

**IEA**  
**SOLAR R&D**

**INTERNATIONAL ENERGY AGENCY**

**program  
to develop and test  
solar heating  
and cooling systems**

**task V**

# **solar radiation data source catalogue**

**october 1980**

## INTERNATIONAL ENERGY AGENCY

In order to strengthen cooperation in the vital area of energy policy, an Agreement on an International Energy Program was formulated among a number of industrialized countries in November 1974. The International Energy Agency (IEA) was established as an autonomous body within the Organization for Economic Cooperation and Development (OECD) to administer that agreement. Nineteen countries are currently members of the IEA, with the Commission of the European Communities participating under a special arrangement.

As one element of the International Energy Program, the participants undertake cooperative activities in energy research, development, and demonstration. A number of new and improved energy technologies which have the potential of making significant contributions to our energy needs were identified for collaborative efforts. The IEA Committee on Energy Research and Development (CRD), assisted by a small Secretariat, coordinates the energy research, development, and demonstration program.

### Solar heating and cooling program

Solar Heating and Cooling was one of the technologies selected by the IEA for a collaborative effort. The objective was to undertake cooperative research, development, demonstrations and exchanges of information in order to advance the activities of all Participants in the field of solar heating and cooling systems. Several sub-projects or »tasks» were developed in key areas of solar heating and cooling. A formal Implementing Agreement for this Program, covering the contributions, obligations and rights of the Participants, as well as the scope of each task, was prepared and signed by 15 countries and the Commission of the European Communities. The overall program is managed by an Executive Committee, while the management of the sub-projects is the responsibility of Operating Agents who act on behalf of the other Participants.

*The tasks of the IEA Solar Heating and Cooling Program and their respective Operating Agents are:*

- I Investigation of the Performance of Solar Heating and Cooling Systems – Technical University of Denmark
- II Coordination of R & D on Solar Heating and Cooling Components – Agency of Industrial Science and Technology, Japan
- III Performance Testing of Solar Collectors – Kernforschungsanlage Julich, Federal Republic of Germany
- IV Development of an Insolation Handbook and Instrumentation Package – United States Department of Energy
- V Use of Existing Meteorological Information for Solar Energy Application – Swedish Meteorological and Hydrological Institute
- VI Performance of Solar Heating, Cooling and Hot Water Systems using Evacuated Collectors – United States Department of Energy
- VII Central Solar Heating Plants with Seasonal Storage – Swedish Council for Building Research

Collaboration in additional areas is likely to be considered as projects are completed or fruitful topics for cooperation identified.

### Task V – Use of existing meteorological information for solar energy application

Recognizing the importance of resource information, two of the five tasks were designated as meteorological support tasks for solar heating and cooling research and applications. The objectives of Task V are to improve the availability of existing solar radiation and related meteorological data and to support the collection and presentation of such data in an effective manner for the solar energy community.

*The project is comprised of the following subtasks:*

- A Compilation of Sources of Solar Radiation and Relevant Meteorological Data
- B Preparation of a Handbook on Estimation Methods
- C Recommendations Concerning Meteorological Stations
- D Preparation of a Uniform Format for Presentation of Data.

*The following countries are participants in this task: Austria, Belgium, Canada, Denmark, Germany, Italy, the Netherlands, Spain, Sweden, Switzerland, United Kingdom, USA, and the Commission of European Communities.*

This report documents work carried out under subtask A of this task. The cooperative work and resulting report is described in the following section.

# **solar radiation data source catalogue**

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October 1980

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This report is part of the work within the IEA Solar Heating and Cooling Program,  
Task V: Use of Existing Meteorological Information for Solar Energy Application  
Subtask A: Compilations of Sources of Solar Radiation and Relevant Meteorological Data.

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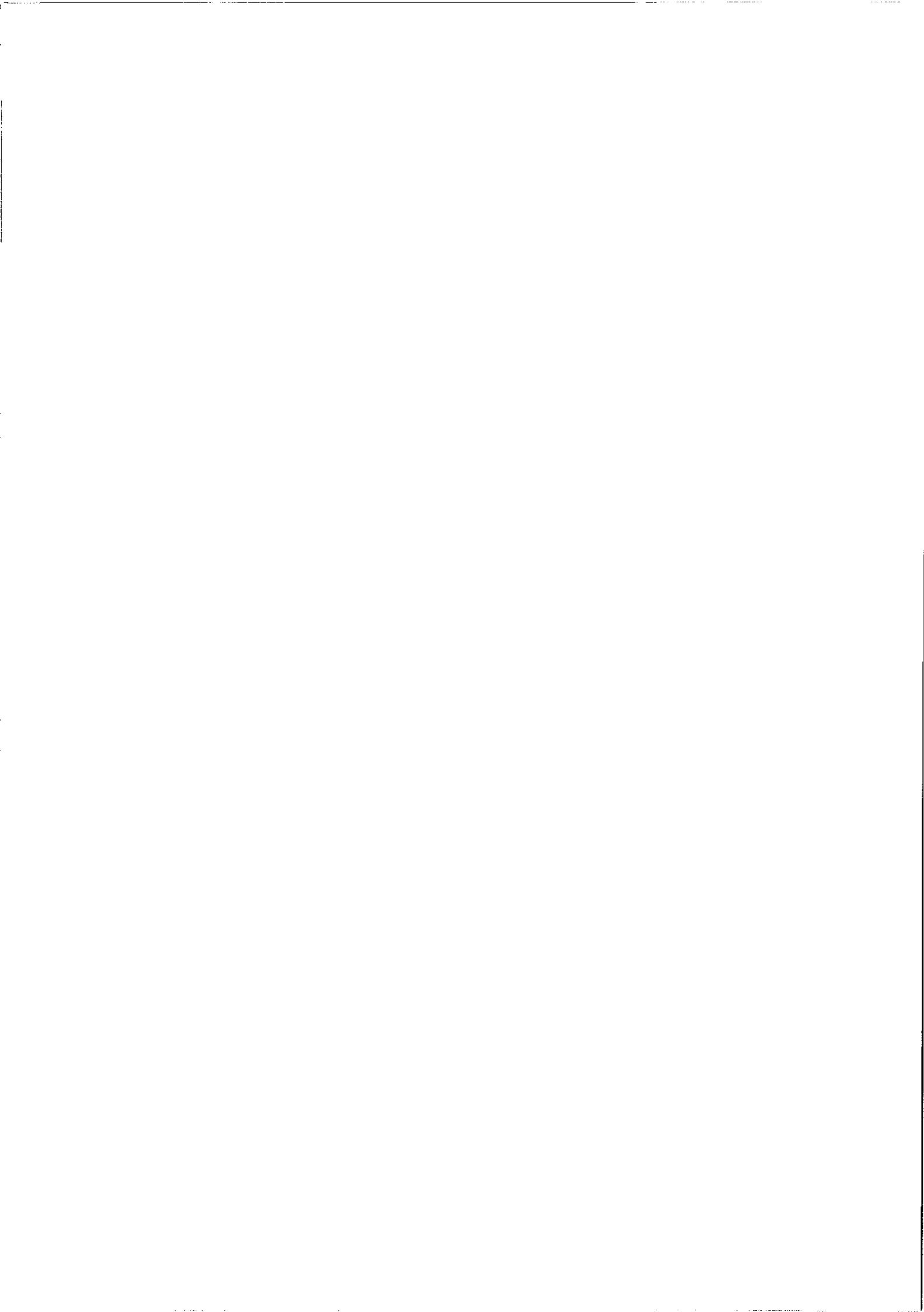
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## INTRODUCTION

The intention of the Data Source Catalogue is to increase the availability of existing radiation data and relevant meteorological data.

The catalogue consists of three parts here called Introduction (I), Explanation (II), and Data List (III).

In part I several important concepts of radiation are introduced together with a brief presentation of radiation quantities and radiation instruments. To get more than a general view of those and related subjects the IEA-Handbook is recommended. This and other publications are included in the reference list, see page (1-31).

The purpose of part II is to give all information needed for an optimal use and understanding of the data presented in part III.

Part III is a compilation of radiation data sources and radiation stations. It also includes addresses where requests for these data should be sent.

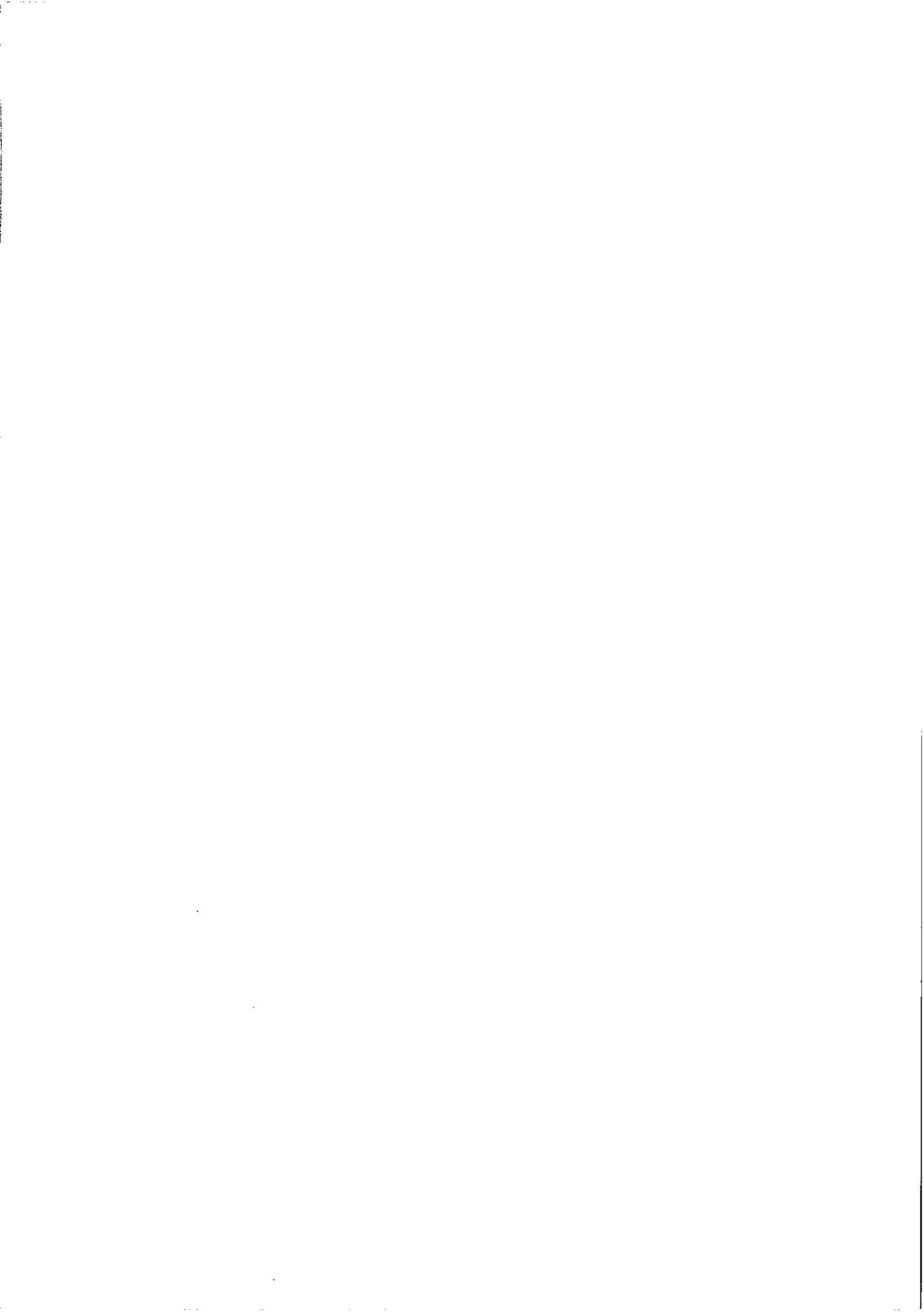
Solar radiation data and related weather data may be corrected, controlled and published, microfilmed, placed on punch cards or magnetic tape. Sometimes it is only available in a raw form as recorded on strip charts etc.

If known, the type of storing is given in the Data List i.e. published, data sheets, magnetic tapes or punch cards and strip charts.

The question of the representativeness and accuracy of the radiation data listed in this catalogue is not discussed. For detailed information contact the organization that is collecting and storing the data. The only method to obtain detailed and accurate data on solar radiation is to measure carefully with an accurate instrument at the site of interest. However, there are methods of estimating solar radiation fluxes where measurements are not available.

Solar radiation models and interpolation techniques are discussed in references [1,5,21-24].

Since the compilation of this book many changes have occurred and will occur. The number of stations and the amount of radiation data are increasing rapidly. As it is our intention to keep the Solar Radiation Data Source Catalogue up to date the reader is respectfully requested to report any known change or correction of information that should be included.



### SOLAR AND TERRESTRIAL RADIATION

The driving power of the ocean currents, the wind and the photosynthetic process emerges from the sun. This power arrives at the earth as electromagnetic radiation, so called extraterrestrial solar radiation. More than 99% of the energy is concentrated in the spectral range 0.15-4.0 m.

The intensity of the radiation varies about  $\pm 3\%$  from the average value, the "solar constant" ( $1.368 \text{ kW/m}^2$ , [12]) due to the elliptical orbit of the earth.

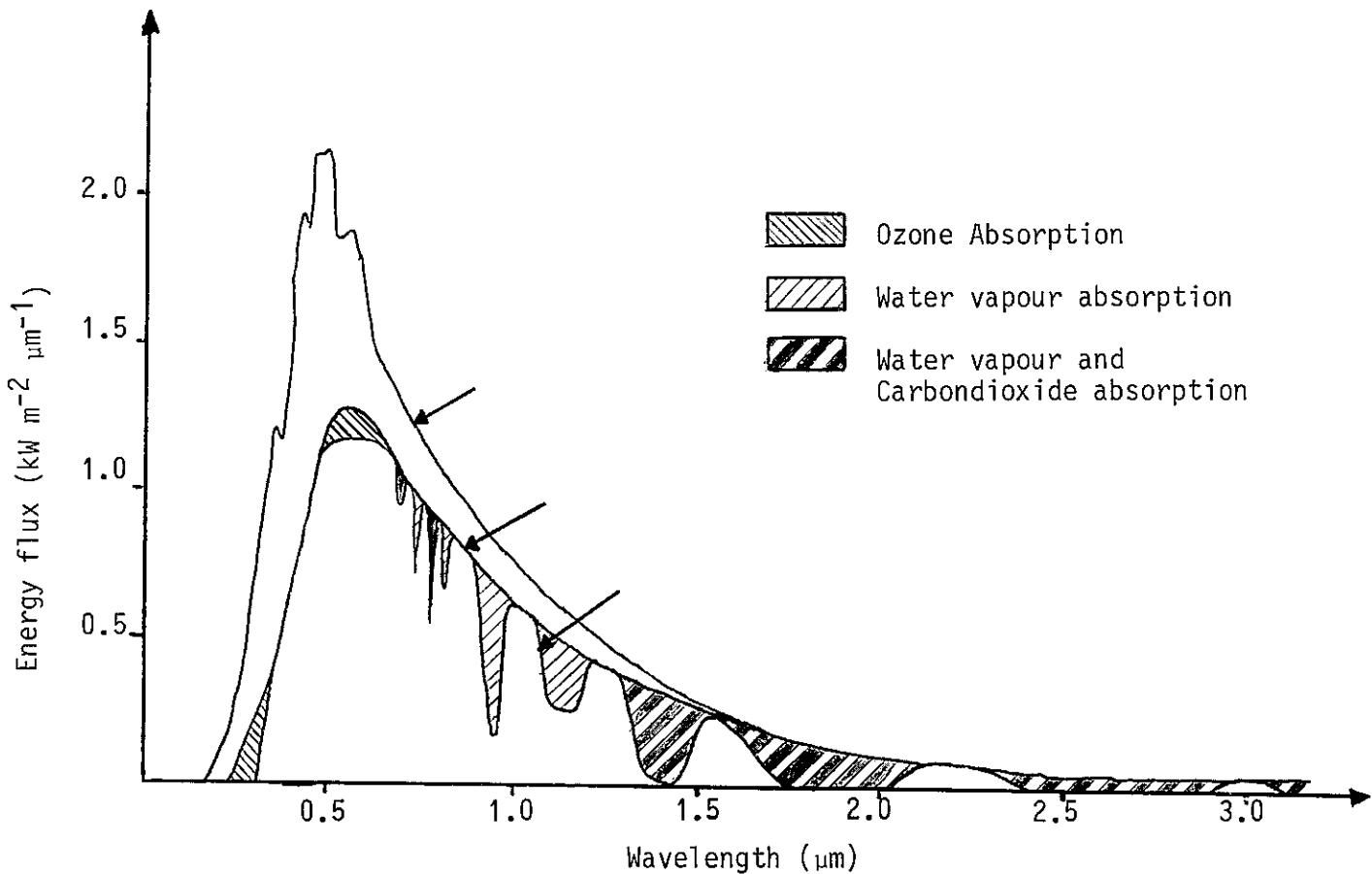


Fig. 1 Schematic spectral distribution of solar radiation:

1. Outside the Earth's atmosphere.
2. Typical at sealevel after scattering in dust and molecules and
3. after absorption.

There are many processes in the atmosphere affecting the character and reducing the intensity of the solar radiation. The primary ones are scattering, absorption and reflection. The first and the last process change the direction of the rays while the remaining effect reduces the energy of the radiation.

Principal producers of scattering are

- i) dry air molecules
- ii) water vapour molecules and
- iii) aerosols

Principal absorbers are

- i) ozone
- ii) carbon dioxide
- iii) water vapour and
- iv) dust

Principal reflectors are

- i) clouds and
- ii) dust

The intensity reduction of the direct solar radiation caused by aerosols in the atmosphere can be described by a parameter called the atmospheric turbidity. Several methods exist to characterize the effect of turbidity, usually by studying the attenuation of the direct solar radiation. Well known turbidity parameters are the Ångström and the Schüepp turbidity coefficients and also the turbidity factor of Linke.

With a simple instrument called the Volz Sunphotometer the direct solar radiation attenuation (in one or two narrow spectral regions) can be measured in order to determine the Schüepp turbidity coefficient.

There exists a network organised by the WMO (World Meteorological Organization) using this method (the main part of the compilation called "Turbidity Network" in this catalogue) from which data are available in the publication "Atmospheric Turbidity and Precipitation Chemistry Data for the World", Environmental Data Service, Asheville, N.C. 28801, USA.

Representative turbidity values in rural areas are in the summer 0.1 and in the winter 0.05. Urban areas have higher values caused by pollution in the lower layers of the atmosphere.

In the stratosphere an upper layer of dust caused by aerosols from large volcanic eruptions contributes to the turbidity.

Another important parameter affecting the radiation is the reflectance, also called the albedo. For instance overcast sky and snow covered ground causes multiple reflection which contributes considerably to the diffuse solar radiation.

For a specific surface (soil, vegetation cover, snow etc.) the albedo is not fully specified by knowing the composition and the state of the surface, e.g. roughness and humidity. Primarily the spectral range must be defined because the wavelength dependence is considerable. For example the albedo of maize (corn) is about 10% in the visible and about 30% in the near infrared part of spectrum.

The albedo values for the range  $0.3 - 4.0 \mu\text{m}$  will be affected as the spectral composition of global and diffuse solar radiation varies with solar height, cloud and turbidity conditions.

Another factor influencing the albedo is the angle of incidence of the radiation. That is why the albedo is significantly dependent upon solar elevation, especially for smooth surfaces and low altitudes of the sun.

The complex dependence on different factors causes daily, yearly and spatial variations of the albedo.

A few examples of albedo values can be found in table 2. More detailed information on albedo can be found in references [1, 5, 14, 15, 16, 17, 18] and some of those contain additional useful ones.

The earth and its atmosphere absorb much of the solar radiation. To avoid overheating the surface of the earth and the atmosphere with its clouds, dust and gases must radiate energy into the space. This energy balance is outlined in fig. 2.

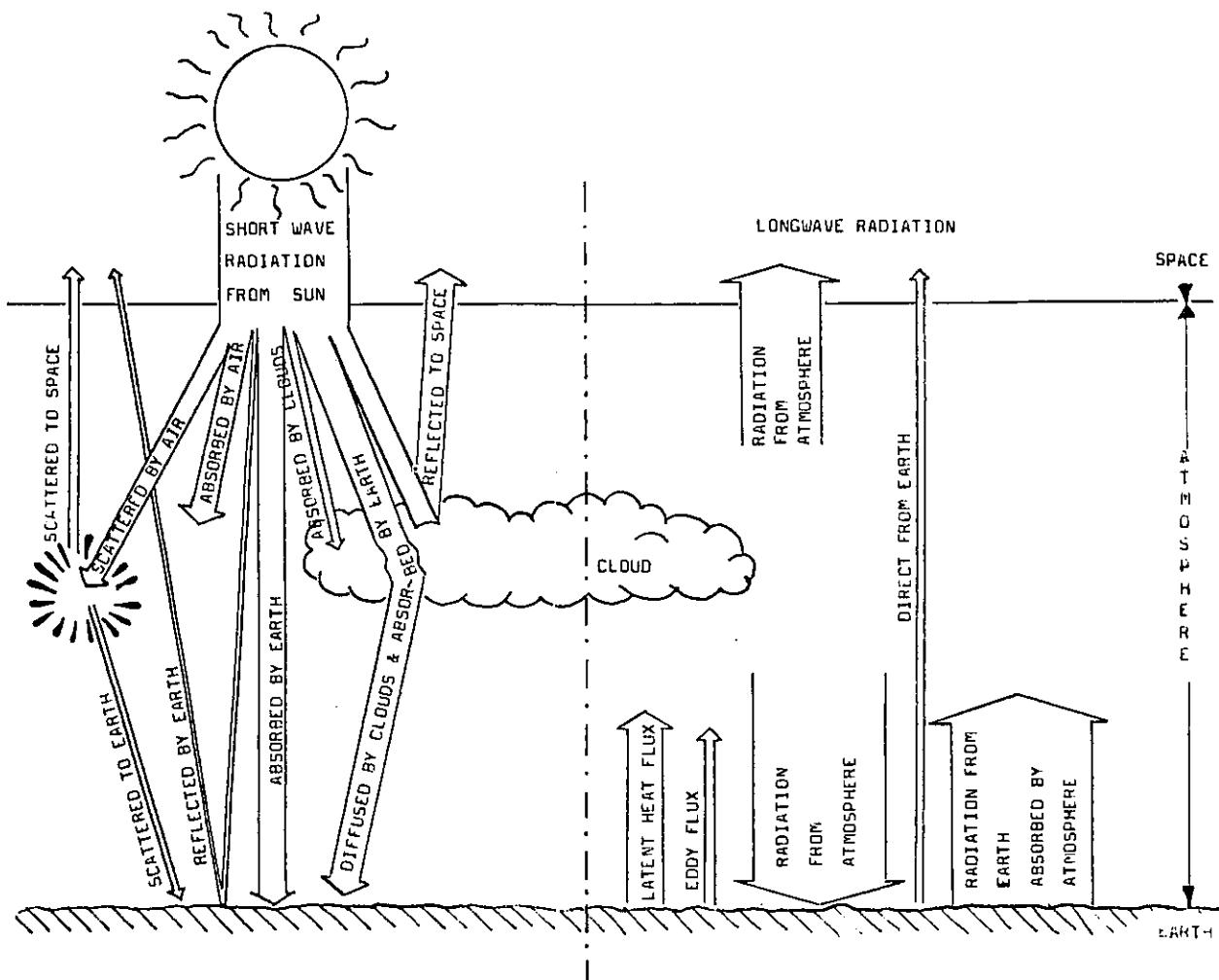


Fig. 2 Earth and atmosphere energy balance, [19].

More than 99% of the energy is emitted in the spectral range 4-100  $\mu\text{m}$ . Since this range does not coincide with that of solar radiation, a special denomination is used in meteorology, namely longwave radiation or terrestrial radiation to distinguish it from the short-wave radiation or solar radiation.

The transmittance of longwave radiation in the atmosphere shows a strong variation with the wavelength. In the range 8-13  $\mu\text{m}$  the air is very transparent and radiation can escape to space. This spectral range is known as the atmospheric window.

On the other hand, at some wavelengths absorption and emission of the atmosphere is so strong that only a one meter layer of air is needed to totally absorb the radiation emitted by a specific object.

The main gaseous absorbers and emitters of longwave radiation in the atmosphere are not oxygen and nitrogen but water vapour, carbon dioxide and ozone. Dust and clouds act approximately as 'black bodies' in the terrestrial range, i.e. they absorb all the incident radiation and emit the maximum radiation in that range.

