Feb. 26 - May 12	16 mm
			1960	Feb. 16-18 Mar. 15-17	16 mm
			1961	Jan. 17 - May 31 June 20-29 Aug. 15 - Sept. 19	16 mm
			1958	Mar. - Dec.	16 mm
			1959	May 27 - June 1	16 mm TID, meteor. echoes
			1957	Aug. - Dec.	16 mm Data intermittent
			1958	Jan. - Dec.	" "
Talara	S 4.60	278.70	1959	Jan. - Dec.	" "
			1960	Jan. - Dec.	" "
			1961	Jan. - Oct. 19	" "
			1963	May 12-24	35 mm Drifts
			1947	Aug. 14-16	16 mm Moderate Ionosphere Storm, J. Watts
Wallops Island Washington (Sterling)	N37.90 N38.70	284.50 282.90	1948	Mar. 13-16	16 mm Ionosphere Storm, E. J. Wiewara
				Oct. - Nov.	
Wilkes	S66.90	110.50	1949	May 10-12	16 mm
			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 film 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 booklet 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. *AFCLR 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 E_s layer (foE_s), 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.

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

	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>		
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		
	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>		
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		
	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
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.

<u>Address of Data Source</u>	<u>Stations</u>		
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			
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Belgium			
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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		
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Director General Department of Communications Telecommunications Engineering Branch 1241 Clyde Avenue Ottawa, Ontario K2C 1Y3, Canada	Churchill Ottawa Resolute	St. John's Winnipeg	

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Universidad de Concepcion
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Concepcion

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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

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Ionosphere Laboratory
Technical University of Denmark
DK 2800 Lyngby, Denmark

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Narsarsuaq
Sondre Stromfjord
Thule

Finland

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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

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Djibouti
Garchy
Kerguelen

Lannion
Ouagadougou
Poitiers
Tahiti

Tamanrasset
Terre Adelie

Greece

Ionospheric Institute
Nat'l. Observatory of Athens
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Athens

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Dr. J. Taubenheim
Heinrich-Hertz Inst.
DDR 1199 Berlin-Adlershof
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German Dem. Rep

Juliusruh/Rugen

<u>Address of Data Source</u>	<u>Stations</u>		
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		
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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 Istituto 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		
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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 Telecomunicaciones Mexico 12, D.F. Mexico	Mexico		

Address of Data SourceStations

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Royal Netherlands Meteorological Inst.
297 Utrechtseweg
De Bilt, Netherland

De Bilt
Paramaribo

New Zealand

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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

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Radio Wave Propagation Bureau
Division for Electronics
Norwegian Defense Research Estab.
P.O. Box 25
N-2007 Kjeller, Norway

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Observatory of Ebro
Roquetas (Tarragona), Spain

Tortosa

Address of Data SourceStations

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Research Institute of National Defence
Section 346
S-104 50 Stockholm, Sweden

Kiruna
Lycksele
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Slough
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Cape Schmidt
Dixon
Gorky
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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.
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- 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 \$4.27.
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