## COMPONENTS OF RADIATION

This is a brief presentation of the different radiation components and some of their properties. The terminology and the abbreviations for the various fluxes are defined in legend 2.

### Solar radiation components

The primary flux is the DIRECT SOLAR RADIATION measured at normal incidence. The magnitude of the flux depends on the attenuation in the atmosphere and especially by clouds.

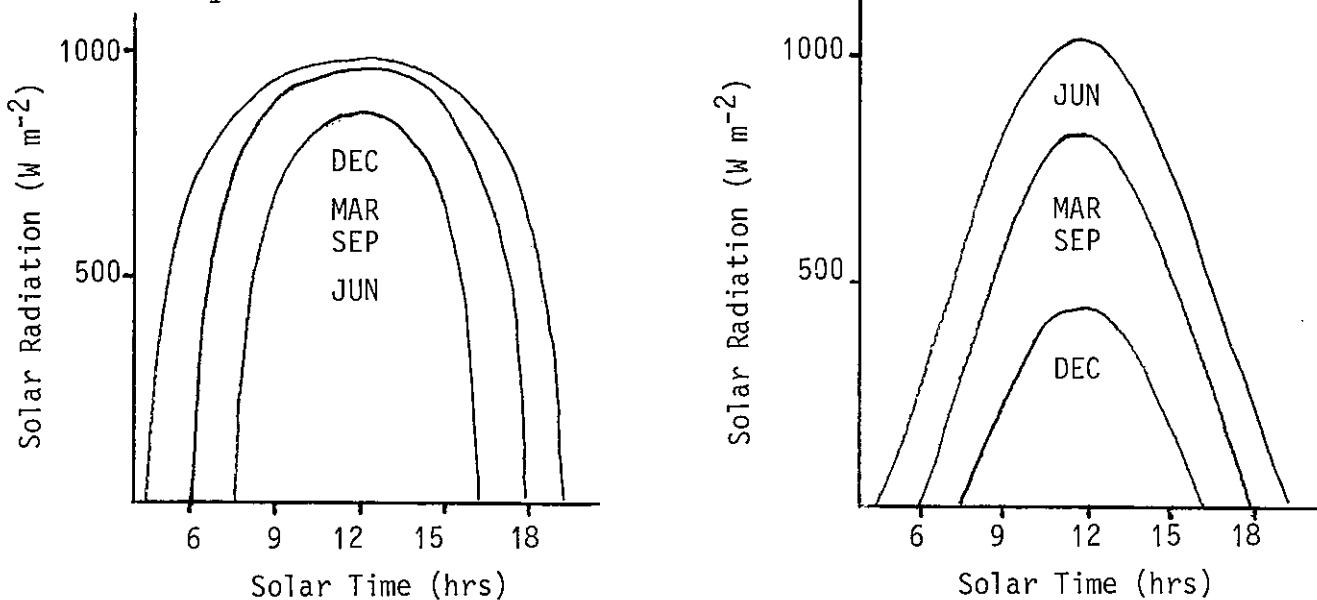


Fig. 3 Example of the daily variation of direct solar radiation (left) and global radiation (right) for a very clear day and for different times of the year at approximately  $45^{\circ}$  latitude.

Radiation received directly from the solid angle of the sun's disk and also scattered and reflected radiation from the sky is called GLOBAL RADIATION, earlier referred to as TOTAL RADIATION. It is usually measured on a horizontal surface. If the receiving surface is inclined a reflected flux is introduced. The measured radiation depends not only on the orientation and tilt of the surface but also on the albedo of the surroundings.

The DIFFUSE SOLAR RADIATION or SKY RADIATION is the scattered and diffusely reflected radiation from the sky. In clear conditions the diffuse solar radiation is about 10-30% of the global radiation. If the sun is obscured the components are identical.

The upward solar radiation reflected by the Earth's surface is called REFLECTED GLOBAL RADIATION.

The components above are usually measured so that all solar radiation is included. With the aid of filters the solar radiation in selected spectral bands can be measured. A purpose of those measurements may be to determine the atmospheric turbidity. A list of filters and their transmission bands is presented in legend 7.

Special cases are the measurement of the DAYLIGHT ILLUMINATION, the PHOTOSYNTHETICALLY ACTIVE RADIATION (PAR) and the ULTRAVIOLET RADIATION.

Measurements are also made of the solar radiation falling on a spherical receiving surface. The result will be dependent of the albedo of the surrounding, which implies less accuracy. Those observations are of minor importance for solar energy applications but in many countries it is the only radiation quantity measured. Daily values can be converted to the corresponding global radiation as received by a horizontal surface.

The SUNSHINE DURATION is the amount of time in which the direct solar radiation can activate the recording instrument, threshold limit approximately  $200 \text{ W/m}^2$ . It is not an energy measurement but a determination of the time the sun is unobscured by clouds, dust etc. Therefore the sunshine duration is highly correlated with the cloudiness, which in turn has a great influence on the solar energy fluxes.

A great number of stations measure sunshine duration, many of them with records extending over long periods. This makes sunshine data valuable for statistical treatment and for estimating global radiation in sparse networks.

The high correlation between sunshine duration and global radiation particularly for periods of several days or a month implies the existence of a relationship.

A frequently used linear relation between global radiation  $G$  and percentage of possible sunshine  $S$  is

$$G = G_0 (a + bS)$$

where  $G_0$  is the extraterrestrial solar radiation on a horizontal surface and  $a$  and  $b$  are empirical constants.

#### Terrestrial radiation and total radiation components

Terrestrial radiation is emitted by all matter and is more complex to describe than solar radiation. In a broad sense terrestrial radiation behaves as if it is a diffuse flux.

The measured fluxes through a horizontal surface are the DOWNWARD ATMOSPHERIC RADIATION, the UPWARD TERRESTRIAL RADIATION and the NET TERRESTRIAL RADIATION.

Total radiation is the sum of solar radiation and terrestrial radiation. The quantities usually measured are the DOWNWARD TOTAL RADIATION, the UPWARD TOTAL RADIATION and the NET RADIATION.

## RADIATION INSTRUMENTS

The terminology for radiation instruments used in the Data Source Catalogue is the terminology recommended by the World Meteorological Organization.

### PYRHELIOMETER

A pyrheliometer is an instrument for measuring the intensity of direct solar radiation at normal incidence.

### PYRANOMETER

A pyranometer is an instrument for the measurement of the solar radiation received from the whole hemisphere. It is suitable for the measurement of global or sky radiation.

### PYRGEOMETER

A pyrgeometer is an instrument for the measurement of net atmospheric radiation on a horizontal upward-facing black surface at the ambient temperature.

### PYRRADIOMETER

A pyrradiometer is an instrument for the measurement of both solar and terrestrial radiation (total radiation).

### NET PYRRADIOMETER

A net pyrradiometer is an instrument for the measurement of the net flux of downward and upward total (solar, terrestrial surface and atmospheric) radiation through a horizontal surface.

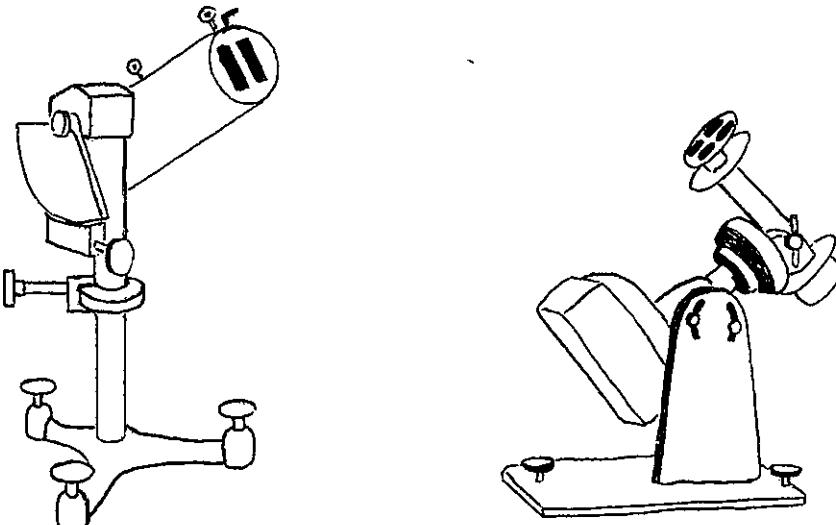


Fig. 4 The Ångström electrical compensation pyrheliometer.

Fig. 5 The Eppley Normal Incidence Pyrheliometer (NIP) mounted on a solar tracker

## Pyrheliometers

Direct solar radiation is measured with pyrheliometers. Only the most well known types are discussed briefly below.

The WMO classifies pyrheliometers as standard, first class and second class. Another classification is based on the concept of absolute and relative instrument. Most pyrheliometers are relative instruments and have to be calibrated against a standard instrument, normally the Ångström pyrheliometer or the silver-disk pyrheliometer, although the second one is not an absolute instrument.

During the 1960's substantial efforts have been made to develop improved absolute pyrheliometers. Well known are the Active Cavity Radiometer (ACR) and the Practical Absolute Cavity Radiometer (PACRAD), now commercially available as the Eppley-Kendall radiometer. They are often referred to as absolute radiometers, cavity pyrheliometers or self calibrating pyrheliometers. In comparisons the measurements of these new developed pyrheliometers have produced close agreement.

Pyrheliometers are often provided with filters to make it possible to measure the solar radiation in various bands.

Instruments in routine operation have large aperture angles compared with the angle of the sun's disk,  $0.5^\circ$ . Consequently they will view different amounts of the circum-solar sky, e.g. Ångström pyrheliometer  $3^\circ \times 12^\circ$  or  $2^\circ \times 7^\circ$ , Eppley NIP  $5.7^\circ$  diameter of circular aperture, Linke-Feussner pyrheliometer  $10.2^\circ$  diameter of circular aperture. This will introduce an error if the purpose of the measurement is to determine the radiation from the sun's disk only or to compare two pyrheliometers with different apertures.

Other sources of error are turbulent transport of heat from the sensor, dependence of instrument temperature and scattering of radiation inside the instrument.

### The Ångström pyrheliometer

The sensor of the pyrheliometer is two blackened manganin strips situated at the lower end of a collimator tube. The strips can alternately be shaded from the sun and each of them is connected to an electrical circuit.

Two thermojunctions are attached to register the temperature difference between the strips.

In operation one strip is exposed to the direct solar radiation, while the other one is heated by an electric current to achieve equal temperature of the strips. This is controlled by a galvanometer connected to the thermojunctions.

By alternate exposure of the strips the compensation electric current,  $i$ , is determined. The direct solar radiation,  $I$ , is then obtained from

$$I = K i^2$$

where  $K$  is the instrument constant. Normally  $K$  is determined by reference to a standard pyrheliometer, but it may be calculated in terms of the instrument characteristics. Therefore the Ångström pyrheliometer is an absolute instrument. Fig. 4.

#### The silver-disk pyrheliometer

In the silver-disk pyrheliometer solar radiation is absorbed by a blackened silver disk at the base of a collimator tube, with aperture angle  $5.7^\circ$  diameter.

A shutter is rotated to alternately shade and expose the disk. A thermometer inserted into the disk measures the changes in temperature due to the radiation. Readings and shadings are made in carefully timed sequence. When the temperature readings are corrected for air, stem and bulb temperatures the direct solar radiation may be obtained.

#### Eppley normal incidence pyrheliometer (NIP)

The sensitive element of the Eppley NIP is a thermopile mounted at the base of a brass tube, which is hermetically sealed and filled with dry air. A temperature compensating circuit minimizes the dependence on ambient temperature.

The pyrheliometer has a robust and weatherproof design and is provided with a filter wheel for spectral measurements. It is suitable for spot readings as well as for continuous recording. In the latter case an equatorial mounting is required for sun tracking (fig. 5).

#### Linke-Feussner pyrheliometer

In the Linke-Feussner pyrheliometer two equal sections of a thermopile are used as the sensor. One section is exposed to the radiation and the other is shaded. Temperature fluctuations of the environment are compensated because they are supposed to influence both sections equally. A thermometer embedded in the pyrheliometer makes it possible to correct the measurements for their dependence on the instrument temperature.

#### Michelson bimetallic pyrheliometer

In the Michelson bimetallic pyrheliometer the solar radiation causes a deflection of a very fine bimetallic fiber, that is observed through a microscope. The instrument must be frequently compared to a reference standard to achieve a reliable calibration constant.

## Pyranometers

Instruments called pyranometers are used to measure solar radiation from a solid angle of  $2\pi$  steradians. The pyranometer is usually mounted horizontally but it can of course have another orientation, in which case reflected solar radiation will have an influence on the measurement.

The diffuse solar radiation component is measured by shading the pyranometer from direct solar radiation with a shadow ring or with a sun tracking disk, see fig. 6 & 7. Compared with the shading disk equipment, the shadow ring is simple in construction and also inexpensive. A correction factor has to be used, because a part of the diffuse solar radiation is intercepted by the shading ring.

### Thermopile types

Most pyranometers in routine use are of the thermopile type. Most popular are those manufactured by Eppley Lab. and Kipp and Zonen. These instruments have a thermopile that records the temperature difference between a black surface, exposed to solar radiation, and a white surface or a heat sink. The difference is a function of the amount of solar radiation.

To protect the receiving surface from the influence of wind, dust, precipitation etc., and to filter terrestrial radiation it is covered by one or two glass hemispheres. Glass hemispheres in use are transparent for the main part of the solar spectrum. In the ultraviolet region the transmission decreases and for the infrared radiation with wavelengths greater than  $2-5 \mu\text{m}$  the glass is opaque.

This selective spectral sensitivity introduces errors if the measurement conditions are different from those under which the instrument is calibrated. For routine use this error is negligible.

The whole ultraviolet part of the solar radiation penetrating the atmosphere will be included in the measurement if the glass hemisphere is replaced by one of quartz.

For measurement in selected spectral bands the glass dome is replaced by spectral filters. Different Schott spectral filters and their spectral range of transmission are presented in legend 7.

The response of a pyranometer should be proportional to the cosine of the angle of incidence of radiation. For practical instruments the response does not follow the true cosine variation, with significant errors occurring at large incidence angles. The rectangular Kipp and Zonen thermopile introduces an asymmetry in azimuth into this cosine error.

Another complication of pyranometers is that the sensitivity depends on the temperature of the instrument. Certain modern instruments are compensated for this effect to minimize this source of error. Data recorded with uncompensated pyranometers may have a considerable error of this type, unless corrections based on the air temperature have been applied to the measured values.

The quality of radiation data is dependent on many factors. A pyranometer that is carefully calibrated and reasonably well maintained, i.e. compared with a standard instrument, inspected at least once a day, cleaned, level controlled, time checked etc., is expected to have an accuracy of  $\pm 5\%$  for daily sums of global radiation. Hourly sums from routine observations of course have lower accuracy, particularly at low sun elevations.

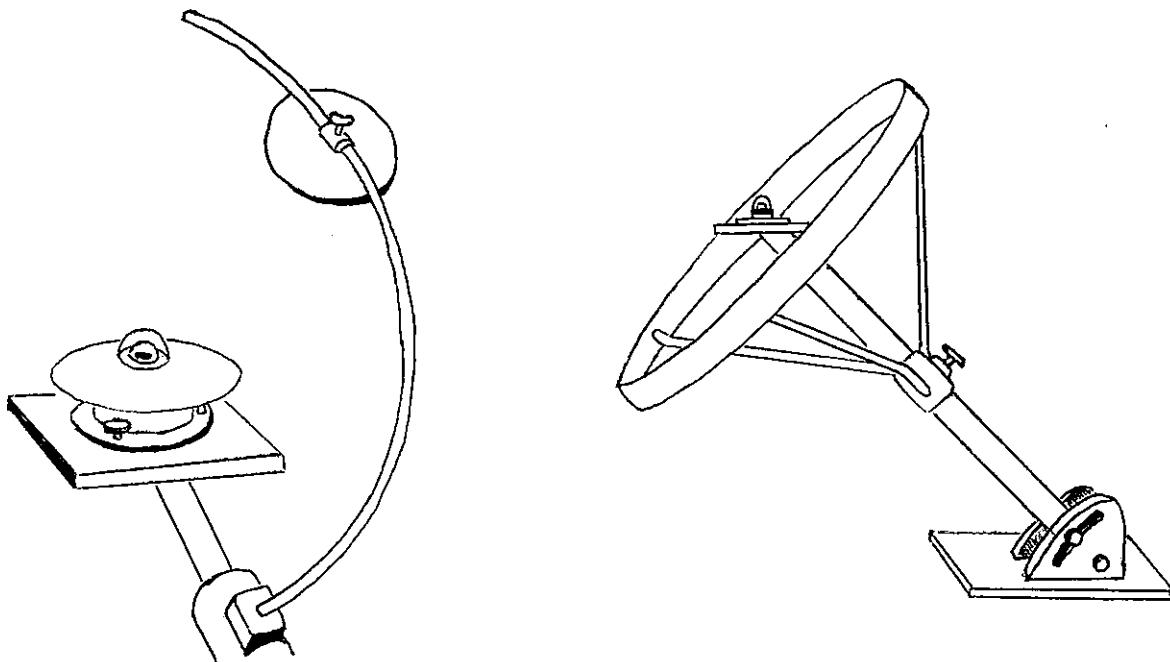


Fig. 6 & 7 A shadow ring and a shading disk together with pyranometers for the measurement of diffuse solar radiation.

#### Bimetallic pyranometers

The bimetallic pyranometer is used all over the world. It is a simple self recording instrument, which makes it suitable for remote operation.

There are different types in routine use but they all work similarly. The sensor is a blackened horizontal bimetallic strip that bends depending on the amount of solar radiation. Through a mechanical linkage the bending causes a deflection of a recorder pen, that makes a trace on a chart mounted on a rotating drum.

The bimetallic pyranometer is not recommended for any measurements except daily totals. Even with the most careful calibration these daily totals must be regarded as having an accuracy not better than  $\pm 10\%$ .

The distortion of the strip is not only a function of the amount of solar radiation received. It is also depending on the ambient temperature and the fact that the strip does not remain flat. This in turn makes the calibration constant a function of both solar elevation and solar azimuth.

Due to the large heat capacity of the sensor the response (98% of a step-function change of radiation) is slow, 10-15 minutes.

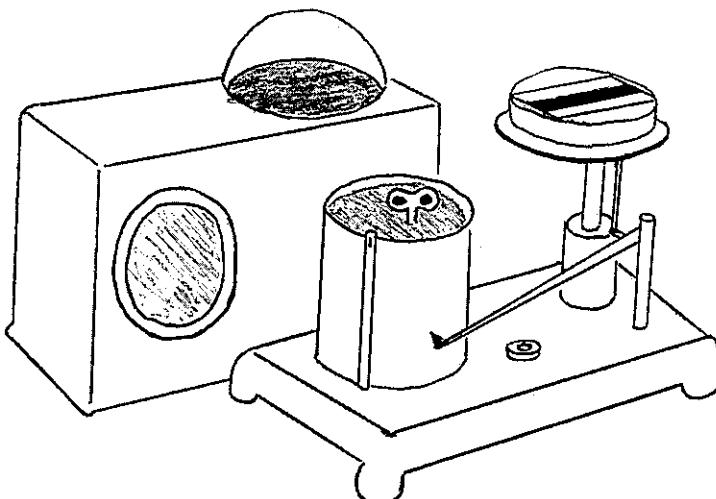


Fig. 8 A bimetallic pyranometer (actinograph) with cover removed.

#### Solar cells

Solar cells are simple and inexpensive. This makes them attractive as sensors in pyranometers.

Two main disadvantages of solar cells are that they only measures a part of the solar spectrum and that the response deviates strongly from the ideal cosine law. Generally the cosine response is improved by mounting the cell below a diffuser.

Despite low accuracy solar cells are used to measure radiation, preferably daily sums.

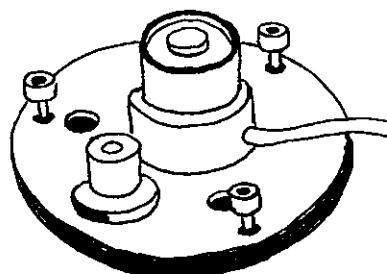


Fig. 9 Mounted solar cell sensor from Lambda Inst. Corp.

Spherical distillation pyranometers

Measurements of global radiation on a spherical surface with different types of the Gunn-Bellani integrating spherical pyranometer are denoted G(BS) in the Data Source Catalogue. A number of models of the instrument are available but they all have the same basic design.

Solar radiation is absorbed by the blackened surface of a sphere enclosed in a glass-bulb. The black sphere, containing a liquid, is heated. The liquid evaporates and the vapour is transferred to a chamber where it is condensed.

The accumulated volume of the liquid in the chamber is a measure of the radiation received. It is normally read and reset once a day. More frequent readings will be affected with large errors, because of the great lag of the instrument due to the large heat capacity of the black sphere and the liquid.

Sources of error for the spherical pyranometer are ambient air temperature, wind speed, temperature dependent threshold radiation and of course the albedo of the surroundings.

Distillation pyranometers with a horizontal surface exist but normally the data referred to a spherical surface are converted to give the global radiation as received by a horizontal surface. This conversion of course lowers the accuracy of data.

### Recorders of sunshine duration

Different types of instrument have been used to measure the duration of sunshine. The measurement with one type of instrument will probably not agree with that made with another instrument. Therefore the Campbell-Stokes recorder was adopted as standard of reference in 1962. It is called the interim reference sunshine recorder (IRSR) and in the future all values of sunshine duration should be reduced to this standard, if not a note with the reduction factor should be attached to the data.

The two most common instruments (1979) are presented below. New types of instruments have been developed and data from those will be available in a near future.

#### Campbell-Stokes sunshine recorder

The Campbell-Stokes sunshine recorder consists of a glass-sphere mounted in a section of a spherical bowl. The sun's rays are focused, by the sphere, on a card inserted in slots inside the bowl. If the intensity of solar radiation is over the threshold limit (IRSR-threshold approximately  $200 \text{ W/m}^2$ ) a trace is burned in the card.

Sources of error are unsatisfactory adjustment of the bowl, inserting of the cards, levelling of the instrument and also wet cards and frost on the bowl. The latter can be prevented by heating the instrument.

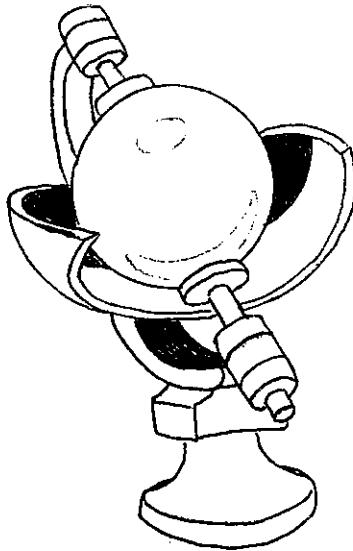


Fig. 10 The Campbell-Stokes sunshine recorder.

#### Foster sunshine switch

In the Foster sunshine switch two photo-cells act as the sensor. One cell is shielded from the direct solar radiation, while the other is not. They are both exposed to the diffuse solar radiation, but balanced to each other that no response result if the sun is obscured. However, exposed to direct solar radiation

there will be imbalance between the cells and the instrument gives a response activating a recorder.

This instrument is not commercially available.

### Pyrgeometers, pyrradiometers and net pyrradiometers

Radiometers for the measurement of longwave radiation are called pyrgeometers.

Total radiation (longwave and shortwave radiation) and net radiation are measured with pyrradiometers and net pyrradiometers.

A large number of different types of radiometers measuring these components exist. Below only a selection of instrument will be presented but different types have many problems and operate in common and it will be beyond the scope of this introduction to enter into details. For further information reference may be made to the manufactures manuals and to [1, 6].

The large spectral range that is to be measured by pyrradiometers introduce specific problems, because there is no ideal material either for the "black" receiving surface or for a shielding dome. This makes the response, the calibration and the cosine-error dependent on the wavelength.

Estimates of the accuracy of net radiation measurements during the IGY, International Geophysical Year 1957-1958, as quoted by Robinson 1964, [20], are the following:

Hourly sums	$\pm 20\%$ or $\pm 20 \text{ Jcm}^{-2}$ , whichever the largest
Daily sums	$\pm 15\%$ or $\pm 40 \text{ Jcm}^{-2}$ , whichever the largest
Monthly sums	$\pm 15\%$ or $\pm 400 \text{ Jcm}^{-2}$ , whichever the largest
Annual sums	$\pm 15\%$ or $\pm 800 \text{ Jcm}^{-2}$ , whichever the largest

The estimated accuracy of downward atmospheric radiation and net radiation during the IFYGL, International Field Year for the Great Lakes, is approximately  $\pm 4\%$ . Reference [4].

### Eppley precision infrared radiometer (pyrgeometer)

This pyrgeometer is a development of the Eppley PSP. The sensitive element is a blackened surface of a thermopile and the response is compensated for dependence of the instrument temperature.

Shortwave radiation is eliminated by a silicon hemisphere with an interference filter deposited on its inner surface. The transmission of longwave radiation is in the range 4-50  $\mu\text{m}$ .

If using data from this instrument one must be careful, because accurate measurements are difficult to obtain.

### Gier and Dunkle net pyrradiometer and pyrradiometer (Beckman and Whitley, Teledyne Geotech)

The sensor of the radiometer consists of a thermopile between two thin blackened and horizontal plates. The temperature difference between the upper and lower surface is assumed to be a function of the difference

in radiation incident upon the two surfaces but heat can also be exchanged with the ambient air by nonradiative processes, e.g. evaporation, convection and conduction.

This problem can partly be controlled by shielding the sensor or, as for the Gier and Dunkle instrument, by establishing a ventilation across the plates. The ventilation must be uniform to assure that convective heat losses from both plates are equal. This can be tested by inverting the instrument.

The wind affects the response, particularly at counter-flow and for speeds over 5 m/s.

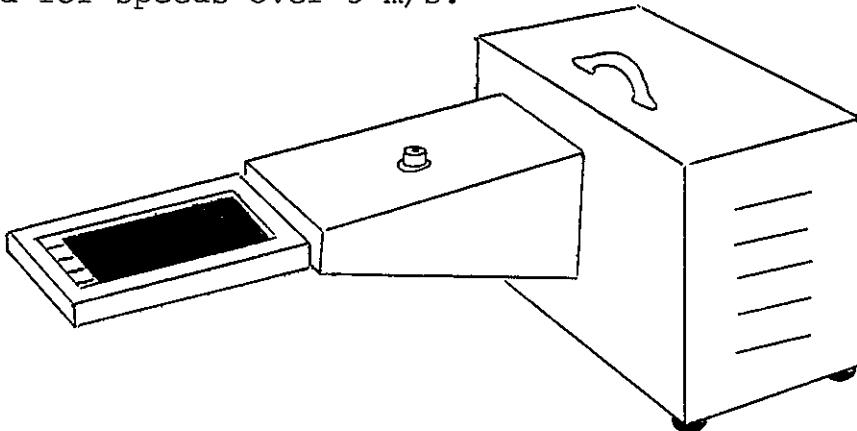


Fig. 11 The Gier and Duncle net pyrradiometer.

The net pyrradiometer may be converted into a pyrradiometer by putting a blackened plate of metal as a shield below the lower surface. If the temperature of the shield is equal of the temperature of the lower surface the instrument will measure the downward total radiation.

#### Funk net pyrradiometer and pyrradiometer (CSIRO), Middleton

Shielding of the sensor is one method of controlling and minimizing the non-radiative effects.

The receiving surfaces of the Funk net pyrradiometer are protected by two hemispheres of thin polyethylene which is transparent from about 0.3  $\mu\text{m}$  to 100  $\mu\text{m}$ , but there are narrow absorption bands.

To prevent condensation and to keep the shield spherical they are inflated by a slow stream of dry gas. By a heating ring or a stream of dry air the formation of dew on the outside is prevented.

The sensor is a thermopile in good thermal contact with two thin plates of blackened aluminium.

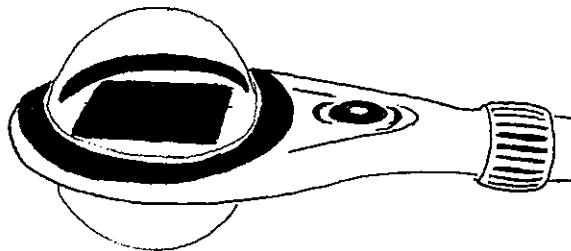


Fig. 12 The Funk net pyrradiometer.

The Funk net pyrradiometer and also other types of net pyrradiometers can be used as pyrradiometers by shielding one surface of the sensor from radiation exchange. The measured response is a function of the incident radiation upon the other surface minus the radiation emitted by the instrument itself. The latter can be determined by measuring the temperature of the instrument.

### General remarks about quality of radiation data

Before dealing with measured radiation data one should be aware of some fundamental concepts, namely the time system used, the radiometric scale and units of the data and their estimated accuracy.

Solar data are often related to True Solar Time (TST), alternatively called Local Apparent Time (LAT) and not to Local Standard Time (LST). As a consequence hourly values recorded in two different systems are not comparable. Fortunately this is not true for daily and monthly values. The Japan Meteorological Agency uses LST and so does NOAA (USA) since 1977.

Despite the introduction of the International System of Units (SI) there are still, and will probably remain so, other units in use for radiation quantities, for example  $\text{J cm}^{-2}$  and  $\text{mWh cm}^{-2}$ .

Earlier the Langley ( $\text{cal cm}^{-2}$ ) was the most frequently used unit for energy density. Conversion factors for units of energy (radian energy), energy density (irradiation) and power density (irradiance) are presented in table 1.

When comparing different data samples it is important to know if they are referred to the same radiometric scale. By recommendation from the International Radiation Conference, Davos 1956, data should be adjusted to the International Pyrheliometric Scale (IPS 1956).

A new reference, the World Radiometric Reference (WRR), is proposed to be brought into effect on 1 January 1981. To change data referred to IPS 1956 to WRR they have to be multiplied by 1.022.

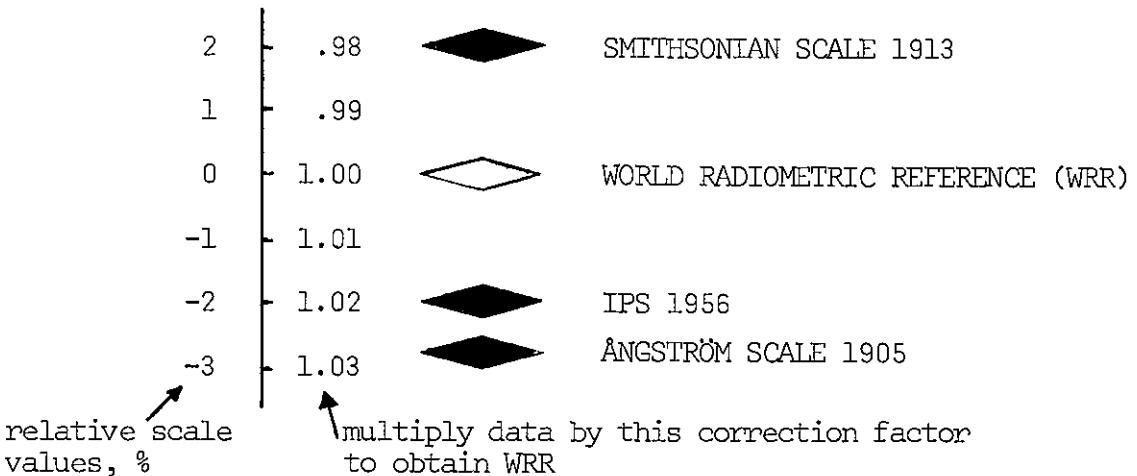


Fig. 13 Radiometric scales and correction factors, [8] .

Measured radiation data may be representative only for a small area around the station and are not necessarily applicable to an adjacent place. Users are cautioned against interpolation techniques as radiation regimes are subject to modifications caused by:

- i) albedo values differing from the surroundings
- ii) non-representative cloudiness
- iii) local air pollution

The main sources of error for radiometers are listed disregarding their significance and application for a specific instrument.

- i) Instrument characteristics
- ii) Recording system
- iii) Maintenance and calibration
- iv) Data processing

The absolute accuracy of radiation data is hard to determine. However, it is possible to make estimates of systematic and random errors to provide an indication of probable errors. References [1, 3, 4, 6, 7, 20].

## RELEVANT METEOROLOGICAL PARAMETERS

This section comprises a brief presentation of meteorological parameters that are relevant for solar energy applications.

For stations listed in the Catalogue there is no explicit information about those parameters, only the daily frequency of observations is given in column 9 of the part called Data List. Detailed information about instruments, accuracy of data etc. can only be given by the administrator of the station.

The accuracy requirements in the text are applicable to most climatological and synoptic observations.  
References [2, 3].

### Wind

The standard exposure of wind instrument is 10 m above the ground and in an open terrain.

- i) Wind direction is usually measured by a vane and is averaged over a 1, 5 or 10 minute period and reported to the nearest 10 degrees.  
Accuracy:  $\pm 10^\circ$
- ii) Wind speed measured by a cup- or propeller-anemometer is averaged over a 1, 5 or 10 minute period and is recorded to the nearest m/s, knot or mile/hour.  
Accuracy:  $\pm 0.5$  m/s up to 5 m/s  
 $\pm 10\%$  above 5 m/s

There are stations recording both the wind direction and the wind speed continuously on strip charts.

### Visibility

The visibility is the greatest distance at which an object can be identified when observed against a background of sky or fog.

Visual observation is the method most used, only a few stations use instruments. The visibility is reported in hectometers and kilometers.

Accuracy:  $\pm 10-20\%$

### Precipitation

The amount of precipitation is the vertical depth in millimeters of the water (if snow, melted) solid or liquid which falls to the ground during a known period of time.

The precipitation is measured with a gauge, a cylinder, open at one end and with a known area.

Accuracy:  $\pm 0.1$  mm up to 10 mm  
 $\pm 2\%$  for larger amounts

Pressure

Atmospheric pressure can be measured by mercury barometers or aneroid barometers. The instrument is usually placed in a room where it is protected from draught, direct sunshine, temperature changes and rough handling.

Pressure is still reported in millibar (mbar) but as this unit does not belong to the International System of Units (SI) there are plans to report the pressure in kilopascals (kPa). A mbar is equal to 100 Pa or  $100 \text{ N/m}^2$ . Standard pressure at sea-level is considered to be 1013.2 mbar or 101.32 kPa. Many stations use a barograph to get a continuous record of the atmospheric pressure.

Accuracy: Mercury barometer  $\pm 30 \text{ Pa}$  (0.3 mbar)  
 Aneroid barometer  $\pm 50 \text{ Pa}$  (0.5 mbar)  
 Barograph  $\pm 100 \text{ Pa}$  (1.0mbar)

Temperature

The temperature is usually recorded in a well ventilated, white painted shelter, in which the sensor is protected from radiation, wind and precipitation. The instrument is supposed to be placed 1.25 - 2 m above ground and in representative surroundings.

A standard instrument is the psychrometer which beside air temperature can be used to determine the humidity of air. Also in common use is the bimetallic thermograph to achieve a continuous record of the temperature. The unit generally used for temperature is degrees centigrade ( $^{\circ}\text{C}$ ).

Accuracy: Psychrometer:  $\pm 0.1^{\circ}\text{C}$   
 Thermometers for extreme temperatures:  $\pm 0.5^{\circ}\text{C}$   
 Bimetallic thermograph:  $\pm 0.5^{\circ}\text{C}$

Humidity

The amount of water vapour in the air can be expressed in many terms; relative humidity, vapour pressure, dew-point etc. They can all be converted into each other if the air temperature and the pressure are known.

Hair hygrometers and psychrometers are most widely used. Readings are very often simultaneous with temperature measurements. For continuous recording hygrographs are in common use.

Accuracy: Psychrometer:  $\pm 2\%$   
 Hair hygrometer:  $\pm 5\%$   
 Hygrograph:  $\pm 5\%$

Less accuracy is achieved at low relative humidity and at low temperature.

Cloud

Visual observation gives the AMOUNT of the sky that is covered with clouds in a scale of tenths or eighths. Note that the clouds do not have to be opaque.

The TYPE of the clouds are also determined by visual observation. For details see the International Cloud Atlas, WMO, Geneva, Vol. I and II, 1956.

HEIGHTS of clouds are reported in dekameters and can be based on visual estimation, aircraft reports or instrument readings. The accuracy depends strongly on the method.

TABLE 1

CONVERSION FACTORSEnergy (radian energy)

From	To	$J = Ws$	kcal	Wh	BTU
$J = Ws$		1	$238.8 \times 10^{-6}$	$277.8 \times 10^{-6}$	$947.8 \times 10^{-6}$
kcal		$4.184 \times 10^3$	1	1.162	3.968
Wh		$3.600 \times 10^3$	$859.8 \times 10^{-3}$	1	3.410
BTU		$1.054 \times 10^3$	$252.0 \times 10^{-3}$	$292.9 \times 10^{-3}$	1

Energy density (irradiation)

From	To	$ly = cal \text{ cm}^{-2}$	$Jm^{-2}$	$Wh \text{ m}^{-2}$	$BTU \text{ ft}^{-2}$
$ly = cal \text{ cm}^{-2}$		1	$41.84 \times 10^3$	11.63	3.6867
$J \text{ m}^{-2}$		$23.89 \times 10^{-6}$	1	$277.8 \times 10^{-6}$	$88.11 \times 10^{-6}$
$Wh \text{ m}^{-2}$		$85.93 \times 10^{-3}$	$3.60 \times 10^3$	1	$316.82 \times 10^{-3}$
$BTU \text{ ft}^{-2}$		$271.25 \times 10^{-3}$	$11.35 \times 10^3$	3.152	1

Power density (irradiance)

From	To	$ly \text{ min}^{-1}$	$Wm^{-2}$	$BTU \text{ min}^{-1} \text{ ft}^{-2}$	$BTU \text{ h}^{-1} \text{ ft}^{-2}$
$ly \text{ min}^{-1}$		1	697.3	3.688	221.2
$Wm^{-2}$		$1.434 \times 10^{-3}$	1	$5.285 \times 10^{-3}$	$317.21 \times 10^{-3}$
$BTU \text{ min}^{-1} \text{ ft}^{-2}$		$271.1 \times 10^{-3}$	189.2	1	59.97
$BTU \text{ h}^{-1} \text{ ft}^{-2}$		$4.5208 \times 10^{-3}$	3.152	$16.68 \times 10^{-3}$	1

Example

To convert BTU  $\text{h}^{-1} \text{ ft}^{-2}$  to  $Wm^{-2}$  multiply by 3.152, e.g. 100 BTU  $\text{h}^{-1} \text{ ft}^{-2}$  is equal to 315.2  $Wm^{-2}$ .

TABLE 2

ALBEDO-VALUES(short-wave radiation, approx. 0.3-4.0  $\mu\text{m}$ )

Type_of_Surface:	Albedo_(%):
Sand	10 - 40
Fields	3 - 25
Grass	15 - 30
Forests, coniferous	10 - 15
Water, ocean	5 - 10
Snow & Ice	45 - 90
Cities	5 - 30
Cloud, stratus	5 - 85

TABLE 3 MEAN DAILY GLOBAL RADIATION (J CM<sup>-2</sup>)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL	YRS
Sidi-Bou-Said, Tunisia	862	1151	1531	1958	2431	2594	2694	2385	1866	1431	1134	778	1736	6
Tahrir, Egypt	1268	1640	2004	2397	2694	2870	2824	2607	2222	1757	1326	1130	2063	10
Casablanca, Morocco	971	1326	1636	2159	2389	2469	2540	2884	1975	1452	1054	874	1761	4
Bissau, Guinea-Bissau	1803	2071	2351	2414	2330	2146	1971	1803	1925	1966	1824	1695	2033	9
Wad Medani, Sudan	2050	2310	2469	2590	2464	2397	2268	2259	2356	2238	2121	2029	2297	10
Benin City, Nigeria	1523	1682	1749	1724	1749	1548	1297	1293	1397	1640	1745	1582	1582	8
Nairobi, Kenya	2314	2318	2230	1912	1669	1552	1276	1389	1916	1987	1904	2251	1904	10
Kisangani, Zaire	1657	1812	1874	1879	1816	1669	1498	1510	1778	1866	1724	1669	1715	9
Dundo, Angola	1648	1678	1695	1699	1741	1653	1565	1464	1682	1807	1720	1736	1665	9
Pretoria Forum, South Africa	2452	2259	2050	1699	1515	1397	1502	1812	2171	2293	2431	2527	2004	8
Port Elizabeth, South Africa	2510	2222	1841	1431	1117	954	1033	1301	1669	2092	2439	2611	1770	10
Cape Chelyuskin, U.S.S.R.	0	17	335	1243	2201	2284	1611	849	326	59	0	0	745	10
Verkhoyansk, U.S.S.R.	21	205	761	1506	1920	2159	1941	1305	695	293	63	4	908	10
Omsk, U.S.S.R.	276	628	1088	1540	1904	2134	2096	1577	1109	544	293	201	1117	10
Petropavlovsk-Kamchatsky, U.S.S.R.	347	661	1184	1715	1741	1774	1699	1410	1197	757	418	264	1096	10
Tashkent, U.S.S.R.	678	962	1234	1766	2385	2766	2736	2502	1933	1268	782	515	1628	10
Ulan-Bator, Mongolia	611	1008	1490	1849	2167	2272	2008	1766	1527	1109	665	477	1414	10
Pyongyang, Korea	816	1163	1510	1782	2079	1962	1594	1531	1506	1264	828	699	1393	9
Sapporo, Japan	565	862	1268	1602	1732	1816	1674	1481	1293	925	582	469	1188	10
Tateno, Japan	895	1113	1477	1519	1803	1556	1498	1674	1192	1025	879	816	1284	10
Fukuoka, Japan	657	849	1293	1389	1745	1669	1598	1720	1326	1134	820	569	1243	7
Macau	1100	1004	1146	1339	1623	1682	1933	1828	1803	1582	1385	1121	1464	9
Lahore, Pakistan	1017	1351	1795	2075	2297	2138	2050	1895	1900	1582	1222	1000	1695	7
Shillong, India	1372	1799	1916	1996	1887	1397	1464	1410	1389	1368	1414	1397	1565	5
Ahmadabad, India	1711	2042	2360	2573	2682	2251	1770	1644	2029	2063	1799	1636	2046	9
Madras, India	1849	2238	2414	2431	2264	2067	1941	2021	1992	1728	1531	1502	1996	9
Maracaibo, Venezuela	1544	1707	1799	1690	1548	1665	1753	1753	1644	1519	1393	1431	1619	10
Ciudad Bolivar, Venezuela	1611	1816	1966	1920	1799	1699	1791	1870	1874	1749	1619	1586	1774	10
Puerto Viejo, Ecuador	1172	1243	1377	1443	1272	1059	1155	1272	1377	1276	1184	1213	1251	4
Huancayo, Peru	2653	2414	2356	2356	2222	2259	2268	2427	2582	2686	2791	2594	2469	3
Parina Cota, Chile	1925	1816	1858	2008	1753	1623	1690	1975	2197	2397	2477	2188	1992	5
Valparaiso, Chile	2192	1803	1448	1004	669	510	649	933	1255	1615	1996	2176	1356	6
Lago Chapo, Chile	1720	1615	1247	724	393	285	331	548	845	1318	1669	1749	1038	5
Buenos Aires, Argentina	2519	2289	1849	1397	967	761	820	1201	1506	1912	2389	2561	1682	5
Port Stanley, Falkland Islands	2155	1582	1205	695	397	259	314	598	1042	1632	2105	2280	1188	3
Resolute, Northwest Territories	0	59	536	1498	2356	2519	1833	1109	531	130	4	0	883	10
Norman Wells, Northwest Territories	50	272	887	1623	2054	2188	1904	1423	724	310	84	17	967	5
Churchill, Manitoba	230	594	1234	1925	2142	2209	2100	1640	933	431	243	155	1155	8
Goose, Newfoundland	339	682	1142	1598	1774	1841	1770	1452	1029	594	318	251	1067	10
Edmonton, Alberta	377	715	1335	1778	2117	2163	2243	1866	1218	711	381	272	1264	10
Toronto, Ontario	515	820	1167	1602	1958	2176	2192	1862	1364	874	431	351	1276	10
Fairbanks, Alaska	67	297	891	1573	1929	2109	1816	1326	753	343	109	25	937	25
Seattle, Washington	314	582	1109	1686	2105	2138	2368	1891	1356	787	435	226	1255	9
Madison, Wisconsin	619	920	1310	1648	1950	2151	2222	1891	1456	1008	607	481	1356	45
Boise, Idaho	577	987	1431	2029	2448	2661	2803	2410	1925	1259	761	519	1653	10
Blue Hill, Massachusetts	640	954	1335	1628	1962	2134	2100	1879	1481	1113	678	565	1372	26
Nashville, Tennessee	623	954	1347	1807	2105	2305	2218	1979	1686	1289	870	628	1485	17
Albuquerque, New Mexico	1268	1615	2138	2586	2870	3038	2858	2619	2318	1833	1397	1155	2142	13
Los Angeles, California	1038	1385	1966	2155	2393	2494	2682	2431	2105	1561	1209	1008	1937	9
Miami, Florida	1460	1736	2046	2259	2314	2226	2226	2113	1841	1607	1477	1322	1887	10
Brownsville, Texas	1243	1427	1682	1908	2360	2552	2623	2377	1987	1720	1238	1100	1849	10
Honolulu, Hawaii	1519	1766	2159	2339	2582	2573	2573	2561	2397	2121	1782	1552	2159	4
Ciudad University, Mexico	1699	1950	2079	2142	2067	2071	1828	1749	1674	1678	1682	1515	1845	6
Swan Islands	1849	2075	2573	2703	2615	2276	2460	2473	2238	1912	1648	1598	2201	7
San Salvador, Salvador	1807	1929	2050	1979	1715	1824	2033	1904	1753	1707	1703	1736	1849	3

TABLE 3 MEAN DAILY GLOBAL RADIATION ( $J \text{ CM}^{-2}$ ) cont.

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>ANNUAL</u>	<u>YRS</u>
Wake Island	1640	1874	2226	2431	2540	2498	2393	2243	2113	1920	1690	1586	2096	10
Quezon City, Philippines	1301	1582	1699	1933	1820	1615	1427	1393	1456	1339	1297	1192	1506	9
Singapore	1669	1833	1837	1732	1590	1577	1623	1619	1674	1628	1473	1418	1640	9
Canton Island	2460	2619	2653	2527	2347	2297	2301	2498	2678	2724	2510	2393	2498	8
Dili, Timor	1741	1745	1812	2004	1766	1732	1820	2004	2121	2213	2155	1895	1908	9
Nandi, Fiji	1954	1879	1695	1536	1385	1264	1339	1561	1774	1904	2075	1987	1695	8
Alice Springs, Australia	2573	2356	2159	2017	1552	1481	1636	1941	2310	2439	2623	2531	2134	4
Perth, Australia	2699	2489	2033	1335	1134	870	1021	1343	1791	2209	2464	2724	1841	5
Aspendale, Australia	2427	2184	1736	1188	757	644	703	937	1331	1799	2209	2439	1531	9
Wellington, New Zealand	2155	1987	1448	1017	623	519	556	774	1259	1720	2054	2218	1360	9
Invercargill, New Zealand	1966	1795	1218	757	469	364	444	699	1096	1548	1895	2167	1201	9
Reykjavik, Iceland	50	213	607	1096	1540	1506	1607	1246	695	326	88	21	761	10
Bergen, Norway	75	268	561	1113	1435	1619	1494	1218	695	310	109	46	745	8
Luleå, Sweden	38	238	690	1197	1682	1992	1837	1251	674	272	75	8	828	8
Jokioinen, Finland	79	289	766	1205	1753	2180	1920	1414	774	356	113	46	908	10
Taastrup, Denmark	159	381	812	1297	1749	2109	1824	1561	1008	531	230	121	983	9
Valentia, Ireland	247	515	933	1393	1745	1837	1732	1452	1059	582	305	188	1000	10
Cambridge, United Kingdom	230	444	816	1167	1640	1799	1648	1339	1054	611	331	180	883	8
Braunschweig, Germany Fed. Rep.	213	406	791	1159	1636	1849	1661	1448	975	548	243	146	920	10
De Bilt, Netherlands	209	431	803	1209	1648	1799	1611	1464	1050	615	280	180	941	10
Uccle, Belgium	218	414	799	1172	1632	1753	1636	1439	1096	653	297	172	941	10
Limoges, France	423	657	1121	1498	1837	2046	2109	1682	1439	992	510	377	1226	6
Angra, Azores	632	891	1305	1653	2021	2067	2092	1983	1540	1130	749	602	1389	9
Wien, Austria	280	506	908	1368	1774	1908	1933	1590	1167	745	351	243	1063	10
Locarno-Monti, Switzerland	556	841	1301	1711	1908	2142	2268	1891	1423	996	556	477	1339	10
Napoli, Italy	649	900	1335	1820	2234	2473	2515	2192	1640	1201	736	544	1519	10
Warszawa, Poland	188	347	778	1146	1586	1954	1828	1561	1017	556	205	130	1151	10
Beograd, Yugoslavia	510	761	1188	1657	2025	2255	2251	1975	1477	1079	594	368	1343	10
Archangelsk, U.S.S.R.	50	234	649	1201	1669	2013	1862	1268	623	222	67	21	.824	10
Moscow, U.S.S.R.	238	502	954	1255	1824	2117	1858	1523	929	423	197	117	996	10
Odessa, U.S.S.R.	335	523	946	1515	1950	2238	2218	1933	1452	900	381	247	1222	10
Tbilisi, U.S.S.R.	556	833	1180	1536	2004	2205	2213	1874	1481	1084	615	477	1339	6
Bet Dagan, Israel	1042	1414	1787	2222	2640	2858	2807	2573	2192	1695	1238	967	1954	10



Approximate positions ( X ) of the stations in table 3.

WORLD CLIMATOLOGICAL DATA REFERENCES

CLIMATOLOGICAL NORMALS (CLINO) FOR CLIMAT AND CLIMAT SHIP STATIONS FOR THE PERIOD 1931-1960 WMO/OMM-No.117.TP.52 Contains monthly mean values for the period of pressure, temperature, duration of sunshine, vapour pressure, humidity, precipitation

WORLD WEATHER RECORDS  
US Dep. of Commerce  
Period: 1921-1930  
1931-1940  
1941-1950  
1951-1960

Contains monthly mean values for the period of pressure, temperature, precipitation, freeze and thaw dates

WORLD SURVEY OF CLIMATOLOGY,  
1-14  
H.E. Landsberg

Contains a description of the regional climate and various charts and tables with climatological information about pressure, temperature, precipitation, humidity, vapour pressure, wind, snow, cloudiness, duration of sunshine, global radiation and for some stations or regions direct radiation, diffuse radiation, albedo and ultraviolet radiation

TABLES OF TEMPERATURE, RELATIVE HUMIDITY AND PRECIPITATION FOR THE WORLD, PART I-VI  
AIR MINISTRY METEOROLOGICAL OFFICE

Contains monthly average of highest and lowest temperature for each month, daily maximum and minimum temperature, of relative humidity at 0600 & 1400, of precipitation. Absolute maximum and minimum temperature and maximum rainfall in 24 hr. for each month. A new edition will also contain mean values of sunshine duration.

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### EXPLANATION

In the Data Source Catalogue the radiation measurements are related to the geographic site (station) where they have been obtained. Stations are placed under the country they belong to. Countries are arranged alphabetically within their region (figure 14). Canada and USA are subdivided into their states and provinces.

The stations of each country are divided in two groups, one that measures radiation and another that only measures sunshine duration. Within those groups, the stations are listed according to their latitude from north to south.

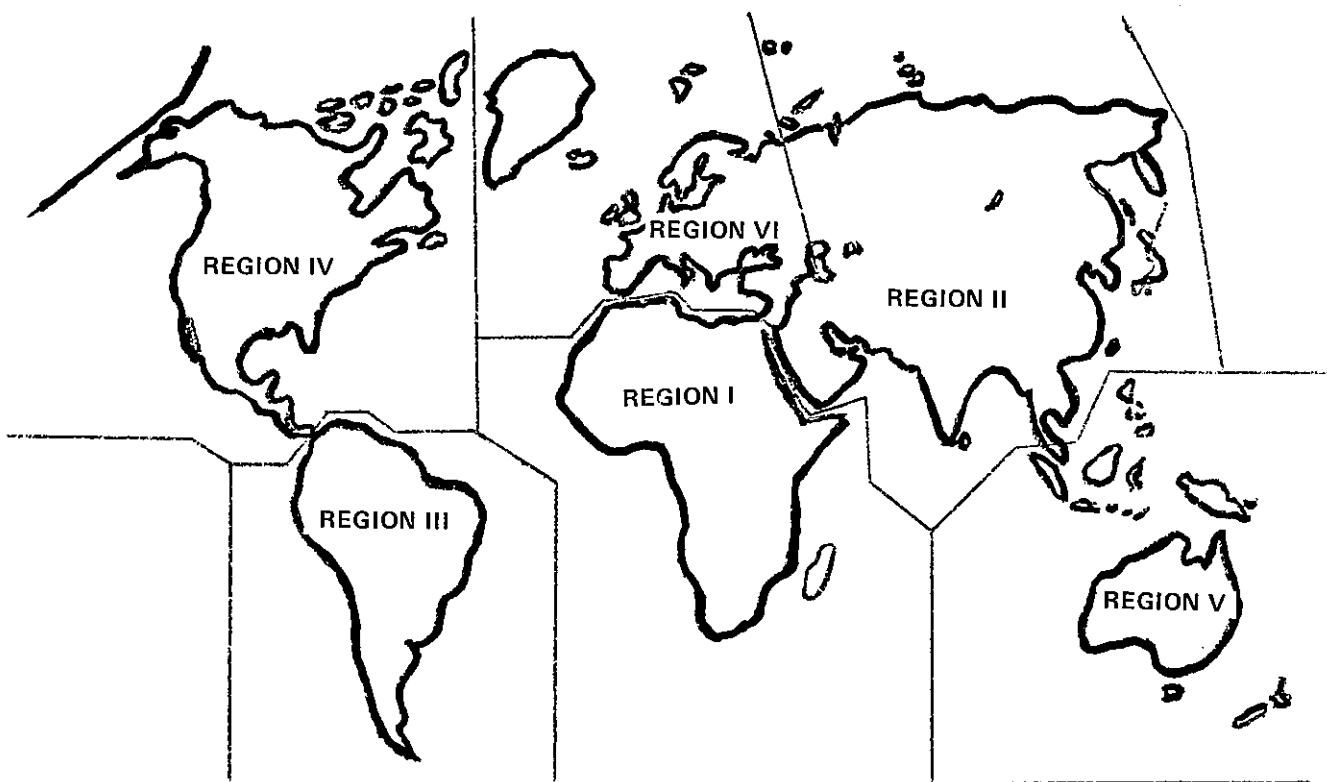


Fig. 14 The division in Regions used in the catalogue is according to WMO.

The "Data List" which is the main part of the catalogue is divided in columns, explained in legend 1.

Briefly the content is name and position of each station, the parent organization or administrator, the radiation component measured, the instrument used and the period for the measurement. The abbreviations are explained in legends 1-8.

The following three columns contain information on the type of data available in publications or from the administrator. The type of data available on magnetic tape or punchcards can also be deduced.

Column 9 is important because it contains the daily frequency of observations of other meteorological parameters. The observations are usually made independently of the radiation measurements since most sites are also a climatological or a synoptic observation station.

Some meteorological parameters might be registered continuously. For example temperature and humidity are often measured with a recording instrument. For further information about the meteorological parameters see page 1-24.

References to climatic data compilations that can be useful are included, see page 1-31.

The last column gives additional information, for example the orientation and tilt of inclined surfaces.

Note that the catalogue only gives the availability of measured data as hourly and daily sums. By processing their data many countries are able to present statistical distributions as well as other types of average values than those mentioned in the catalogue.

There also exist more or less complex models and calculations of the correlation between different parameters.

For information about the availability of those special data the meteorological office of the actual country should be contacted.

In the section "Administrators and Publications" are the names and addresses of administrators and parent organizations of the stations listed together with publications for each country. The countries are arranged in the same way as in the "Data List". Requests for measured data and for further information about the stations should be sent to those addresses.

The catalogue also includes a "Library List" (only IEA), see page 2-3. For each library in the list, the available publications with radiation data are listed in the abbreviated form also used in the "Data List".

LIBRARY LIST  
(only IEA)

Data that have been published, might be available from some of the libraries listed below. A number of publications available at each library have been listed in an abbreviated form.

The abbreviations consist of one, two or three letters followed by a number.

By using legend 8, the letters can be decoded to give the publishing country. In the list of administrators and publications of this country the publications are listed according to the number mentioned above.

Example:

In the column 6 of the "Data List" one can find D: A1 - SUI. The D: means that daily values can be found in the publications A1 and SUI.

Legend 8 gives    A = AUSTRIA

                  SU = SOVIET UNION

From the list of "Administrators and Publications" for Austria and Soviet Union one can find:

A1 = Ergebnisse von Strahlungsmessungen in Österreich, etc.

SUI = Solar Radiation and Radiation Balance Data, etc.

LIBRARY LIST, ONLY IEAAvailable publications

## AUSTRIA

Central Institute for Meteorology and Geodynamics, Library, Hohe Warte 38 A-1190 Vienna	A1 D1 I2 IS2 NL2 SU1 ZAL	A2 D2 IL2 J1 NZ1 SU2	B1 D3 IL3 J2 P1 SU3	B2 D4 IND2 N1 P2 US1	CH1 DK1 IRL2 N2 S1 US2	CH3 GB1 IS1 NLL S2 YU1
-----------------------------------------------------------------------------------------	--------------------------------------------	-------------------------------------	------------------------------------	-------------------------------------	---------------------------------------	---------------------------------------

## BELGIUM

Bibliothique de l'observatoire Royal de Belgique 3, Avenue Circulaire B-1180 Bruxelles	Al CH3 GB1 IRL2	A2 D1 I3 IS1	B1 D2 I5 IS2	B2 D3 IL2 J1	CDN1 D4 IL3 J2	CH1 DK1 IRL1 N1
	N2	NLL	P1	P2	R1	S1
	S2	SU1	SU2	US1	US2	US4
	YU1	ZAL				

## CANADA

The Librarian The Atmospheric Environment Service 1905 Dufferin Street Downsview Ontario, M3H 5T4	A1 CDN3 CH1 GB1 IS1 NLL SU2 ZAL	A2 CH1 I2 I3 IS2 P1 US1	B1 CH3 I3 I5 J1 P2 US2	B2 D1 D4 IL2 J2 S1 US2	CDN1 D4 IRL1 N1 S2 US3	CDN2 DK1 IRL1 N2 SU1 US4 YU1
---------------------------------------------------------------------------------------------------------------	------------------------------------------------------	-------------------------------------------	------------------------------------------	------------------------------------------	---------------------------------------	------------------------------------------------

## GERMANY, FEDERAL REPUBLIC OF

Bibliothek des Deutschen Wetterdienstes Frankfurter Str. 135 D-6050 Offenbach a.M.	A1 CH1 D5 IL3 J1 NL2 S2 US3	A2 CH3 D6 IND1 J2 NZ1 SU1 YU1	B1 D1 DK1 IRL1 J3 P1 SU2 ZAL	B2 D2 GB1 IRL2 N1 P2 SU3 ZAL	CDN1 D3 I3 IRL2 IS1 R1 US1	CDN2 D4 IL2 IS2 N2 S1 US2
------------------------------------------------------------------------------------------	--------------------------------------------------	----------------------------------------------------	---------------------------------------------------	---------------------------------------------------	----------------------------------------------	---------------------------------------------

## ITALY

Library Servizio Meteorologico Piazzale Archivi - Roma & Library Istituto Fisica Atmosfera P.le Sturzo 31 - Roma	B1 D1 I4 NL2 US2	B2 D3 I5 S1 US3	CDN1 GB1 IL2 S2 US4	CDN2 I1 IL3 S1 SU3	CH1 I2 J1 SU2	CH3 I3 J2 US1
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Available publications

## THE NETHERLANDS

Bibliotheek	A1	A2	B1	B2	CDN1	CDN3
Koninklijk Nederlands	CH1	CH3	D1	D2	D3	D4
Meteorologisch Instituut	GB1	I2	I3	I5	IL1	IRL1
De Bilt	IS1	J1	J2	J3	N1	N2
	NL1	NL2	P1	P2	R1	SU1
	SU2	US1	US2	US3	US4	YU1
	ZAL					

## SWEDEN

Sveriges Meteorologiska	A1	A2	B1	B2	CH1	CH3
och hydrologiska Institut	D1	D2	D3	D4	D5	DK1
Box 923	I1	I2	I3	I5	IS1	IS2
S-601 19 Norrköping	J1	J2	N1	N2	NL1	NL2
	S1	S2	SF1	SF2	SF3	SF4
	SU1	SU2	US1	YU1	ZAL	
Meteorologiska institu-	A1	A2	A4	B1	B2	CH1
tionen	CDN3	D1	D2	D4	DK1	GB1
Uppsala Universitet	I3	IS1	J1	J2	N1	N2
Box 516	NL1	P1	S1	S2	SF1	SF2
S-751 20 Uppsala 1	SF3	SU1	SU2	US1	YU1	

## SWITZERLAND

Meteorologische Zentral-	A1	A2	B1	B2	CDN1	CH1
anstalt	CH2	CH3	CH4	CH5	D1	D2
Krähbühlstrasse 58	D3	D4	GB1	I2	I3	I5
CH-8044 Zürich	IL2	IND1	IRL1	IS1	J1	J2
	J3	N1	N2	NL1	NZ1	P1
	P2	R1	US1	US2	ZAL	

## UNITED KINGDOM

Meteorological Office	A1	A2	B1	B2	CDN1	CDN3
Eastern Road, Bracknell	CH1	CH3	D1	D2	D3	D4
Berkshire, RG12 2UR	DK1	GB1	I2	I3	I5	IL2
	IL3	IND1	IRL1	IS1	IS2	J1
	J2	J3	N1	N2	NL1	NL2
	P1	P2	R1	S1	S2	SU1
	SU2	SU3	US1	US2	US3	US4
	YUL	ZAL				

## USA

NOAA - LISD D822	A1	A2	B1	B2	CDN1	CDN2
Building 4	CH1	CH3	D1	D2	D4	DK1
6009 Executive Blvd.	GB1	I2	I3	I5	IL2	IL3
Rockville, MD 20852	IDN1	IRL1	IS1	IS2	J1	J2
	J3	N1	N2	NL1	NL2	NZ1
	P1	P2	R1	S1	SU1	SU2
	US1	US2	US3	US4	US6	US7
	US8	YU1	ZAL			

NUMBER OF STATIONS MEASURING DIFFERENT RADIATION COMPONENTS	DIRECT RAD cont inst fil- ter			GLOBAL RADIATION hor incl fil- surf surf ter surf			DIFFUSE RAD hor incl fil- surf surf ter			REFL RAD	INC LONGWAVE RAD	OUT RADIATION	NET MINA	INC RAD	OUT DUR	SUN TION																					
	I	I*	IX	G	G/	GX	G(BS)	D	D/	DX	R	L+	L-	L*	Q+	* Q-	Q*	E	UV	S																	
SOUTH AFRICA			1	14		14												70																			
REGION I (except South Africa)			3	103		117		18										1 400 <sup>x</sup>																			
JAPAN	1	13	1	68		1		1		1		1				1		90																			
U.S.S.R. (Region II)			7	26		26		12				21				25 <sup>x</sup>																					
REGION II (except Japan & USSR)			6	106		2		1				3				150 <sup>x</sup>																					
REGION III			6	117								5				250 <sup>x</sup>																					
CANADA	2	56		2		10		7		2		27		1		310																					
U.S.A.	80	5	1	302	56	5	20	4	2	4	1	11	1	1	4	165	5	165																			
7	11	154		3		4		1		1		6		3		4																					
REGION IV (except Canada & USA)	3	41		1		4						1		2		5		20 <sup>x</sup>																			
AUSTRALIA	1	1	1	35	3	16		3		1		1		1		1		135																			
NEW ZEALAND			20		7		1								1		30																				
REGION V (except Aus. & NZ)	1	1	40		1		1										120 <sup>x</sup>																				
ALBANIA			1	6		1		3		3						20																					
AUSTRIA			3	19		2		4		2				3		2		130																			
BELGIUM	1	14		6		1		1						1		1		20																			
BULGARIA			1	6		1								1		1		45																			
CYPRUS			1												2																						
CZECHOSLOVAKIA	2	4		1		1		1		1				1		1		130																			
DENMARK			1		1		1		1		1				1		35																				
FINLAND	5	10		1		9		5				5				1		35																			
FRANCE	2	1	1	25	2		9		1				1		1		110																				
GERMAN DEM. REP.	1	6		1		4		1		1				1		1		90																			
GERMANY, FED. REP. OF			1		33		1		15		2		1		1		1		130																		
GREECE	1	1	9		1		2		1		3		1		1		2		40																		
<hr/>																																					
GREENLAND																																					
HUNGARY	2	9		1		1						1				1		20																			
ICELAND	2	8		1		1										1		9																			
IRELAND	1	1	6		1		1		2						1		50																				
ISRAEL	1	9		1		3		1				2		4				5																			
ITALY			33		1		1		1						1		130																				
JORDAN			10												15																						
LEBANON			2																																		

Upper figure indicates the number of stations in operation  
Lower figure indicates the number of stations out of operation

The number of sunshine duration stations is approximate and  
an "x" indicates an estimated number. Note that they are  
not always presented in the catalogue.

= MATRIX = NUMBER OF STATIONS MEASURING DIFFERENT RADIATION COMPONENTS		DIRECT RAD		GLOBAL RADIATION			DIFFUSE RAD			REFL	INC	OUT	NET	INC	OUT	NET	ILLU	UV	SUN		
		cont	inst	fil-	ter	hor	incl	fil-	sphr	hor	incl	fil-	surf	surf	ter	RAD	LONGWAVE RAD	RADIATION	MINA	RAD	DUR
		I	I*	IX	G	G/	GX	G(BS)	D	D/	DX	R	L+	L-	L*	Q+	Q-	Q*	E	UV	S
MALTA					1				1											2	
THE NETHERLANDS	1		1		7		1										1		1	30	
NORWAY		3			8				1			1		1		1	1	1	1	25	
POLAND		12	12		10				5			2		1		3	3		1	1	11 <sup>x</sup>
PORTUGAL		4	4	11	1	1		1	3			1					2			100	
	1			1																	
ROMANIA	1	4	4	8					1			1					6	4			
SPAIN		1	1	30					2			1								100	
SWEDEN	1	1	1	16	1	1			2							1	1			30	
	2			9					1												
SWITZERLAND	2	1	2	47	7	6	21	6	6	1		4				2	2	1		60	
	2	1	1	9	2		6					6				3	3	1			
SYRIA		3		3					3											23	
				1				1													
TURKEY				39																85	
UNITED KINGDOM	2		1	33	1				15								6	1		350	
				6				1									6				
U.S.S.R. (Region VI)		5		48				12			7			1			9				
YUGOSLAVIA	2	2	18	2				4	3		2						1			30	
			2					2									1				
ANTARCTICA (different admini- strators)	1			22	1			3							2	5				16	

Upper figure indicates the number of stations in operation.  
Lower figure indicates the number of stations out of operation.

The number of sunshine duration stations are approximate  
and they are not always presented in the catalogue.  
An "x" indicates an estimated number.

## Legend 1

EXPLANATION OF COLUMNS

Column 1 (6 pos.)	Station number
Column 2 (24 pos.)	Name of station
Column 3 (2 pos.)	Abbreviation of the parent organization or institution, e.g. administrator according to the list following each nation.
Column 4 (17 pos.)	This column gives the latitude and the longitude in degrees and minutes followed by the elevation of the station (in some cases the instrument) in metres above mean sea level.
Column 5 (22 pos.)	The letters before the parentheses indicate the radiation component. The letters in the parentheses indicate the instrument type. The parentheses are followed by figures indicating the start year and the end year (if not in operation) of the observation period.

The meaning of the symbols used in connection with the observation period:

62-71	Continuous record with no significant interruption.
55*59	Intermittent record or instantaneous measurements.
56-59, 60-	Significant interruption.

Note: The observation period does not usually coincide with the data availability given in columns 6, 7 and 8.

Abbreviations see legend 2 and 3.

Column 6 (16 pos.)	The first letter(s) indicates the shortest integration time interval for the radiation values available in the publication(s) indicated by the following letters.
	Abbreviations see legend 5 and 6.

Column 7 (3 pos.)	The shortest integration time interval for the radiation values available from the administrator.
	Abbreviations see legend 5.

Column 8 (3 pos.)	The shortest integration time interval for the radiation values available on magnetic tape and/or punchcards.
	Abbreviations see legend 5.

Column 9    The daily frequency of meteorological observations.  
(3 pos.)

Column 10    Additional information.  
(15 pos.)

Abbreviations see legend 7.

## Legend 2

RADIATION QUANTITIES

- I DIRECT SOLAR RADIATION  
Solar radiation coming from the solid angle of the sun's disk on a surface perpendicular to the axis of the solid angle.
- G GLOBAL RADIATION  
The downward direct and diffuse solar radiation as received on a horizontal surface from a solid angle of  $2\pi$ .
- D DIFFUSE SOLAR RADIATION (SKY RADIATION)  
The downward diffuse solar radiation as received on a horizontal surface from a solid angle of  $2\pi$  with the exception of the solid angle subtended by the sun's disk.
- R REFLECTED GLOBAL RADIATION  
The upward solar radiation reflected by the earth's surface.
- L+ DOWNWARD ATMOSPHERIC RADIATION  
Downward long-wave atmospheric radiation mainly emitted by the atmosphere.
- L- UPWARD TERRESTRIAL RADIATION  
Upward terrestrial surface and longwave atmospheric radiation.
- L\* NET TERRESTRIAL RADIATION  
Net flux of atmospheric and terrestrial surface radiation.  $L^* = (L+) - (L^-)$
- Q+ DOWNWARD (TOTAL) RADIATION  
Downward solar and downward atmospheric radiation.  $Q^+ = G + (L+)$
- Q- UPWARD (TOTAL) RADIATION  
Upward solar, terrestrial surface and atmospheric radiation.  $Q^- = R + (L^-)$
- Q\* NET RADIATION  
Net flux of downward and upward radiation; net flux of all radiations.  
 $Q^* = (Q^+) - (Q^-)$
- UV ULTRAVIOLET RADIATION  
Direct, global or diffuse solar radiation approximately in the range 30-400 nm.
- E ILLUMINATION  
Daylight illumination due to solar radiation.

Related quantities and symbols

- S DURATION OF BRIGHT SUNSHINE  
The amount of time in which the direct solar radiation can activate the recording instrument.

- / INCLINED SURFACE  
If the radiation components are measured for inclined or vertical surfaces the radiation symbol is followed directly by the symbol /. The orientation of the surface is given in column 10.
- X SPECTRAL  
If the radiation components are measured in broad or narrow spectral bands the radiation symbol is followed directly by the symbol X. If possible further information is given in column 10.

## Legend 3

PYRHELIOMETERSStandard Pyrheliometers & Absolute Radiometers

A Ångström Pyrheliometer  
 AC Active Cavity Radiometer  
 EK Eppley-Kendall Absolute Radiometer  
 SD Abbot Silver-Disk Pyrheliometer  
 TM Technical Measurements, Inc. Pyrheliometer

Operational Pyrheliometers  
thermopile types:

EO Eppley Normal Incidence Pyrh. (not temp. comp.)  
 EN Eppley Normal Incidence Pyrh., NIP (temp. comp.)  
 JP Japan Meteorological Agency Pyrh.  
 LF Linke-Feussner Pyrheliometer  
 MG Moll-Gorczynski Pyrheliometer  
 Y Savinov-Yanishevsky Pyrheliometer

## bimetallic types:

MI Michelson-Moscow, Büttner and Marten Pyrh.

PYRANOMETERS

## thermopile types:

D Physico Meteorological Observatory, Davos Pyranometer  
 E1 Eppley Pyranometer ( $180^\circ$  Pyrheliometer, model 10 & 50 Junction)  
 E2 Eppley Precision Spectral Pyranometer (PSP, model 2 & 15)  
 E8 Eppley Black-and-White Pyranometer (model 8 & 48)  
 HC Pyranometer (HY-cal Engineering, diff. models)  
 I Pyranometer of International Scientific Industries  
 JP Japan Meteorological Agency Pyranometer  
 K Kipp and Zonen Pyranometer (Moll-Gorczynski)  
 LI Pyranometer of Lintronic Limited  
 PB Pyranometer of Belfort Instrument Co  
 PS Pyranometer Sonntag  
 SR Spectrolab Pyranometer (model SR-75)  
 S Starpyranometer (Dirmhirn-Sauberer)  
 V Volachine Pyranometer  
 WM Pyranometer of Weather Measure Corp.  
 Y Yanishevski Pyranometer (P 3x3)

## solar cell types:

L Pyranometer of Lambda Inst. Corp.  
 MK Pyranometer of Matrix, Inc. (MK 1-G & MK 14)  
 SO Solameter, Photovoltaic Cell  
 PH Unknown solar cell type

## electrical resistance types:

CL Callendar Pyranometer

distillation types:

BS Bellani Spherical Pyranometer

bimetallic types:

R Robitzsch type actinographs (Casella/London, Fuess/Berlin, SIAP/Italy, Foster/MSC, Japanese model)

### PYRGEOMETERS, PYRRADIOMETERS & NET PYRRADIOMETERS

unshielded sensors:

GD Gier and Dunkle Pyrradiometer and Net Pyrradiometer (Beckman and Whitley, Teledyne Geotsch)  
 KE Net Pyrradiometer of the Kew Observatory  
 SF Suomi, Fransilla and Islitzer Net Pyrradiometer  
 W Wagner Net Pyrradiometer  
 Y Yanishevsky Net Pyrradiometer (M-10)

shielded sensors:

D Physico Meteorological Observatory, Davos Pyrrad. and Net Pyrrad.  
 EG Eppley Precision Infrared Radiometer (Pyrgeometer)  
 FR Fritschen Net Pyrradiometer  
 FU Funk Net Pyrradiometer (CSIRO, Middleton)  
 GR Georgi Universal Radiationmeter (Kahl)  
 HY Net Radiometer (HY-CAL Engineering)  
 LR Linar Net Radiometer (Swissteco)  
 NE Net Pyrradiometer (Siemen Ersking)  
 PG Pyrgeometer Model 4064 (Spectran)  
 RM Radiometer (Molelectron)  
 RS Pyrradiometer (Schenk)  
 SH Schulze Net Pyrradiometer  
 SK Suomi-Kuhn Net Pyrradiometer  
 TG Teledyne Geotech Pyrradiometer  
 TH Thorntwaite Net Pyrradiometer

### ULTRAVIOLET RADIOMETER

CU CSIRO Ultraviolet Pyranometer  
 DU Dehne UV-B Radiometer  
 EU Eppley Ultraviolet Radiometer  
 RB Robertson-Berger UV-V Radiometer  
 SU Smithsonian UV-B Radiometer

### PHOTOMETERS (ILLUMINOMETERS)

E Eppley Illuminometer  
 LN Leeds-Northrup Photometer  
 LP Photometric Sensor (Lambda Inst. Corp.)  
 MO Photometer used in United Kingdom  
 WB Weber-Bylov Photometer

### SUNSHINE RECORDERS

C Campbell-Stokes Sunshine Recorder  
 F Foster Sunshine Switch  
 H Haenni Sunshine Recorder

HE      Helior Sunshine Recorder  
J      Jordan Sunshine Recorder  
M      Maring-Marvin Sunshine Recorder  
MA     Maurer Sunshine Recorder

## Legend 4

RADIOMETER ABBREVIATIONS IN ALPHABETICAL ORDER

A	Ångström Pyrheliometer
AC	Active Cavity Radiometer (Absolute radiometer)
BL	Bruno Langes Luxmeter
BS	Bellani Spherical Distillation Pyranometer
C	Campbell-Stokes Sunshine Recorder
CL	Callendar Pyranometer
CU	CSIRO Ultraviolet Pyranometer
D	Radiometer of the Physico Meteorological Observatory, Davos
DU	Dehne UV-B Radiometer
E	Eppley Radiometer
E1	Eppley Pyranometer (180° Pyrheliometer, model 10 & 50 junction)
E2	Eppley Precision Spectral Pyranometer, PSP (model 2 & 15)
E8	Eppley Black-and-White Pyranometer (model 8 & 48)
EG	Eppley Precision Infrared Radiometer (Pyrgeometer)
EK	Eppley-Kendall Absolute Radiometer (PACRAD)
EN	Eppley Normal Incidence Pyrheliometer, NIP (temp. comp.)
EO	Eppley Normal Incidence Pyrheliometer, NIP (not temp. comp.)
EU	Eppley Ultraviolet Radiometer
F	Foster Sunshine Switch
FR	Fritschen Net Pyrradiometer
FU	Funk Net Pyrradiometer (CSIRO, Middleton)
GD	Gier and Dunkle Pyrradiometer and Net Pyrradiometer (Beckman and Whitley, Teledyne Geotech)
GR	Georgi Universal Radiationmeter (Kahl)
H	Haenni Sunshine Recorder
HE	Helior Sunshine Recorder
HC	Pyranometer (HY-CAL Engineering, diff. models)
HY	Net Radiometer (HY-CAL Engineering)
I	Pyranometer of International Scientific Industries
J	Jordan Sunshine Recorder
JP	Radiometer of the Japan Meteorological Agency
K	Kipp and Zonen Pyranometer (Moll-Gorczynski)
KE	Net Pyrradiometer of the Kew Observatory
L	Pyranometer of Lambda Inst. Corp.
LF	Linke-Feussner Pyrheliometer
LI	Pyranometer of Lintronic Limited
LN	Leeds-Northrup Photometer
LP	Photometric Sensor (Lambda Inst. Corp.)
LR	Linar Net Radiometer (Swisssteco)
M	Maring-Marvin Sunshine Recorder
MA	Maurer Sunshine Recorder
MG	Moll-Gorczynski Pyrheliometer
MI	Michelson-Moscow, Büttner and Marten Bimetallic Pyrheliometer
MK	Pyranometer of Matrix, Inc. (Mk 1-G)
MO	Photometer used in United Kingdom
NE	Net Pyrradiometer (Siemen Ersking)
PB	Pyranometer of Belfort Instrument Co
PG	Pyrgeometer Model 4064 (Spectran)
PH	Pyranometer, solar cell type
PS	Pyranometer Sonntag

R	Robitzsch type actinographs (Casella/London, Fuess/Berlin, SIAP/Italy, Foster/MSC, Japanese model)
RB	Robertson-Berger UV-B Radiometer
RM	Radiometer (Molelectron)
RS	Pyrradiometer (Schenk)
S	Starpyranometer (Dirmhirn-Sauberer, Kahl)
SD	Abbot Silver-Disk Pyrheliometer
SF	Suomi, Fransilla and Islitzer Net Pyrradiometer
SH	Schulze Net Pyrradiometer (Lange)
SK	Suomi-Kuhn Net Pyrradiometer
SO	Solameter Pyranometer, Photovoltaic cell
SR	Spectrolab Pyranometer (model SR-75)
SU	Smithsonian UV-B Radiometer
TG	Pyrradiometer, Teledyne Geotech, different types
TH	Thornthwaite Net Pyrradiometer
TM	Technical Measurements, Inc. Pyrheliometer
V	Volochine Radiometers
W	Wagner Net Pyrradiometer
WB	Weber-Bylov Photometer
WM	Pyranometer of Weather Measure Corp.
Y	Yanishevsky Radiometers

## Legend 5 &amp; 6

TYPE OF AVAILABLE DATA

Shortest integration time interval for the radiation values available from the administrator of the station or in the given publication.

S second sums  
M minute sums  
H hourly sums  
D daily sums  
MO monthly sums

20S twenty second sums  
5M five minute sums  
12H twelve hour sums

\* instantaneous values  
CON continuous record

Only the shortest available value is given. Of course sums for longer interval are available and also other types of data. There might exist raw material from which a better time resolution can be evaluated.

ABBREVIATIONS FOR PUBLICATIONS

By using an abbreviation for the editing nation (legend 8) together with a figure the publication can easily be found in the list of "Administrators and Publications". The abbreviations above are used for the type of published data.

Example: D:SUL

D: = daily sums (type of data)  
SU = Soviet Union (editing nation)  
SUL = Solar Radiation and Radiation  
Balance Data, The World Network,  
Leningrad (publication)

## Legend 7

ABBREVIATIONS USED IN COLUMN 10

Measurements are made in specified spectral ranges:

<u>FILTER</u>		<u>TRANSMISSION</u> (approximate)
WG295	WG7	295-2800 nm
GG395	GG22	395-2800 nm
GG400		400-2800 nm
GG495	GG14	495-2800 nm
OG530	OG1	530-2800 nm
OG570	OG2	570-2800 nm
RG610	RG1	610-2800 nm
RG630	RG2	630-2800 nm
RG695	RG8	695-2800 nm
RG715	RG10	715-2800 nm
RG805		805-2800 nm
	QUA	250-4000 nm Quartz
	PAR	400- 700 nm Photosynthetically Active Radiation

Measurements are used to determine the atmospheric turbidity:

TB	not specified
TBA	Ångström Turbidity Coefficient
TBS	Schüepp Turbidity Coefficient
TBL	Linke Turbidity Factor

The inclination and orientation of non-horizontal surfaces:

The first two figures give the inclination from the horizontal plane and the following letters indicate the orientation.

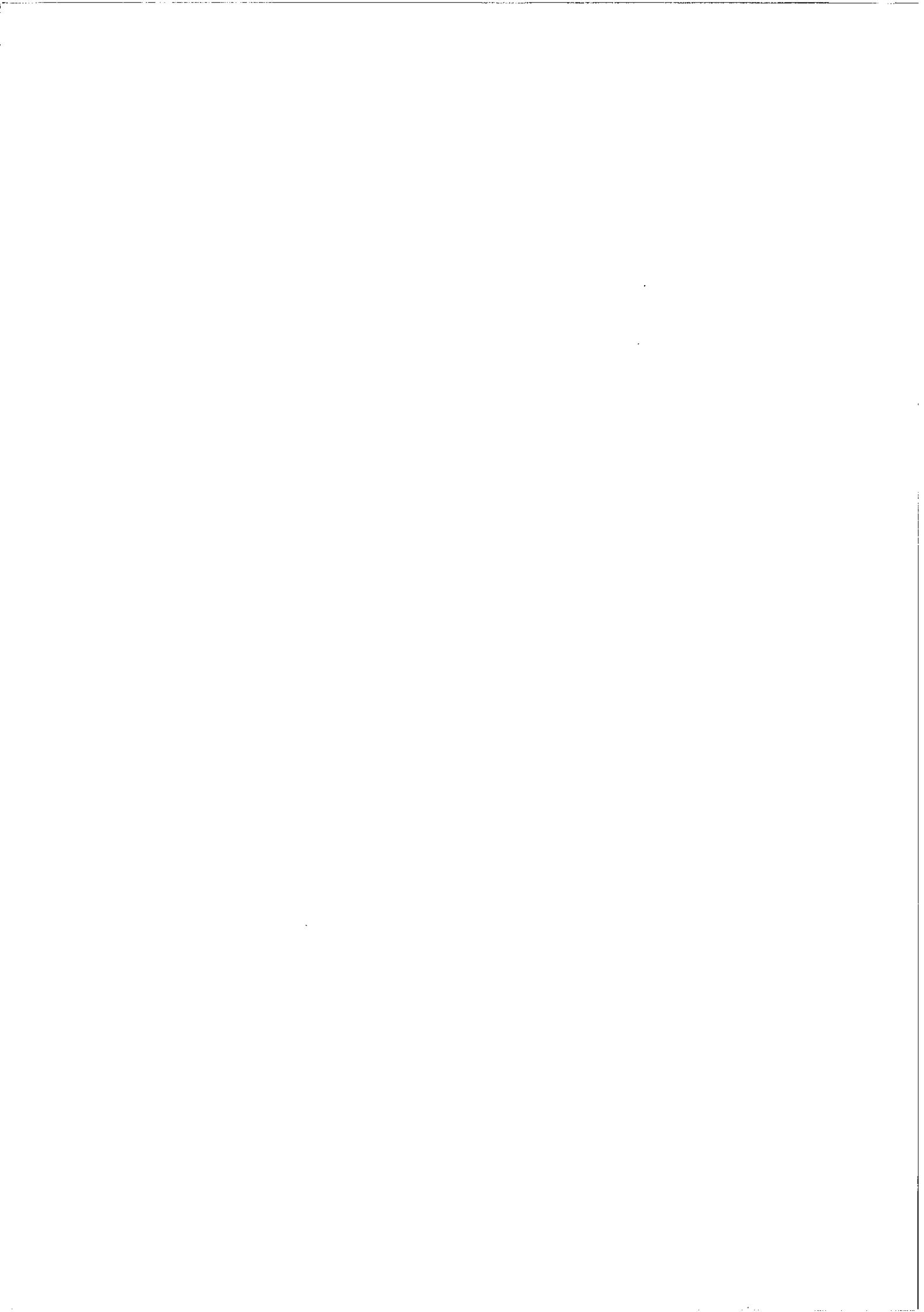
Example: 60S, 90N, E, S, W

These notations mean one surface inclined sixty degrees and facing south and four vertical surfaces facing north, east, south and west.

## Legend 8

ABBREVIATIONS OF COUNTRIES IN ALPHABETICAL ORDER

A	AUSTRIA	KN	KENYA
AB	ALBANIA	KO	KOREA, REP. OF
AD	DEM. REP. YEMEN	KW	KUWAIT
AG	ARGENTINA	LA	LAOS
AL	ALGERIA	LB	LEBANON
AN	ANGOLA	LY	LIBYAN ARAB REP.
AUS	AUSTRALIA	MEX	MEXICO
B	BELGIUM	MG	MADAGASCAR
BC	BOTSWANA	ML	MALTA
BG	GUYANA	MO	MONGOLIA
BR	BARBADOS	MS	MALAYSIA
BU	BULGARIA	MV	MALDIVES
BW	BANGLADESH	MZ	MOZAMBIQUE
BZ	BRAZIL	N	NORWAY
C	CUBA	NI	NIGERIA
CDN	CANADA	NL	THE NETHERLANDS
CE	CENTRAL AFR. REP.	NZ	NEW ZEALAND
CH	SWITZERLAND	P	PORTUGAL
CHI	CHILE	PH	PHILIPPINES
CI	CHINA	PK	PAKISTAN
CL	SRI LANKA	PL	POLAND
CS	COSTA RICA	PM	PANAMA
CY	CYPRUS	PY	PARAGUAY
CZ	CZECHOSLOVAKIA	QT	QATAR
D	GERMANY, FED. REP. OF	R	ROMANIA
DDR	GERMAN DEM. REP.	RN	MALAWI
DK	DENMARK	RZ	ZAIRE
E	SPAIN	S	SWEDEN
EJ	FIJI	SD	SAUDI ARABIA
EQ	EQUADOR	SDN	SUDAN
ET	ETHIOPIA	SF	FINLAND
F	FRANCE	SG	SENEGAL
FM	MOROCCO	SR	SINGAPORE
GB	UNITED KINGDOM	SU	U.S.S.R.
GC	GHANA	SV	EL SALVADOR
GN	GUINEA-BISSAU	SYR	SYRIA
GO	GABON	TD	TRINIDAD AND TOBAGO
GR	GREECE	TE	CHAD
H	HUNGARY	TH	THAILAND
HKJ	JORDAN	TN	TANZANIA
HO	HONDURAS	TS	TUNISIA
I	ITALY	TU	TURKEY
ID	INDONESIA	UB	EGYPT
IL	ISRAEL	UG	UGANDA
IND	INDIA	US	U.S.A.
IR	IRAN	VN	VENEZUELA
IRL	IRELAND	YU	YUGOSLAVIA
IS	ICELAND	ZA	SOUTH-AFRICA
IQ	IRAQ	ZB	ZIMBABWE
J	JAPAN	ZM	SAMOA
JM	JAMAICA		



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**REGION I  
AFRICA**



## ALGERIA

	2	3.	4	5	6	7.	8.	9.	10
ALGER/DAR EL BEIDA	A	3643N	0315E	23. G(K) S(C)	D:SU1,MO:SU2 MO:SU1-2		.24		
DJERBI ES SENZA	A	3537N	0036W	90. S(C)			.24		
BECCHAR	A	3137N	0213W	811. G(K) S(C)	D:SU1,MO:SU2 MO:SU1-2		.24		
TAMANRASSET	A	2247N	0531E	1366. G(K) S(C)	D:SU1,MO:SU2 MO:SU1-2		.24		

## ANGOLA

	2	3.	4	5	6	7.	8.	9.	10
CABINDA	A	0533S	1211E	25. G( ) S( )			.5		
DUNDO	A	0724S	2049E	775. I( ) G(E.) D(C) S(C)	D:SU1,MO:SU2 MO:SU1-2		.6		
LUANDA	A	0849S	1313E	44. G( ) G(E.) D(E.) S(C)	D:SU1,MO:SU2 D:SU1,MO:SU2 MO:SU1-2		.24	.001,PG2	
MALANGE	A	0933S	1622E	1139. G(R) D(C) S(C)	D:SU1,MO:SU2 MO:SU1-2		.13		
SAURIMO (HENRIQUE DE C.)	A	0939S	2024E	1081. G( ) S( )					
LUENA (LUSO)	A	1147S	1955E	1328. G(R) D(C) S(C)	D:SU1,MO:SU2 MO:SU1-2				
HUAMBO (NOVA LISBOA)	A	1248S	1545E	1710. G(E.) D(C) S(C)	D:SU1,MO:SU2 MO:SU1-2		.6		
MENONGUE (SERPA PINTO)	A	1439S	1741E	1348. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2		.4		
LUCANGO (SA DE BANDEIRA)	A	1454S	1329E	1761. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2				
MOCAMEDES	A	1512S	1209E	43. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2		.4		
MAVINGA	A	1550S	2021E	1118. G( ) S( )					
PEREIRA D'ECA	A	1705S	1544E	1108. G(R) S( )	D:SU1		.5		

## BOTSWANA

	2	3.	4	5	6	7.	8.	9.	10
SERELE	A	2434S	2557E	994. G(K) S(C)	D:SU1,MO:SU2 MO:SU1-2				

## CAPE VERDE ISLANDS

	2	3.	4	5	6	7.	8.	9.	10
MINDELO	A	1653N	2500W	2. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2		.4		
PRAIA	A	1454N	2331W	27. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2		.4		

## CENTRAL AFRICAN REPUBLIC

	2	3.	4	5	6	7.	8.	9.	10
URIA	A	0632N	2159E	583. G( ) S(C)					
BOSSANGOA	A	0629N	1726E	463. G( ) S(C)					
DANGUI	A	0424N	1831E	367. G(K) S(C)					

## CHAD

	2	3.	4	5	6	7.	8.	9.	10
NDJAMENA	A	1208N	1502E	295. G( ) S(C)				.24	

## EGYPT

	2	3.	4	5	6	7.	8.	9.	10
TAHRIR	A	3039N	3042E	16. G(E.) 69- G(R) S(C)	D:SU1,MO:SU2 MO:SU1-SU2				
DAHTIM	A	3009N	3115E	17. G(E.) 69- G(R) S(C)	D:SU1,MO:SU2 MO:SU1-SU2				
CAIRO	A	3005N	3117E	36. G(E.) 69- S(C)	D:MO:SU2 MO:SU1-SU2				
GIZA	A	3003N	3113E	21. G(R) 64-48 S(C)	D:SU1,MO:SU2 MO:SU1				
KHARGA	A	2527N	3042E	16. G(R) 71- S(C) 71-	D:SU1,MO:SU2 MO:SU1-SU2				

6490M

2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10  
LIBREVILLE A 0027N 0925E 12 G( ) S( ) 24

GHANA

	2	3.	4	5	6	7.	8.	9.	10
NAVRONGO	.	A	1053N	0105W 198 G(BS) S(C)	.MO:SU2 .MO:SU2	.	.	24	.
WA	.	A	1003N	0230W 323 G( ) S(C)	.	.	.	24	.
TAMALE	.	A	0930N	0051W 168 G(BS) S(C)	.MO:SU2 .MO:SU2	.	.	24	.
YENDI	.	A	0927N	0001W 195 G( ) S(C)	.	.	.	24	.
BOLE	.	A	0902N	0229W 299 G(BS) S(C)	.	.	.	24	.
KETE-KRACHI	.	A	0749N	0002W 122 G( ) S(C)	.	.	.	24	.
WENCHI	.	A	0745N	0206W 339 G( ) S(C)	.	.	.	24	.
KUMASI	.	A	0643N	0136W 287 G(R) -65 G(QS) 66- S(C)	.D:SU1, MO:SU2 .MO:SU1-2	.	.	24	.
HO	.	A	0636N	0028E 156 G(BS) G(R) S(C)	.MO:SU2 .MO:SU2 .MO:SU2	.	.	24	.
TAFO	.	A	0615N	0023W 195 G(K) 72- S(C)	.MO:SU2 .MO:SU2	.	.	24	.
SEFWI BEKWAI	.	A	0612N	0220W 171 G( ) S(C)	.	.	.	24	.
AKUSE	.	A	0606N	0007E 17 G( ) S(C)	.	.	.	24	.
KOFORIDUA	.	A	0605N	0015W 160 G( ) S(C)	.	.	.	24	.
AKIM UDA	.	A	0556N	0059W 139 G( ) S(C)	.	.	.	24	.
ADA	.	A	0547N	0038E 5 G( ) S(C)	.	.	.	24	.
ACCRA	.	A	0536N	0010W 68 G(K) G(R) G(BS) S(C)	.MO:SU2 .MO:SU2 .MO:SU2 .MO:SU2	.	.	24	.
SALTPOUND	.	A	0512	0104W 44 G(BS) S(C)	.MO:SU2 .MO:SU2	.	.	24	.
TAKURADI	.	A	0453N	0146W 5 G(BS) S(C)	.MO:SU2 .MO:SU2	.	.	24	.
AXIM	.	A	0452N	0214W 38 G( ) S(C)	.	.	.	24	.

GUITNEA-BISSAU

1	2	3	4	5	6	7	8	9	10
.	.	.	.	.	.	.	.	.	.
BAFATA		A 1211N 1440W 42	G(R)		D:SU1,M0:SU2				
			S(C)		M0:SU1-2				
BISSAU AIRPORT		A 1153N 1539W 39	G(R)		D:SU1,M0:SU2			24	
			S(C)		M0:SU1-2				
BOLAMA		A 1135N 1529W 18	G(R)		D:SU1,M0:SU2				
			S(C)		M0:SU1-2				

KENYA

	2	3.	4	5	6	7.	8.	9.	10
MANDERA		A .0356N	4152E 230	G(BS) 66- S(C)	D:SU1,MO:SU2 MO:SU1-2	D	.	19	.
LOWAR		A .0307N	3537E 536	G(BS) 53- S(C) 58-	D:SU1,MO:SU2 MO:SU1-2	D	.	19	.
LOKORI		A .0156N	3602E	G( )	.	.	D	.	.
KITALE		A .0101N	3500E 1820	G(BS) 66- S(C)	D:SU1,MO:SU2 MO:SU1-2	D	.	.	.
INZIA FOREST		A .0045N	3456E	G( )	.	.	D	.	.
TURBO FOREST		A .0038N	3503E	G( )	.	.	D	.	.
ARCHERS POST		A .0037N	3749E	S(C)	.	.	D	.	.
ELDORET		A .0032N	3517E 2120	G(BS) 59- S(C) 59-	D:SU1,MO:SU2 MO:SU1-2	D	.	19	.
MARIGAT		A .0029N	3559E 1047	G(BS) 60- S(C) 57-	.	.	D	.	.
RUMIRUTI W.O.D.		A .0023N	3639E 1750	G(BS) 63-	.	.	D	.	.
MUMIAS SUGAR		A .0021N	3430E	G( )	.	.	D	.	.
MERU		A .0009N	3739E	G(BS)	.	.	D	.	19
KANDENG		A .0002N	3428E	S(C)	.	.	D	.	.
NANYUKIE		A .0001N	3704E 1910	G(BS) 66- S(C)	D:SU1,MO:SU2 MO:SU1-2	D	.	.	.
MARIEKE		A .0000S	3735E	G( )	.	.	D	.	.
OL JORO OROK		A .0002S	3621E 2400	G(BS) 63-	.	.	D	.	.
KIBOS COTTON RES.STN.		A .0004S	3449E 1200	G(BS) 63- S(C) 63-	.	.	D	.	.
KISUMO		A .0006S	3445E 1157	G(BS) 58- S(C) 58-	D:SUT,MO:SU2 MO:SU1-2	D	.	.	.

## KENYA

	2	3.	4	5	6	7.	8.	9.	10
LAMURIA W.D.D.	A .0002S	3652E1860.	G(BS)	63-		D			
AHERO/KANO	A .0009S	3456E1200.	G(BS)	62-		D			
HARIMANTI	A .0009S	3759E	G( )			D			
NAKURU	A .0016S	3604E1871.	G(BS)	66-	D:SU1,MO:SU2	D		19	
			S(C)	63-	MO:SU1-2				
KERICHO, TIMBILIL	A .0022S	3521E2300.	G(BS)	58-		D			
			S(C)	56-					
GARISSA	A .0028S	3938E 138.	G(BS)	63-	D:SU1,MO:SU2	D		19	
			S(C)	56-	MO:SU1-2				
TEBERE COTTON	A .0037S	3720E	G( )			D			
EMBU, MWAE EXP. STN.	A .0038S	3722E1150.	G(BS)	64-		D			
			S(C)	59-					
KISII	A .0041S	3447E	G( )			D			
NAIVASHA	A .0041S	3627E	G( )			D			
SOUTH KINANGOP FOREST	A .0043S	3641E2400.	G(BS)	63-		D			
KINDARUMA	A .0049S	3748E	G( )			D			
KIMAKIA	A .0048S	3645E2400.	G(BS)	57-		D			
			S(C)	57-					
CHANIA DAM	A .0049S	3646E	G( )			D			
KEDONG RANCH	A .0055S	3630E1890.	G(BS)	61-		D			
			S(C)	61-					
THIKA, HORT. RES. STN.	A .0059S	3704E1550.	G(BS)	63-		D			
			S(C)	63-					
RUIRU	A .0105S	3654E	G( )			D			
NAROK	A .0109S	3550E1890.	G(BS)	64-	D:SU1,MO:SU2	D		19	
			S(C)	53-	MO:SU1-2				
MUGUGA E.A.A.F.R.O.	A .0113S	3638E2090.	G(K)	57-72	D:SU1,MO:SU2	D			
			G(BS)	73-	D:SU1,MO:SU2	D			
			S(C)	53-	MO:SU1-2				
KABETE OBSERVATORY	A .0116S	3645E1740.	G(K)	35-43					
			S(C)	31-55					
NAIRODI/DAGORETTI	A .0116S	3645E1798.	G(E)	56-71	D:SU1,MO:SU2			12	
			G(K)	72-	D:SU1,MO:SU2				
			D( )						
			S(C)	55-	MO:SU1-2				
NAIRODI AIRPORT	A .0119S	3655L1624.	G(BS)	69-	D:SU1,MO:SU2	D		24	
			S(C)	50-	MO:SU1-2				
KITUI DAM	A .0121S	3800E1090.	G(BS)	63-		D			
ROHET RANCH	A .0122S	3730L	G( )			D			
GALOLE,TANA IRR.SCHEM	A .0130S	4002W 91.	G(BS)	63-		D			
			S(C)	50-					
WAYY CHIEF'S	A .0131S	3934E	G( )			D			
MACHAADS DAM	A .0131S	3715E1570.	G(BS)	63-		D			
KATUMANI	A .0135S	3714E	G( )			D			
MAKJENI	A .0151S	3740L	G( )			D			
LAMU	A .0216S	4054E 10.	G(BS)	71-	D:SU1,MO:SU2	D		19	
			S(C)	60-	MO:SU1-2				
LOITOKITOK	A .0257S	3732E	S(C)			D			
MALINDI AIRPORT	A .0314S	4006E 20.	G(BS)	67-	D:SU1,MO:SU2	D		24	
			S(C)	64-	MO:SU1-2				
VOI	A .0324S	3334L 560.	G(BS)	54-6d,75-	D:SU1,MO:SU2	D		19	
			S(C)		MO:SU1-2				
TAVETA	A .0334S	3741C	G( )			D			
BACHOMA	A .0342S	3357L	G( )			D			
MOMBASA AIRPORT	A .0402S	3937L 57.	G(BS)	53-	D:SU1,MO:SU2	D		24	
			S(C)	49-	MO:SU1-2				

## LIBYAN ARAB JAMAHIRIYA

	2	3.	4	5	6	7.	8.	9.	10
TRIPOLI	A .3240N	1310E	G( )	77-					
			UV( )	77-					24
			S(C)						

## MADAGASCAR

	2	3.	4	5	6	7.	8.	9.	10
TANANARIVE	A .1354S	4732E1300.	G(K)	53-	MO:SU2			30	
			D(K)						
			S(C)		MO:SU2				

## MOROCCO

	2	3.	4	5	6	7.	8.	9.	10
CASABLANCA	A .3334N	0740W 55.	G(E)		D:SU1,MO:SU2			24	
			S(C)		MO:SU1-2				

## MOZAMBIQUE

	2	3.	4	5	6	7.	8.	9.	10
PEMBA (PORTO AMELIA)	A .1256S	4030E 50.	G(R)		D:SU1				
			S(C)		MO:SU1				14
LICHINGA (VILA CADRAL)	A .1317S	3515E1364.	G(R)		D:P1-SU1,MO:SU2			13	
			S(C)		D:P1				
			D( )		MO:P1-SU1-SU2				
LUMBO	A .1502S	4040E 10.	G(R)		D:P1-SU1,MO:SU2			4	
			S(C)		MO:P1-SU1-SU2				
NAMPULA	A .1506S	3917E 441.	G(K)		D:P1-SU1,MO:SU2			14	
			S(C)		MO:P1-SU1-SU2				
GURUE' (VILA JUNQUEIRO)	A .1523S	3659E 734.	G(R)		D:SU1,MO:SU2				
			S(C)		MO:SU1-SU2				
TETE	A .1611S	3335E 149.	G(K)		D:P1-SU1,MO:SU2				
			D( )		D:P1				
			S(C)		MO:P1-SU1-SU2				
MOCUBA	A .1650S	3659E 134.	G(R)		D:P1-SU1,MO:SU2				
			S(C)		MO:P1-SU1-SU2				
CHIMOIO (VILA PERY)	A .1907S	3328E 731.	G(R)		D:P1-SU1,MO:SU2			4	
			S(C)		MO:P1-SU1-SU2				

MOZAMBIQUE

3-5

	2	3.	4	5	6	7.	8.	9.	10
BEIRA	A	1950S	3451E	7. G(K) D(..) S(C)	D:P1-SU1,MO:SU2 D:P1 MO:P1-SU1-SU2		15		
CHICUALACUALA (MALVERNIA)	A	2205S	3141E	452. G(R) S(C) D(..) S(L)	D:P1-SU1,MO:SU2 MO:P1-SU1-SU2 D:P1-SU1,MO:SU2 D:P1 MO:P1-SU1-SU2		4		
INHAMBARNE	A	2352S	3523E	14. G(K) S(C) D(..)	D:P1-SU1,MO:SU2 MO:P1-SU1-SU2 D:P1 MO:P1-SU1-SU2		6		
CHOKWE' (V. TRIGO DE MORAIS)	A	2431S	3300E	33. G(R) S(C)	D:P1-SU1,MO:SU2 MO:P1-SU1-SU2 D:P1-SU1,MO:SU2 MO:P1-SU1-SU2				
MANIQUENIQUE	A	2444S	3332E	13. G(R) S(C)	D:P1-SU1,MO:SU2 MO:P1-SU1-SU2 D:P1-SU1,MO:SU2 MO:SU1				
BOBOLE	A	2537S	3240E	30. G(R) S(C)	D:SU1 MO:SU1				
MAPUTO (LOURENCO MARQ.)	A	2558S	3236E	60. I(..) G(E..) D(..) S(C)	D:P1 D:P1-SU1,MO:SU2 D:P1 MO:P1-SU1-SU2		19	061, RG2	
UMBELUZI	A	2603S	3223E	12. G(R) S(C)	D:P1-SU1,MO:SU2 MO:P1-SU1-SU2				

NAMIBIA

	2	3	4	5	6	7	8	9	10
WINDHOEK	A	22345	1706E1726	G(K) S1-	H:ZA1,0:SU1, MO:SU2 S(C)				
KEETMANSHOOP	A	26345	1807E1064	G(K) S6-	H:ZA1,D:SU1, MO:SU2 S(C)				
GROOTFONTEIN	A	19355	1307E1411	G(K) D(K) S(C)	H:ZA1, D:ZA1,MO:SU1-SU, S(C)				

NIGERIA

REPUBLIC OF DJIBOUTI

• 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10  
 .....  
 . DJIBOUTI . A 1136S 4309E 3. G(K) . D:SU1,MO:SU2 . . . .  
 . . . . S(C) . MO:SU1-2 . . . .

## REUNION

..... 2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10 ..  
SAINT-DENIS/GILLOT . F 2053S 5531E 19. G( ) . . . . . 24 .  
. . . . . S( ) . . . . . . . . . .

	2	3.	4	5	6	7+	8+	9+	10
GUEDE	A 1633N	1445W	8 G(K)	71-		H			
			D(K)	71-		H			
			S(C)						
LOUGA	A 1537N	1613W	38 G(K)	77-		H			
			S(C)			H			
DAKAR-HANN	A 1443N	1727W	20 G(V)	57-77	D:SU1,MO:SU2	H		24	
			G(K)	77-	D:SU1,MO:SU2	H			
			D(K)	-		H			
			0*(GD)65-75		H:SU1,MO:SU2	H			
			D*(FU)72-		H:SU1,MO:SU2	H			
			S(C)		MO:SU1-2				
BAMBEY	A 1442N	1628W	17 G(K)	65-		H			
			D(K)	-		H			
			S(C)			H			
TAMBACOUNDA	A 1346N	1341W	49 G(K)	77-		H		24	
			S(C)			H			
KEDOUGOU	A 1234N	1213W	165 G(E)	78-		H		14	
ZIGUINCHOR	A 1233N	1616W	19 G(K)	76-	D:SU1	H		24	
			S(C)			H			

## REPUBLIC OF SOUTH AFRICA

	2	3.	4	5	6	7+	8+	9+	10
NELSPRUIT	A 2526S	3059E	671 G(K)	73-	H:ZA1,D:SU1,				3
			D(K)		MO:SU2				
			S(C)		H:ZA1				
ROODEPLAT	A 2535S	2821L1164	6 G(K)	56-	D:ZA1,MO:SU1-2				
			D(K)		H:ZA1,D:SU1,				
			S(C)		MO:SU2				
PRETORIA-FORUM	A 2544S	2811L17331	I(A)		H:ZA1,MO:SU1-2				13
			I(LF)						
			I(HI)						
			G(K)	55-	H:ZA1,D:SU1,				
			D(K)		MO:SU2				
			S(C)		H:ZA1				
PRETORIA-LYNWOOD	A 2545S	2614L1369	G(K)	51-	D:ZA1,MO:SU1-2				
			D(K)		H:ZA1,MO:SU1-2				
			S(C)		H:ZA1,D:SU1,				
			G(C)		MO:SU2				
PRETORIA-IRENE	A 2555S	2813L1532	G(K)	74-	H:ZA1				
			D(K)		H:ZA1				
			S(C)		D:ZA1				
UPINGTON	A 2624S	2116E	236 G(K)	64-	H:ZA1,D:SU1,				13
			D(K)		MO:SU2				
			S(C)		H:ZA1				
ALEXANDERBAAI/DAY	A 2834S	1632E	21 G(K)	57-	D:ZA1,MO:SU1-2				12
			D(K)		H:ZA1,D:SU1,				
			S(C)		MO:SU2				
BLOEMFONTEIN	A 2706S	2618E1422	6 G(K)	53-	D:ZA1,MO:SU1-2				17
			D(K)		H:ZA1,D:SU1,				
			S(C)		MO:SU2				
DURBAN	A 2956S	3057E	b G(K)	51-	H:ZA1,MO:SU1-2				18
			D(K)		H:ZA1				
			S(C)		D:ZA1,MO:SU1-2				
GROOTFONTEIN/MIDDELBURG	A 3129S	2502E1271	6 G(K)	65-	H:ZA1,D:SU1,				3
			D(K)		MO:SU2				
			S(C)		H:ZA1				
CAPE TOWN/KAAPSTAD	A 3358S	1836E	44 G(K)	51-	D:ZA1,MO:SU1-2				20
			D(K)		H:ZA1,D:SL1,				
			S(C)		MO:SU2				
PORT ELIZABETH	A 3359S	2536E	62 G(K)	57-	H:ZA1				20
			D(K)		D:ZA1,MO:SU1-2				
			S(C)		H:ZA1,D:SU1,				
GOUGA ISLAND	A 4021S	753W	54 G(K)	65-	MO:SU2				20
			D(K)		H:ZA1				
			S(C)		D:ZA1,MO:SU1-2				
MARION ISLAND	A 4653S	3752E	23 G(K)	52-	H:ZA1,D:SU1				20
			D(K)		MO:SU2				
			S(C)		H:ZA1				
			D:ZA1,MO:SU1-2						

## SUDAN

	2	3.	4	5	6	7+	8+	9+	10
PORT SUDAN	A 1935N	3713E	3 G(R)	61-	D:SU1,MO:SU2	D		44	
			S(C)		MO:SU1-SU2				
DONGOLA	A 1910N	3029E	225 G(R)	73-	D:SU1,MO:SU2	D		45	
			S(C)		MO:SU1-SU2				
TOKAR	A 1826N	3737E	20 G(R)		D:SU1	D		5	
			S(C)		MO:SU1				
HUDEIDA	A 1734N	3356E	350 G(R)		D:SU1	D			
			S(C)		MO:SU1				
AROMA	A 1550N	3409E	430 G(R)		D:SU1	D		5	
			S(C)		MO:SU1				
KHARTOUM-SHAMBAT	A 1540N	3232E	376 G(K)		D:SU1,MO:SU2	D		48	
			G(R)	61-	MO:SU1-SU2				
WAD MEDANI	A 1424N	3329E	405 G(K)		D:SU1,MO:SU2	D		48	
			G(R)	61-	MO:SU1-SU2				
EL FASHER	A 1337N	2520E	730 G(R)	61-	D:SU1,MO:SU2	D		48	
			S(C)		MO:SU1-SU2				
ZALINGE	A 1254N	2329E	900 G(R)	72-	D:SU1,MO:SU2	D		6	
			S(C)		MO:SU1-SU2				
ABU NAAMA	A 1244N	3407E	444 G(R)	64-	D:SU1,MO:SU2	D		24	
			S(C)		MO:SU1-SU2				
GHAZALA GAWAZAT	A 1128N	2627E	481 G(R)	64-	D:SU1,MO:SU2	D		21	
			S(C)		MO:SU1-SU2				
EL SHOWAK	A 1124N	3551E	510 G( )		D:SU1	D			
			S(C)		MO:SU1				
KADUGLI	A 1100N	2943E	501 G(R)	73-	D:SU1,MO:SU2	D		8	
			S(C)		MO:SU1-SU2				
MALAKAL	A 0933N	3139E	390 G(R)	61-	D:SU1,MO:SU2	D		48	
			S(C)		MO:SU1-SU2				
WAU	A 0742N	2801E	438 G(R)		D:SU1,MO:SU2	D		27	
			S(C)		MO:SU1-SU2				
JUBA	A 0452N	3137	457 G(R)	61-	D:SU1,MO:SU2	D		48	
			S(C)		MO:SU1-SU2				

## TANZANIA

	2	3.	4	5	6	7.	8.	9.	10
• BUKOBA	A 0120S	3149E1137.	G(BS)	64-69*71-	D:SU1,MO:SU2	D		.24	
• MUSOMA	A 0130S	3348E1147.	G(BS)	70-	MOSU1-2	D		.24	SOMETIMES E(K)
• MWANZA	A 0228S	3255E1139.	G(BS)	65-	D:SU1-MOSU2	D		.24	
• LYAHUNGU COFFEE RES.STN	A 0314S	3715E1250.	G(BS)	63-	MOSU1-2	D		.24	
• ARUSHA	A 0320S	3637E1387.	G(BS)	73-	D:SU1,MO:SU2	D		.13	
• KILIMANJARO AIRPORT	A 0325S	3704E 891.	G(BS)	72-	MOSU1-2	D		.24	
• SAME	A 0405S	3743E 872.	G(BS)	69-	D:SU1,MO:SU2	D		.24	
• KIGOMA	A 0453S	2938E 382.	G(BS)	70-	MOSU1-2	D		.24	
• TABORA AIRPORT	A 0505S	3250E1181.	G(BS)	65-	D:SU1,MO:SU2	D		.24	
• NGOMENI SISAL RES.STN.	A 0509S	3854E 183.	G(BS)	63-	MOSU1-2	D		.24	
• DODOMA	A 0610S	3546E1119.	G(BS)	65-	D:SU1,MO:SU2	D		.24	
• ZANZIBAR/KISAUNI A.	A 0613S	3913E 15.	G(BS)	66-	MOSU1-2	D		.24	
• ILONGA EXP. FARM	A 0615S	3913E 20.	G(C)	32-53	D:SU1,MO:SU2	D		.24	
• MOROGORO	A 0646S	3752E 503.	G(BS)	63-	MOSU1-2	D		.24	
• DAR ES SALAAM AIRPORT	A 0653S	3912E 55.	G(E.)	-71	D:SU1,MO:SU2	D		.24	
•					MOSU1-2	D		.24	
•					D:SU1,MO:SU2	D		.24	
• IRINCA	A 0740S	3545E1426.	G(BS)	60-	MOSU1-2	D		.22	
• SEATONDALE EXP. STN.	A 0747S	3531C1550.	G(BS)	63-67	D:SU1,MO:SU2	D		.24	
• MBARALI IRR. SCHEME	A 0840S	3420E1080.	G(BS)	63-	MOSU1-2	D		.24	
• MEDEYA RANGE	A 0850S	3328E2440.	G(BS)	57-	D:SU1,MO:SU2	D		.24	
•					MOSU1-2	D		.24	
• MTWARA	A 1016S	4011E 113.	G(BS)	69-	D:SU1,MO:SU2	D		.24	
• SONGEA	A 1041S	3535E1067.	G(BS)	68-	MOSU1-2	D		.24	
•					D:SU1,MO:SU2	D		.24	

## TUNISIA

	2	3.	4	5	6	7.	8.	9.	10
• SIDI-BOU-SAID	A 3052N	1021E 127.	G(K)	65-	D:SU1,MO:SU2	D		.24	
• TUNIS	A 3550N	1014E 5.	G(K)	-67	MOSU1-2	D		.24	
•					D:SU1,MO:SU2	D		.24	
•					MOSU1	D		.24	

## UGANDA

	2	3.	4	5	6	7.	8.	9.	10
• ARIUA	A 0303N	3055E1204.	G(BS)	71-	D:SU1,MO:SU2	D		.24	
• GULU	A 0245N	3220E1104.	G(BS)	64-	MOSU1-2	D		.24	
• WADELAI	A 0244N	3124E 640.	G(BS)	63-	D:SU1,MO:SU2	D		.24	
• PARAA	A 0213N	3135E 693.	G(BS)	73-	MOSU1-2	D		.24	
• ATUMTAK	A 0214N	3439E1280.	G(BS)	58-	D:SU1,MO:SU2	D		.24	
• SOROTI	A 0143N	3337E1132.	G(K)	70-	MOSU1-2	D		.24	
• MASINDI	A 0141N	3143E1146.	G(BS)	64-	D:SU1,MO:SU2	D		.20	
• BUGESIGE EXP. STN.	A 0109N	3416E1450.	G(BS)	64-	MOSU1-2	D		.20	
• TORORO	A 0041N	3410E1170.	G(BS)	66-	D:SU1,MO:SU2	D		.19	
• YAMBULONGE COTTON RES.STN.	A 0032N	3237E1148.	G(K)	59-	MOSU1-2	D		.19	
• JINJA	A 0027N	3311E1175.	G(BS)	56-	D:SU1,MO:SU2	D		.19	
• KAWANDA AGRIC. STN.	A 0025N	3232E1200.	G(BS)	63-	MOSU1-2	D		.19	
• KAMPALA	A 0012N	3237E1144.	G(BS)	69,72-	D:SU1,MO:SU2	D		.19	
•					MOSU1-2	D		.19	
• KITUZA COFFEE RES.STN.	A 0015N	3246E1200.	G(BS)	63-	D:SU1,MO:SU2	D		.18	
• KASESE	A 0011N	3006E 959.	G(BS)	64-	MOSU1-2	D		.18	
• ENTEBBE AIRPORT	A 0003N	3227E1155.	G(BS)	64-	D:SU1,MO:SU2	D		.24	
• MBARARA	A 0037S	3039E17412.	G(BS)	64-	MOSU1-2	D		.20	
•					D:SU1,MO:SU2	D		.20	

## ZAIRE

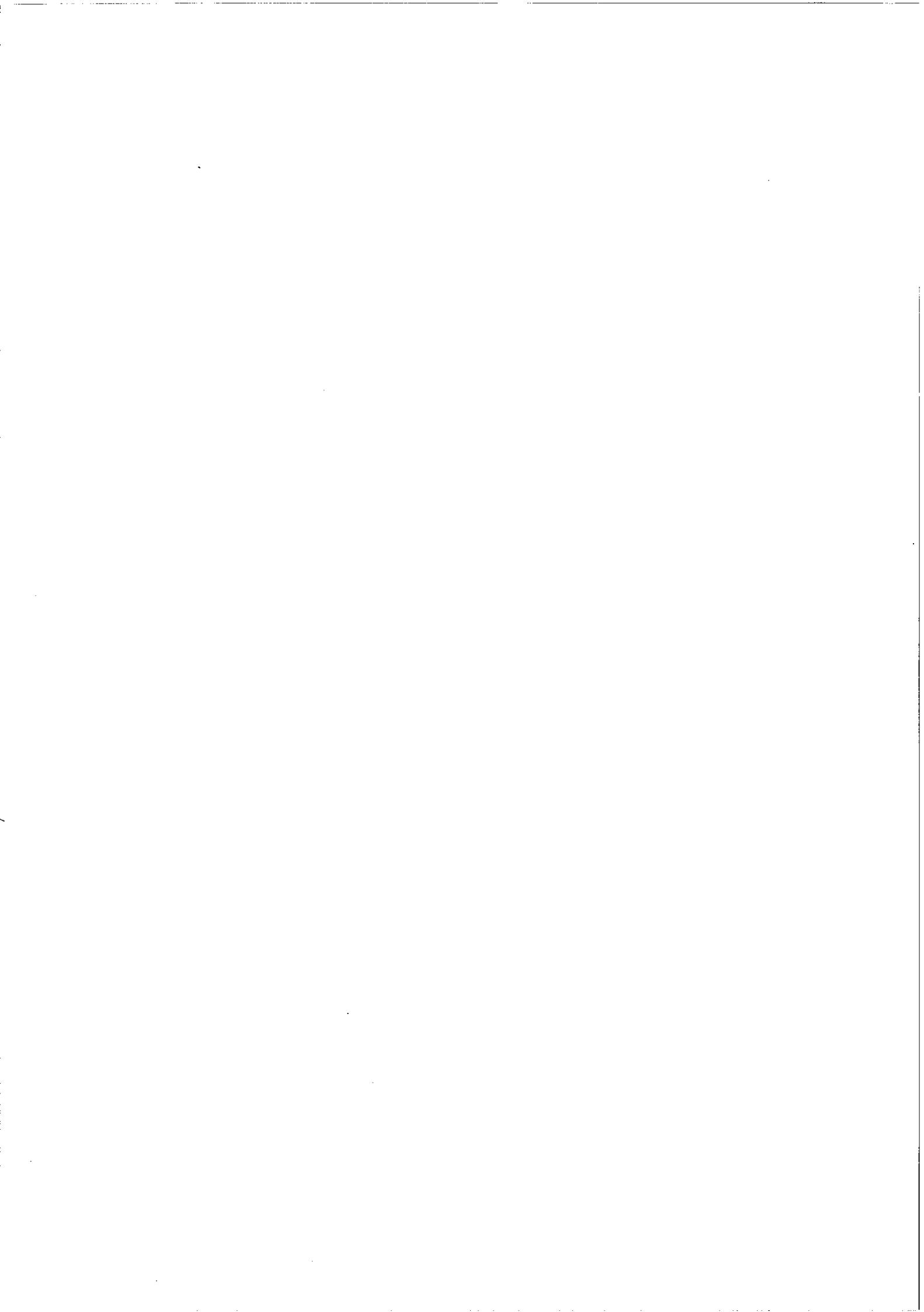
	2	3.	4	5	6	7.	8.	9.	10
• BUTA	A 0247N	2447E 410.	G(C)		D:SU1,MO:SU2	D		.10	
• LISALA	A 0219N	2134E 463.	G(C)		MOSU1-2	D		.16	
• BUNIA	A 0130N	3013E1239.	G(BS)	65-	D:SU1,MO:SU2	D		.24	
• KISANGANI	A 0031N	2511E 396.	G(BS)	65-	MOSU1-2	D		.24	
• MBANDAKA	A 0003N	1816E 345.	G(BS)	65-	D:SU1,MO:SU2	D		.24	
• BOENDE	A 0013S	2051E 351.	G(BS)		MOSU1-2	D		.24	
• LUKOLELA	A 0103S	1712E 318.	G(C)		D:SU1,MO:SU2	D		.10	
•					MOSU1-2	D		.10	

## ZAIRE

	2	3.	4	5	6	7.	8.	9.	10
INDONGO		A .0152S	1816E 300.	G( ) S(C)					.10
BUKAVU		A .0231S	2351E 163.						
KINDU		A .0257S	2555E 497.	G(BS) 65- G(C)	D:SU1,MO:SU2 D:SU1,MO:SU2	D	.24		
BANDUNDU		A .0318S	1721E 332.	G(BS) 65- S(C)		D	.24		
KINHASA/BINZA		A .0422S	1515E 445.	G(X) 65- S(C)	D:SU1,MO:SU2 MO:SU1-2	D			
KINHASA/N'DJELE		A .0423S	1526E 309.	G( ) S(C)					.24
XIKWIT		A .0502S	1848E 518.	G( ) S(C)					.24
MATADI		A .0548S	1326E 355.	G( ) S(C)					.24
KANANGA (LULUABOURG)		A .0553S	2225E 675.	G(BS) 55- S(C)	D:SU1,MO:SU2 MO:SU1-2	D	.24		
KALEMIE		A .0553S	2911E 790.	G(BS)					
KITONA		A .0555S	1227E 122.	G( ) S(C)					.16
MOANDA		A .0600S	1225E 27.	G( ) S(C)					.16
MBUJI-MAYI		A .0610S	2337E 633.	G(BS) 65- S(C)		D	.16		
TSHIKAPA		A .0625S	2051E 521.	G( ) S(C)					.16
MONONO		A .0717S	2726E 614.	G( ) S(C)					.16
LUBUMUASHI-KARAVIA		A .1139S	2728E1250.	G(X) 65- S(C)	D:SU1,MO:SU2 MO:SU1-2	D			

## ZIMBABWE

	2	3.	4	5	6	7.	8.	9.	10
KARIBA		A .1631S	2853E 518.	G( )					
MOUNT DARWIN		A .1647S	3135E 965.	G( ) S(C)					.14
KARO1		A .1650S	2937E1344.	G( ) S(C)					.14
SALISBURY/DELVEDERE		A .1750S	3101E1471.	G(X) D( ) S(C)	MO:SU2 MO:SU2				
SALISBURY/KUTSAGA OBS.		A .1756S	3106E1478.	G( ) S(C)					.13
VICTORIA FALLS		A .1806S	2551E1062.	G( ) S(C)					.14
GRAND REEF		A .1858S	3227E1017.	G( ) S(C)					.14
GWELO		A .1927S	2951E1426.	G( ) S(C)					.14
FORT VICTORIA		A .2004S	3052E1096.	G( ) S(C)					.14
BULAWAYO/GOETZ OBS.		A .2009S	2837E1343.	G(X) D( ) S(C)	MO:SU2 MO:SU2				.5
BUFFALO RANGE		A .2101S	3135E 429.	G( ) S(C)					



**REGION II  
ASIA**



## BANGLADESH

3-10

	2	3.	4	5	6	7.	8.	9.	10
DACCA	A	2346N	9023E	8. G(K) 67- S(C) 68-		H		24	
CHITTAGONG	A	2221N	9149E	35. G(K) 66- S(C) 68-		H		24	

## DEMOCRATIC YEMEN

	2	3.	4	5	6	7.	8.	9.	10
KHORMAKSAR/ADEN	A	1250N	4502E	3. G(K) Q(G)				24	

## INDIA

	2	3.	4	5	6	7.	8.	9.	10
GULMARG	A	3403N	7424E	2655. G(R) 66-		D		2	
NEW DELHI	A	2835N	7712E	216. I(A) G(K) 57- G(BS) D(K) Q(C) S(C)	D:SU1,MO:SU2	H		48	
MUDHAWARI	A	2723N	9531E	111. G(R) 67-		D		24	
JODHPUR	A	2618N	7301E	224. I(A) G(K) 60- D(K) S(C)	D:SU1,MO:SU2	H		24	
PATNA	A	2536N	8506E	51. G(R) 75-		D		30	
SHILLONG	A	2534N	2153L	1630. I(A) G(K) 67- D(K) S(C)	D:SU1,MO:SU2	H		2	
BHOPAL-HAIRAGARH	A	2317N	7721E	523. G(R) 75-		D		24	
AHMEDABAD	A	2304N	7238E	55. I(A) G(K) 62- D(K) S(C)	D:SU1,MO:SU2	H		48	
DUM-DUM-CALCUTTA	A	2239N	8827E	4. G(K) S(C)	MO:SU1-2 MO:SU2	H		45	
CALCUTTA-ALIPORE	A	2232N	8820E	6. I(A) G(K) 57- G(BS) D(K) Q(C) S(C)	D:SU1,MO:SU2	H		3	
BHAJNAGAR	A	2145N	7211E	5. I(A) G(K) 67- D(K) S(C)	D:SU1,MO:SU2	H		3	
BHUBANESHWAR	A	2015N	8550E	46. G(R) 67-		D		16	
NAGPUR	A	2106N	7903L	310. I(A) G(K) 60- D(K) S(C)	D:SU1,MO:SU2	H		24	
BOMBAY-SANTA CRUZ	A	1907N	7251E	14. I(A) G(K) 69- D(K) S(C)	MO:SU1-2 D:SU1,MO:SU2	H		48	
POONA	A	1812N	7351L	559. I(A) G(K) 57- G(BS) D(K) Q(C) S(C)	D:SU1,MO:SU2	H		8	
VISHAKAPATHAM	A	1743N	8314L	3. I(A) G(K) 61- D(K) S(C)	D:SU1,MO:SU2	H		23	
HYDERABAD-BEZUMPET	A	1727N	7928E	545. G(R) 66-		D		24	
GOA-PANJIM	A	1529N	7349E	55. I(A) G(K) 63- D(K) S(C)	D:SU1,MO:SU2	H		8	
MADRAS	A	1300N	8011E	16. I(A) G(K) 57- G(BS) D(K) S(C)	MO:SU1-2 D:SU1,MO:SU2	H		48	
BANGALORE	A	1257N	7738E	897. G(R) 56-		D		5	
MANGALORE-DAJPE	A	1255N	7653E	102. G(R) 62-		D		48	
PORT BLAIR	A	1140N	9243L	79. G(R) 63-		D		8	
KODAIKANAL	A	1014N	7728E	2339. I(A) G(K) 52- S(C)	D:SU1,MO:SU2	H		3	
TRIVANDRUM	A	0329N	7657L	64. I(A) G(K) 59- D(K) Q(C) S(C)	MO:SU1-2 D:SU1,MO:SU2	H		3	
MINICOUY	A	0818N	7300E	2. G(R) 64- S(C)	MO:SU1-2	D		8	

## IRAQ

	2	3.	4	5	6	7.	8.	9.	10
MOSUL	A	3619N	4309E	223. G(R) 70- S(C)		D			
SULAIMANIYA	A	3533N	4527E	853. G(R) 76- S(C)		H			
KIRKUK	A	3528N	4424E	331. G(R) 73- S(C)		D			
BAGHDAD	A	3314N	4414E	34. G(R) 67- S(C)		H			
RUTBA	A	3302N	4017E	616. G(R) 74- S(C)		D			
KERBELLA	A	3237N	4401E	229. G(R) 76- S(C)		H			
NASIRIYAH	A	3105N	4614E	3. G(R) 77- S(C)		D			

JAPAN

	2	3.	4	5	6	7.	8.	9.	10
WAKKANI	A	4525N 14141E	3.	G(R) 51-71 G(JP) 72- S(J) 70-	D:J1 D:J1 D:J1	.	.	.	.
KITAMIESASHI	A	4456N 14235E	6.	G(JP) 74- S(J) 42-	D:J1 D:J1	.	H	3	.
ABASHIRI	A	4401N 14417E	38.	G(R) 54-71 G(JP) 72- S(J) 03-	D:J1 D:J1 D:J1	.	H	.	.
RUMOI	A	4357N 14138E	22.	G(JP) 73- S(J) 43-	D:J1 D:J1	.	H	3	.
ASAHIKAWA	A	4346N 14222E	112.	G(R) 43-71 G(JP) 72- S(J) 96-	D:J1 D:J1 D:J1	.	H	.	.
NEMURO	A	4320N 14535E	26.	I(SD) 53+ G(R) 41-71 G(JP) 71- S(J) 90-	J3 D:J1 D:J1	.	.	2	.
SAPPORO	A	4303N 14120E	17.	I(SD) 32+ G(R) 40-71 G(E,) 59-71 G(JP) 71- S(J) 1689-	J3 D:J1 D:J1, MO:SU1-2	.	H	.	.
OBIHIRO	A	4255N 14313E	39.	G(R) 44-71 G(JP) 74- S(J) 1900- S(J) 01-	D:J1 D:J1 D:J1, MO:SU1-2	.	H	.	.
SUTTSU	A	4247N 14014E	16.	G(JP) 73- S(J) 23-	D:J1 D:J1	.	H	7	.
MURORAN	A	4219N 14059E	43.	G(JP) 73- S(J) 23-	D:J1 D:J1	.	H	4	.
URAOKAWA	A	4210N 14247E	34.	G(R) 45-57 G(JP) 73- S(J) 27- S(J) 1890-	D:J1 D:J1 D:J1	.	.	8	.
HAKODATE	A	4149N 14045E	33.	G(R) 53-71 G(JP) 72- S(J) 1590-	D:J1 D:J1 D:J1	.	H	8	.
AOMORI	A	4049N 14047E	4.	G(R) 41-71 G(JP) 72- S(J) 56-	D:J1 D:J1 D:J1	.	H	.	.
HACHINOHE	A	4032N 14132E	27.	G(JP) 73- S(J) 37-	D:J1 D:J1	.	H	8	.
AKITA	A	3945N 14006E	9.	I(SD) 32+ G(R) 39-71 G(JP) 71- S(J) 1890-	J3 D:J1, D:SU1, NO:SU2	.	.	8	.
MORIOKA	A	3942N 14110E	155.	G(R) 35-71 G(JP) 72- S(J) 23-	D:J1, MO:SU1-2 D:J1	.	H	8	.
MIYAKO	A	3939N 14158E	43.	I(SD) 54+ G(R) 42-71 G(JP) 71- S(J) 02-	D:J1 D:J1, MO:SU1-2	.	H	.	.
RYORI	A	3902N 14150L	260.	I(X) 76- G(JP) 76- S(J) 37-	D:J1, MO:SJ1-2	.	H	.	.
SAKATA	A	3854N 13951E	3.	G(R) 55-71 G(JP) 73- S(J) 37-	D:J1 D:J1 D:J1	.	H	8	.
SENDAI	A	3816N 14054L	38.	G(R) 53-71 G(E,) 59-71 G(JP) 71- S(J) 26-	D:J1-SU1, J3, SU D:J1, MO:SU2 D:J1, MO:SU2	.	H	.	.
YAMAGATA	A	3815N 14021E	151.	G(R) 40-71 G(JP) 73- S(J) 1895-	D:J1 D:J1 D:J1	.	H	4	.
NIIGATA	A	3755N 13903E	2.	G(JP) 72- S(J) 26-	D:J1 D:J1	.	H	8	.
FUKUSHIMA	A	3745N 14029L	67.	G(R) 44-71 G(JP) 73- S(J) 01-	D:J1 D:J1 D:J1	.	H	4	.
WAJIMA	A	3723N 13654E	5.	I(SD) 53+ G(JP) 71- S(J) 30-	D:J1 D:J1, SU1, MO:SU2 D:J1, MO:SU1-2	.	H	.	.
TAKADA	A	3706N 13815E	13.	G(R) 58-71 G(JP) 72- S(J) 23-	D:J1 D:J1 D:J1	.	H	8	.
ONAHAMA	A	3657N 14054E	3.	G(R) 55-71 G(JP) 72- S(J) 11-	D:J1 D:J1 D:J1	.	H	.	.
TOYAMA	A	3642N 13712E	9.	G(R) 42-69 G(JP) 73- S(J) 39-	D:J1 D:J1 D:J1	.	H	4	.
UTSONOMIYA	A	3633N 13952L	120.	G(R) 39-65 G(JP) 73- S(J) 1897-	D:J1 D:J1 D:J1	.	H	4	.
MAEBASHI	A	3624N 13904E	112.	G(JP) 71- S(J) 1897-	D:J1 D:J1	.	H	.	.
MATSUMOTO	A	3615N 13758E	610.	I(SD) 36+ G(JP) 72- S(J) 1899-	D:J1-SU1, MO:SU2 D:J1, MO:SU1-2	.	H	.	.
FUKUI	A	3603N 13614E	9.	G(JP) 73- S(J) 1898-	D:J1 D:J1	.	H	3	.
TATENO	A	3603N 14008L	25.	G(E,) 57-68 G(K) 68-75 G(JP) 75- D(K) 64- R(K) 64- O(GD) L+(..) S(C)	D:J1-SU1, MO:SU2 D:SU1 D:SU1 D:SU1 D:J3 D:J3 MO:SU1-2	.	H	3	LAWN
CHOSHII	A	3543N 14051E	27.	G(JP) 72- S(J) 1899-	D:J1 D:J1	.	H	E	.
TOKYO	A	3541N 13946E	54.	I(SD) 32+64 G(R) 35-70 G(JP) 72- S(J) 1891-	D:J1 D:J1 D:J1 D:J1	.	.	8	.
KOFU	A	3540N 13833E	272.	G(R) 42-45 G(JP) 73- S(J) 1900-	D:J1 D:J1	.	H	.	.
MAIZURU	A	3527N 13519L	3.	G(R) 55-71 G(JP) 74- S(J) 49-	D:J1 D:J1 D:J1	.	H	8	.
YONAGO	A	3526N 13321E	7.	I(SD) 39+ G(R) 41-72 G(JP) 72- S(J) 39-	J3 D:J1 D:J1, MO:SU1-2	.	H	3	.

	2	3	4	5	6	7	8	9	10
• HIKONE	• A .3516N 13615E	87.	G(R)	53-71	• D:J1	•	•	•	•
•	•	•	• G(JP)	73-	• D:J1	• H	•	•	•
•	•	•	• S(J)1895-	•	• D:J1	• H	•	•	•
• NAGOYA	• A .3510N 13658E	51.	G(R)	52-67	•	• H	•	•	•
•	•	•	• G(JP)	72-	• D:J1	• H	•	•	•
•	•	•	• S(J)1891-	•	• D:J1	• H	•	•	•
• SHIZUOKA	• A .3458N 13824E	14.	G(JP)	73-	• D:J1	• H	•	•	•
•	•	•	• S(J)	60-	• D:J1	• H	•	•	•
• HAMADA	• A .3454N 13204E	20.	G(R)	53-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	73-	• D:J1	• H	•	•	•
•	•	•	• S(J)1828-	•	• D:J1	• H	•	•	•
• OSHIMA	• A .3446N 13923	190.	G(R)	42-46	•	• H	•	•	•
•	•	•	• G(JP)	72-	• D:J1	• H	•	•	•
•	•	•	• S(J)	39-	• D:J1	• H	•	•	•
• NARA	• A .3442N 13550E	105.	G(R)	59-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	73-	• D:J1	• H	•	•	•
• OSAKA	• A .3441N 19531E	23.	G(R)	53-71	• D:J1	• H	•	•	•
•	•	•	• G(E.)	59-71	• D:J1-SU1, J3,SU-	• H	•	•	•
•	•	•	• G(JP)	71-	• D:J1,M0:SU2	• H	•	•	•
•	•	•	• S(J)1890-	•	• D:J1,M0:SU1-2	• H	•	•	•
• OMAEZAKI	• A .3436N 13813E	45.	G(JP)	72-	• D:J1	• H	•	•	•
•	•	•	• S(J)	33-	• D:J1	• H	•	•	•
• HIROSHIMA	• A .3422N 13226E	29.	G(R)	57-71	• D:J1	• H	•	•	12
•	•	•	• G(JP)	72-	• D:J1	• H	•	•	•
• TAKAMATSU	• A .3419N 13403E	9.	G(R)	42-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	72-	• D:J1	• H	•	•	•
• IZUHARA	• A .3412N 12918E	21.	G(R)	55-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	72-	• D:J1	• H	•	•	•
•	•	•	• S(J)	03-	• D:J1	• H	•	•	•
• SHIMONOSEKI	• A .3357N 13056E	46.	G(R)	53-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	73-	• D:J1	• H	•	•	•
• NATSUYAMA	• A .3350N 13247E	32.	G(R)	59-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	72-	• D:J1	• H	•	•	•
• FUKUOKA	• A .3335N 13023E	3.	I(SD)	32*	• J3	• H	•	•	•
•	•	•	• G(R)	39-71	•	•	•	•	•
•	•	•	• G(E.)	59-71	• D:J1-SU1, J3,SU-	• H	•	•	•
•	•	•	• G(JP)	71-	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• S(J)1896-	•	• D:J1,M0:SU1-2	• H	•	•	•
• KOCHI	• A .3334N 13333E	1.	G(R)	53-71	• D:J1	• H	•	•	4
•	•	•	• G(JP)	73-	• D:J1	• H	•	•	•
•	•	•	• S(J)1825-	•	• D:J1	• H	•	•	•
• SHIONOMISAKI	• A .3327N 13546E	73.	I(SD)	32*	•	•	•	•	•
•	•	•	• G(R)	53-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	71-	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• S(J)	13-	• D:J1,M0:SU1-2	• H	•	•	•
• SAGA	• A .3315N 13018E	4.	G(R)	53-71	• D:J1	• H	•	•	3
•	•	•	• G(JP)	73-	• D:J1	• H	•	•	•
•	•	•	• S(J)1893-	•	• D:J1	• H	•	•	•
• OITA	• A .3314N 13137E	5.	G(R)	41-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	73-	• D:J1	• H	•	•	•
•	•	•	• S(J)1899-	•	• D:J1	• H	•	•	•
• HACHIJOGIMA	• A .3306N 13947E	79.	G(JP)	71-	• D:J1	• H	•	•	•
•	•	•	• S(J)	07-	• D:J1	• H	•	•	•
• KUMAMOTO	• A .3249N 13043E	36.	G(R)	38-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	72-	• D:J1	• H	•	•	•
•	•	•	• S(J)1891-	•	• D:J1	• H	•	•	•
• NAGASAKI	• A .3244N 12952E	27.	G(R)	35-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	71-	• D:J1	• H	•	•	•
•	•	•	• S(J)1897-	•	• D:J1	• H	•	•	•
• SHIMIZU (ASHIZURI)	• A .3243N 13301E	31.	I(SD)	32*	• J3	• H	•	•	3
•	•	•	• G(R)	53-71	• D:J1	• H	•	•	•
•	•	•	• G(JP)	71-	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• S(J)	42-	• D:J1,M0:SU1-2	• H	•	•	•
• MIYAZAKI	• A .3155N 13125E	7.	G(R)	53-71	• D:J1	• H	•	•	8
•	•	•	• G(JP)	72-	• D:J1	• H	•	•	•
•	•	•	• S(J)1896-	•	• D:J1	• H	•	•	•
• KAGOSHIMA	• A .3134N 13033C	4.	I(SD)	53*	• J3	• H	•	•	2
•	•	•	• I(JP)	65-75-	•	•	10M	•	•
•	•	•	• G(R)	53-71	• D:J1-SU1	•	•	•	•
•	•	•	• G(E.)	57-58	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• G(JP)	71-	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• S(J)1899-	•	• D:J1,M0:SU1-2	• H	•	•	•
• NAZE	• A .2323N 12930E	3.	G(R)	53-71	• D:J1	• H	•	•	2
•	•	•	• G(JP)	71-	• D:J1	• H	•	•	•
•	•	•	• S(J)1897-	•	• D:J1	• H	•	•	•
• CHICHIJIMA	• A .2705N 14211E	3.	I(SD)	33-41	•	•	•	•	•
•	•	•	• G(K)	70-73	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• G(JP)	73-	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• S(J)	70-	• D:J1,M0:SU1-2	• H	•	•	•
• NANA	• A .2614N 12741E	35.	I(SD)	32*	•	•	•	•	•
•	•	•	• G(E.)	68-73	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• G(JP)	73-	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• S(J)1900-	•	• D:J1,M0:SU1-2	• H	•	•	•
• MINAMI-DAITOJIMA	• A .2550N 13114E	14.	G(JP)	73-	• D:J1	• H	•	•	8
•	•	•	• S(J)	68-	• D:J1	• H	•	•	•
• MIYAKOJIMA	• A .2447N 12517E	40.	G(R)	68-	• D:J1	• H	•	•	8
•	•	•	• S(J)	68-	• D:J1	• H	•	•	•
• ISHIGAKIJIMA	• A .2420N 12410E	6.	I(SD)	41*	•	•	•	•	•
•	•	•	• G(R)	41-73	• D:J1	• H	•	•	•
•	•	•	• G(E.)	69-71	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• G(JP)	73-	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• S(J)1899-	•	• D:J1,M0:SU1-2	• H	•	•	•
• MINAMI-TORISHIMA	• A .2418N 15358E	9.	G(K)	70-73	• D:J1-SU1,M0:SU2	• H	•	4	•
•	•	•	• G(JP)	73-	• D:J1-SU1,M0:SU2	• H	•	•	•
•	•	•	• S(J)	70-	• D:J1,M0:SU1-2	• H	•	•	•

## KOREAN PEOPLE'S DEM. REP.

	2	3	4	5	6	7	8	9	10
• KYONGSEUNG	• A .4141N 12941E	8.	S(C)	•	• D:SU1,M0:SU2	•	•	•	•
• PYONGYANG	• A .3902N 12547E	35.	G(C)	•	• M0:SU1-2	•	•	•	•
• HAIZU/HAEJU	• A .3802N 12542E	79.	G(C)	•	• D:SU1,M0:SU2	•	•	•	•
•	•	•	• S(J)	•	• M0:SU1-2	•	•	•	•
•	•	•	• S(J)	•	• D:SU1,M0:SU2	•	•	•	•

	3.	4.	5.	6.	7.	8.	9.	10.
CHUNCHEON	A 3752N 12736E	74. G(E)	S(J)	D:K01		6		
GANGREUNG	A 3745N 12854E	26. G(R)	S(J)	D:K01		6		
GANGHWA	A 3744N 12629E	25. G(E)	S(.)	D:K01		6		
DAEGWANHYEONG	A 3741N 12844E	820. G(R)	S(J)	D:K01		6		
SEOUL	A 3734N 12658E	86. G(R)	S(J)	D:K01		6		
YANGPYEONG	A 3729N 12729E	80. G(E)	S(.)	D:K01		6		
INCHEON	A 3729N 12638E	69. G(E)	S(.)	D:K01		6		
SAMCHEOK	A 3726N 12910E	7. G(E)	S(.)	D:K01		6		
WEONSEONG	A 3719N 12800E	140. G(E)	S(.)	D:K01		6		
IEHLON	A 3717N 12726E	9E. G(E)	S(.)	D:K01		6		
SUWON	A 3716N 12659E	37. G(R)	S(J)	D:K01		6		
JECHEON	A 3708N 12812E	220. G(E)	S(.)	D:K01		6		
CHUNGJU	A 3658N 12755E	50. G(E)	S(.)	D:K01		6		
YEONGJU	A 3649N 12837E	146. G(E)	S(.)	D:K01		6		
ASAN	A 3647N 12659E	25. G(E)	S(.)	D:K01		6		
CHEONJU	A 3638N 12726E	59. G(R)	S(.)	D:K01		6		
MUN-GYEONG	A 3635N 12812E	52. G(E)	S(.)	D:K01		6		
YEONGDEOG	A 3632N 12925E	55. G(E)	S(.)	D:K01		6		
POEUN	A 3630N 12745E	17C. G(E)	S(.)	D:K01		6		
YSEONG	A 3621N 12720E	70. G(E)	S(.)	D:K01		6		
EUISEUNG	A 3621N 12641E	73. G(E)	S(.)	D:K01		6		
BORYEONG	A 3620N 12637E	33. G(E)	S(.)	D:K01		6		
BULYO	A 3616N 12655E	16. G(E)	S(.)	D:K01		6		
SEONSAN	A 3614N 12812E	40. G(E)	S(.)	D:K01		6		
GEUNSAN	A 3606N 12723E	140. G(E)	S(.)	D:K01		6		
CHILGOG	A 3557N 12834E	55. G(E)	S(.)	D:K01		6		
YEONGCHEON	A 3557N 12856E	80. G(E)	S(.)	D:K01		6		
IRI	A 3555N 12657E	8. G(E)	S(.)	D:K01		6		
DUAN	A 3543N 12642E	6. G(E)	S(.)	D:K01		6		
GEOCHANG	A 3540N 12755E	225. G(E)	S(.)	D:K01		6		
IMSIL	A 3536N 12717E	225. G(E)	S(.)	D:K01		6		
HARCHEON	A 3534N 12810E	31. G(E)	S(.)	D:K01		6		
JEONCHEON	A 3534N 12653E	30. G(E)	S(.)	D:K01		6		
WILYANG	A 3529N 12845E	12. G(E)	S(.)	D:K01		6		
SANCHEONG	A 3525N 12753E	200. G(E)	S(.)	D:K01		6		
HAMEON	A 3525N 12725E	115. G(E)	S(.)	D:K01		6		
HAMAN	A 3517N 12325E	9. G(E)	S(.)	D:K01		6		
JINJU	A 3511N 12805E	25. G(R)	S(.)	D:K01		6		
GWANGJU	A 3509N 12653E	43. G(E)	S(.)	D:K01		6		
HAMPYEONG	A 3504N 12631E	9. G(E)	S(.)	D:K01		6		
SEUNGJU	A 3504N 12715E	57. G(E)	S(.)	D:K01		6		
GEOJE	A 3453N 12837E	12. G(E)	S(.)	D:K01		6		
MOGPO	A 3447N 12623E	53. G(R)	S(.)	D:K01		6		
JANGHEUNG	A 3441N 12655E	40. G(E)	S(.)	D:K01		6		
HAENAM	A 3433N 12635E	36. G(E)	S(.)	D:K01		6		
GOHEUNG	A 3436N 12718E	32. G(E)	S(.)	D:K01		6		
WANDO	A 3419N 12645E	20. G(E)	S(.)	D:K01		6		
JEJU	A 3330N 12632E	59. G(E)	S(.)	D:K01		6		
SEONGSANO	A 3327N 12655E	11. G(E)	S(.)	D:K01		6		
DAEJEONG	A 3313N 12615E	20. G(E)	S(.)	D:K01		6		

KUWAIT

2 . 3 . 4 . 5 . 6 . 7 . 8 . 9 . 10  
KUWAIT INT'L AIRPORT A 2913N 4758E 45 I(E0) 48  
S(E2) S(EE) S(EE)

	2	3.	4	5	6	7.	8.	9.	10
• LUANG-PRABANG	• A	1953N	10208E	305. G(, ) 61-					24
• VIENTIANE	• A	1757N	10234E	170. G(, ) 58-					24
• PAKSE	• A	1507N	10547E	100. G(, ) 56-					24
•	•			• S(C) 68-					

## MACAU

	2	3.	4	5	6	7.	8.	9.	10
• MACAU	• A	2212N	11332E	57. G(E1)	D:SU1-P1,M0:SU2				24
•	•			• G(K)	D:SU1-P1				
•	•			• D( )	D:P1				
•	•			• S(C)	M0:SU1-2-P1				

## MALDIVES

	2	3.	4	5	6	7.	8.	9.	10
• GAN	• A	0041S	7309E	2. G(K)					
•	•			• G*(GD)					

## MONGOLIA

	2	3.	4	5	6	7.	8.	9.	10
• ULANGOM	• A	4948N	9205E	934. G(Y)	D:SU1,M0:SU2				24
• MUREN	• A	4933N	10010L	1288. G(Y)	M0:SU1-2				24
• ULAN-BATOR	• A	4751N	10645E	1264. G(Y)	D:SU1,M0:SU2				24
• ULYASUTAY	• A	4745N	9651L	1751. G(Y)	M0:SU1-2				24
• DALAN-DZADAGAD	• A	4335N	10425E	1469. G(Y)	D:SU1,M0:SU2				24
•	•			• S(C)	M0:SU1-2				

## PAKISTAN

	2	3.	4	5	6	7.	8.	9.	10
• PESHAWAR	• A	3400N	7131E	360. I(, ) * 52-60*64-63*70	D:SU1,M0:SU2				24 .5TIMES A DAY
•	•			• G(X)	M0:SU2				
• LAHORE	• A	3133N	7420E	214. I(, ) G(K) 67-	D:SU1,M0:SU2				24 .5TIMES A DAY
•	•			• S(C)	M0:SU1-2				
• MULTAN	• A	3012N	7126E	123. I(, ) G(K) 57-70*73-	D:SU1,M0:SU2				19 .5TIMES A DAY
•	•			• S(C)	M0:SU1-2				
• QUETTA	• A	3011N	6657L	1799. I(, ) G(K) 57-	D:SU1,M0:SU2				8 .5TIMES A DAY
•	•			• S(C)	M0:SU1-2				
• PAKRACHI AIRPORT	• A	2454N	6738E	22. I(, ) G(K) 57-61,66-	D:SU1,M0:SU2				24 .5TIMES A DAY
•	•			• S(C)	M0:SU1-2				

## QATAR

	2	3.	4	5	6	7.	8.	9.	10
• DOHA INT'L A	• A	2516N	5133E	11. G(R)					24
•	•			• S(C)					

## SRI LANKA

	2	3.	4	5	6	7.	8.	9.	10
• JAFFNA	• A	0945N	8030E	• G(R) 76-78					
• MAHA ILLUPPALLAMA	• A	0900N	8030E	• G(R) 75-77					
• KANDY	• A	0715N	8030E	• S(C) 54-					
• COLOMBO	• A	0654N	7952E	6. G(R) 73-76					
•	•			• S(C) 51-					
•	•			• G(R) 64-70					
•	•			• G(R) 74-					
•	•			• S(C) 51-					

## THAILAND

	2	3.	4	5	6	7.	8.	9.	10
• CHIANG MAI	• A	1847N	9859E	312. G(K)					24
• NAKHON PHANOM	• A	1725N	10447E	140. G(K)					6
• BANKOK	• A	1344N	10034E	2. G(K) 64- • S(C) 554-	D:SU1,M0:SU2	H			24
•	•			• S(C)	M0:SU1-2	H			
• SATTAHIP	• A	1241N	10059E	16. G(K)					8
•	•			• S(C)					
• SONGKHLA	• A	0712N	10036E	4. G(K)					11
•	•			• S(C)					

KRENKEL OBS./KHEISA IS.	A	8037N 5803E	21.	G(Y)		
				D(Y)	H:SU3,D:SU1,	
				R(.,)	H:SU2	
				O*(Y)	H:SU3	
				S(C)	H:SU3	
CHELYUSKIN	A	7743N 10417E	12.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				R(.,)	H:SU2	
				O*(Y)	H:SU3	
				S(C)	H:SU3	
KOTELNY IS.	A	7600N 13754E	11.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				R(.,)	H:SU2	
				O*(Y)	H:SU3	
				S(C)	H:SU3	
DICKSON IS.	A	7330N 8014E	42.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				R(.,)	H:SU2	
				O*(Y)	H:SU3	
				S(C)	H:SU3	
WRANGEL IS.	A	7058N 17832W	2.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				R(.,)	H:SU2	
				O*(Y)	H:SU3	
				S(C)	H:SU3	
CHEYTYREKHSTOLBOVOI IS.	A	7038N 16224E	32.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				R(.,)	H:SU2	
				O*(Y)	H:SU3	
				S(C)	H:SU3	
OLENEK	A	6830N 11226E	127.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				O*(Y) 73-	H:SU2	
				S(C)	H:SU3	
VERKHOYANSK	A	6733N 13323E	137.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				O*(Y)	H:SU2	
				S(C)	H:SU3	
TURUKHANSK	A	6547N 8757E	38.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				O*(Y)	H:SU2	
				S(C)	H:SU3	
OMIYAKON	A	5316N 14309E	740.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				O*(Y)	H:SU2	
				S(C)	H:SU3	
YAKUTSK	A	6205N 12945E	98.	I(.,)	H:SU3-SU1,MO:SU,	
				G(Y)	H:SU1-2	
				D(Y)	H:SU2	
				O*(Y)	H:SU3	
				S(C)	H:SU3	
ALEKSANDROVSKOYE	A	6026N 7752E	47.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				O*(Y)	H:SU2	
				S(C)	H:SU3	
VANAVARA	A	6020N 10216E	259.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				O*(Y)	H:SU2	
				S(C)	H:SU3	
OKHOTSK	A	5922N 14312E	8.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				S(C)	H:SU2	
SVERDLOVSK/VERKNEE DUB.	A	5648N 6038E	290.	I(.,.)	H:SU3-SU1,MO:SU,	
				G(Y)	H:SU1-2	
				D(Y)	H:SU2	
				O*(Y)	H:SU3	
				S(C)	H:SU3	
OMTK	A	5456N 7324E	119.	I(.,.)	H:SU3-SU1,MO:SU,	
				G(Y)	H:SU1-2	
				D(Y)	H:SU2	
				R(.,)	H:SU3	
				O*(Y)	H:SU3-SU1,MO:SU,	
				S(C)	H:SU1-2	
KUIJDSHEV	A	5315N 5027E	137.	I(.,.)	H:SU3-SU1,MO:SU,	
				G(Y)	H:SU1-2	
				D(Y)	H:SU2	
				R(.,)	H:SU3	
				O*(Y)	H:SU3-SU1,MO:SU,	
				S(C)	H:SU1-2	
PETROPAVLOVSK-KAMCHATSK-Y.	A	5253N 15845E	32.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				R(.,)	H:SU2	
				S(C)	H:SU3	
IRKUTSK	A	5216N 10421E	467.	I(.,.)	H:SU3-SU1,MO:SU,	
				G(Y)	H:SU1-2	
				D(Y)	H:SU2	
				R(.,)	H:SU3	
				O*(Y)	H:SU3-SU1,MO:SU,	
				S(C)	H:SU1-2	
CHITA	A	5201N 11320E	671.	G(Y)	H:SU3-SU1,MO:SU,	
				D(Y)	H:SU1-2	
				O*(Y)	H:SU2	
				S(C)	H:SU3	

	2	3.	4	5	6	7.	8.	9.	10
SEMIPALATINSK	A .5021N 8015E 195. G(Y)			H:SUS,D:SU1, MO:SU2				.8	
	.	.	D(Y)	H:SUS3					
	.	.	I*(Y)	H:SUS3-SU1,MO:SU					
	.	.	S(C)	MO:SU1-2					
KHABAROVSK	A .4331N 13510E 87. G(Y)			H:SUS3,D:SU1, MO:SU2				.6	
	.	.	D(Y)	H:SUS3					
	.	.	O*(Y)	H:SUS3-SU1,MO:SU					
	.	.	S(C)	MO:SU1-2					
BOLSHAYA ELAN	A .4655N 14244E 22. G(Y)			H:SUS3,D:SU1, MO:SU2				.4	
	.	.	D(Y)	H:SUS3					
	.	.	S(C)	MO:SU1-2					
ARLASKOE MORE	A .4647N 6140E 62. G(Y)			H:SUS3,D:SU1, MO:SU2				.8	
	.	.	D(Y)	H:SUS3					
	.	.	R( )	H:SUS3					
	.	.	I*(Y)	H:SUS3-SU1,MO:SU					
	.	.	I(C)	MO:SU1-2					
VLADEVOSTOK/SAD GOROV	A .4307N 13154E 80. I(.,)			H:SUS3				.8	
	.	.	G(Y)	H:SUS3,D:SU1, MO:SU2					
	.	.	D(Y)	H:SUS3					
	.	.	R( )	H:SUS3					
	.	.	Q*(Y)	H:SUS3-SU1,MO:SU					
	.	.	S(C)	MO:SU1-2					
TASHKENT	A .4116N 6916E 478. I(.,)			H:SUS3				.5	
	.	.	G(Y)	H:SUS3,D:SU1, MO:SU2					
	.	.	D(Y)	H:SUS3					
	.	.	I*(Y)	H:SUS3-SU1,MO:SU					
	.	.	S(C)	MO:SU1-2					

## YEMEN

	2	3.	4	5	6	7.	8.	9.	10
SANA'A	A .1531N 4411E 2206. G( )			H:SUS3				.15	
	.	.	S( )	MO:SU1					



**REGION III**  
**SOUTH AMERICA**



## ARGENTINA

	2	3.	4	5	6	7.	8.	9.	10
LA QUIACA OBSERVATORIO	A 2206S	6536W3462.	G( )						6
LAS LOMITAS	A 2442S	6035W 130.	S( )						6
TUCUMAN AERO	A 2648S	6512W 422.	I(LF)						24
			G(K) 65-	D:SU1,MO:SU2	H				
			Q*(SH)	H:SU1,MO:SU2	H				
			S(C)						
RESISTENCIA AERO	A 2727S	5903W 53.	G( )						24
			S( )						
CONCORDIA AERO	A 3118S	5801W 35.	G( )						18
			S(C)						
SAN JUAN AERO	A 3134S	6825W 597.	G( )						24
			S( )						
PILAR OBSERVATORIO	A 3140S	6353W 338.	I(LF)						3
			G(K) 64-	D:SU1,MO:SU2	H				
			Q*(SH)64-	H:SU1,MO:SU2	H				
			S(C)						
MENDOZA	A 3253S	6851W 828.	I(LF)						24
			G(K) 65-	D:SU1,MO:SU2					
			Q*(SH)	H:SU1,MO:SU2					
			S(C)						
SAN MARTIN	A 3305S	6825W 653.	I(LF)						7
			G(K) 65-						
			Q*(SH)64-						
			S(C)						
LABOULAYE	A 3408S	6322W 136.	G( )						8
			S( )						
BUENOS AIRES (OBS.CENT.)	A 3435S	5829W 25.	I(A)						24 OZONE
			I(SD)						
			I(LF)						.061, RG2-B, GUF.
			G(K) 64-	D:SU1,MO:SU2	H				
			Q*(SH)64-	H:SU1,MO:SU2	H				
			S(C)						
SAN MIGUEL	A 3433S	5833W 25.	G( )						3
			S( )						
PEHUAJO AERO	A 3551S	6152W 36.	G( )						10
			S( )						
NEUQUEN AERO	A 3857S	6808W 270.	I(LF)						24
			G(K) 65-	D:SU1,MO:SU2	H				
			Q*(SH)	H:SU1,MO:SU2	H				
			S(C)						
PASO DE INDIOS	A 4349S	6853W 460.	G( )						5
			S( )						
COMODORO RIVADAVIA AERO	A 4547S	6727W 58.	G( )						24
			S( )						
SANTA CRUZ AERO	A 5001S	6834W 113.	G( )						1
			S( )						
LAGO ARGENTINO AERO	A 5020S	7218W 223.	G( )						6
			S(C)						

## BRAZIL

	2	3.	4	5	6	7.	8.	9.	10
BELEM	A 0123S	4329W 16.	G(E8)						24
SAO LUIZ	A 0235S	4414W 53.	G(E8)						24
MANAUS	A 0309S	5959W 84.	G(E8)						24
FORTALEZA	A 0347S	3832W 25.	G(E8)						24
FLORIANO	A 0646S	4301W 110.	G(E8)						3
CAROLINA	A 0719S	4726W 183.	G(E8)						15
PETROLINA	A 0924S	4030W 375.	G(E8)						15
SALVADOR	A 1300S	3831W 51.	G(E8)						3
BOM JESUS DA LAPA	A 1316S	4325W 440.	G(E8)						3
CUIABA	A 1539S	5606W 182.	G(E8)						16
BRASILIA	A 1552S	4756W1061.	G(E8)						24
CARAVELAS	A 1738S	3915W 4.	G(E8)						24
CAMPO GRANDE	A 2022S	5440W 567.	G(E8)						24
PIRACICABA	A 2242S	4738W 580.	G(E8)						
			S(C)						
RIO JANEIRO	A 2254S	4310W 5.	G(E8)						24
SAO PAULO	A 2337S	4639W 802.	G(E8)						24
CURITIBA	A 2531S	4910W 908.	G(E8)						24
FOZ DO IGUACU	A 2531S	5435W 180.	G(E8)						15
PORTO ALEGRE	A 2000S	5111W 3.	G(E8)						24
PELOTAS	A 3145S	5221W 7.	G(E8)						
			S(C)						

## CHILE

	2	3.	4	5	6	7.	8.	9.	10
PARINACOTA	A 1812S	6916W4392.	G(R)						
MURMUNTANE	A 1922S	6934W3280.	G(R)						
ARICA/ CHACALLUTA	A 1930S	7019W 100.	G(R)						18
			S(C)						
IOUIQUE/CAVANCHA	A 2013S	7009W 8.	G(R)						17
PICA	A 2030S	6921W1280.	G(R)						
			S(C)						
QUILLAGUA	A 2136S	6933W 802.	G(R)						
PARSHALL 2.	A 2158S	6831W3360.	G(R)						
TOCOPILLA	A 2205S	7013W 16.	G(R)						
EL TATIO	A 2221S	6803W4320.	G(R)						
			S(C)						
COYA SUR	A 2226S	6939W1490.	G(R)						
CALAMA	A 2228S	6855W2270.	G(R)						5
SAN PEDRO DE ATACAMA	A 2255S	6811W2436.	G(R)						
			S(C)						
ANTOFAGASTA	A 2328S	7026W 122.	G(R)						
			S(C)						
CATALINA	A 2513S	6943W2180.	G(R)						
TAL-TAL	A 2525S	7034W 5.	G(R)						
POTRERILLOS	A 2620S	6929W2850.	G(R)						
CHAHARAL	A 2620S	7037W 29.	G(R)						17

	2	3.	4	5	6	7.	8.	9
CALDERA	.	A .2705S	7051W 14.	G(R) S(C)	.	.	.	.
COPIAPO	.	A .2721S	7020W 370.	G(R) S(C)	.	.	.	14
LAUTARO	.	A .2758S	7001W1200.	G(R)	.	.	.	.
VALLENAR	.	A .2855S	7046W 469.	G(R) S(C)	.	.	.	17
LA SERENA	.	A .2954S	7115W 32.	G(R) S(C)	.	.	.	16
OVALLE	.	A .3034S	7111W 370.	G(R) S(C)	.	.	.	.
LA PALOMA	.	A .3041S	7102W 342.	G(R) S(C)	.	.	.	.
LOS MOLLES	.	A .3045S	7025W2620.	G(R) S(C)	.	.	.	.
EL YESO	.	A .3241S	7017W2475.	G(R) S(C)	.	.	.	.
VALPARAISO	.	A .3302S	7136W 70.	G(R) S(C)	.	.	.	.
EL OLIVAR	.	A .3302S	7129W 120.	G(R) S(C)	.	.	.	.
SANTIAGO	.	A .3327S	7042W 520.	G(R) S(C)	.	.	.	24
EL BOSQUE	.	A .3334S	7041W 580.	G(R) S(C)	.	.	.	5
PIROQUE	.	A .3337S	7031W 690.	G(R) S(C)	.	.	.	.
GUAYACAN	.	A .3339S	7021W1060.	G(R) S(C)	.	.	.	.
LAS MELOZAS	.	A .3354S	7012W1527.	G(R) S(C)	.	.	.	.
QUELEN TARO	.	A .3402S	7136W 265.	G(R) S(C)	.	.	.	.
PUNTE ARQUEADO	.	A .3417S	7121W 119.	G(R) S(C)	.	.	.	.
RENGO	.	A .3424S	7052W 333.	G(R) S(C)	.	.	.	.
POPETA	.	A .3426S	7048W 360.	G(R) S(C)	.	.	.	.
SAN FERNANDO	.	A .3435S	7100W 350.	G(R) S(C)	.	.	.	.
CONVENTO VIEJO	.	A .3445S	7106W 312.	G(R) S(C)	.	.	.	.
COLORADO	.	A .3537S	7116W	G(R) S(C)	.	.	.	.
AMERILLO	.	A .3542S	7106W 450.	G(R) S(C)	.	.	.	.
LAGUNA INVERNADA	.	A .3544S	7027W1325.	G(R) S(C)	.	.	.	.
CONCEPCION	.	A .3650S	7302W 15.	G(R) S(C)	.	.	.	24
POLCURA	.	A .3719S	7132W 650.	G(R) S(C)	.	.	.	.
LAGO LAJA	.	A .3722S	7122W1375.	G(R) S(C)	.	.	.	.
COLLIPULLI	.	A .3757S	7226W 250.	G(R) S(C)	.	.	.	.
LOQUIMAY	.	A .3826S	7115W 900.	G(R) S(C)	.	.	.	.
PUCON	.	A .3916S	7158W 230.	G(R) S(C)	.	.	.	.
PULLINQUE	.	A .3945S	7213W 145.	G(R) S(C)	.	.	.	.
HUILO-HUILU	.	A .3949S	7200W 720.	G(R) S(C)	.	.	.	.
LAGO CHAPO	.	A .4126S	7225W 247.	G(R) S(C)	.	.	.	.
ALTO PALENA	.	A .4337S	7147W 266.	G(R) S(C)	.	.	.	16
EVANGELISTAS	.	A .5224S	7505W 50.	G(R) S(C)	.	.	.	8
PUNTA ARENAS	.	A .5300S	7050W 33.	G(R) S(C)	.	.	.	13
PUERTO WILLIAMS	.	A .5456S	6729W 8.	G(R) S(C)	.	.	.	8

ECUADOR

	2	3.	4	5	6	7.	8.	9.	10
IZOBAMBA/SANTA CATALINA	A	0022S	7833W3058	6( ) 5(C)	.	.	.	.	5
PORTOVIEJO	A	0104S	3026W	44. G( ) 5(C)	.	.	.	.	5
PICHILINGUE	A	0106S	7929W	73. G( ) 64- 5(C)	.	.	.	.	5
EL PUYO	A	0135S	7754W	950. G( ) 65- 5(C)	.	.	.	.	5
LA CLEMENTINA	A	0140S	7921W	20. G( ) 66- 5(C)	.	.	.	.	.
ISABEL MARIA	A	0143S	7932W	7. G( ) 5(C)	.	.	.	.	.
MILAGRO	A	0209S	7936W	13. G( ) 5(C)	.	.	.	.	5

FRENCH GUIANA

2 3 4 5 6 7 8 9 10  
.....  
CAYENNE/ROCHAMBEAU A 0450N 5222W 9 G(K)  
S(C)

	2	3.	4	5	6	7.	8.	9.	10
GEORGETOWN	A .0648N	5809W	1. G(R)	75-	.	D	D	D	
TIMEHRI	A .0630N	5815W	26. G(.,.)	S(C)	75-	D	D	D	24
EBINYI	A .0534N	5747W	28. G(R)	75-	.	D	D	D	4
LETHEM	A .0322N	5948W	82. G(R)	75-	.	D	D	D	4
			.	S(C)	75-	D	D	D	

PARAGUAY

	2	3.	4	5	6	7.	8.	9.	10
BASE 5/GRAL A. JARA	A	1932S	5922W	150.	G( )	.	.	.	8
BAHIA NEGRA	A	2013S	5810W	92.	G( )	.	.	.	2
MARISCAL ESTIGARRIBIA	A	2201S	6036W	172.	G( )	.	.	.	4
PASO BARETTO	A	2303S	5659W	95.	G( )	.	.	.	4
CONCEPCION	A	2325S	5718W	74.	G( )	.	.	.	8
ASUNCION AEROPUERTO	A	2516S	5738W	101.	G( )	.	.	.	24
SAN LORENZO	A	2522S	5733W	120.	G( )	.	.	.	4
VILLARRICA	A	2545S	5626W	161.	G( )	.	.	.	2
CARRAPEUGA	A	2543S	5713W	110.	G( )	.	.	.	4
CAAZAPA	A	2611S	5621W	.	G( )	.	.	.	4
ITA-CORA	A	2713S	5816W	.	G( )	.	.	.	4
ENCARNACION	A	2719S	5550W	91.	G( )	.	.	.	6

VENEZUELA

Z	3.	4.	5.	6.	7.	8.	9.	10.
LA ORCHILLA	A 1145N	6611W	3. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
CORO	A 1125N	6341W	20. S(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
PORLAMAR	A 1055N	6358W	24. G(R) S(C)	"	D		13	
MARACAIBO	A 1039N	7136W	43. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		20	
CARACAS/MAJUQUETIA	A 1036N	6659W	43. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		24	
GUIRIA	A 1035N	6218W	6. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		13	
PTO. CABELO	A 1030N	6300W	2. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
CA'ACAS/LA CARLOTA	A 1030N	6653W	835. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
MARACAY	A 1015N	6739W	442. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		24	
BARCELONA	A 1007N	6441W	7. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		20	
DARQUISIMETO	A 1004N	6919W	590. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
MENE GRANDE	A 0949N	7056W	27. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		15	
MATURIN	A 0945N	6311W	70. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		20	
ACARIGUA	A 0933N	6914W	226. G(R) S(C)	"	D		18	
GUANARE	A 0901N	6944W	163. G(R) S(C)	"	D		13	
MERIDA	A 0836N	7110W	1479. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
CIUDAD BOLIVAR	A 0809N	6333W	50. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
SAN FERNANDO DE APURE	A 0754N	6725W	73. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		14	
SAN ANTONIO	A 0751N	7227W	404. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
TUMEREMO	A 0718N	6127W	180. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
GUAS DUALITO	A 0714N	7048W	130. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
PUERTO AYACUCHO	A 0541N	6738W	99. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	
SANTA ELENA DE VALEN	A 0436N	6107W	937. G(R) S(C)	D:SU1,MO:SU2 MO:SU1-2	D		18	



**REGION IV  
NORTH AMERICA**



## BARBADOS

3-22

	2	3	4	5	6	7	8	9	10
HUSBANDS	A 1306N 5936W 42.	G(K)	71-		MO:SU2				
		S(C)	69-		MO:SU2				

## CANADA - ALBERTA

	2	3	4	5	6	7	8	9	10
BEAVERLODGE CDA	A .5512N 11925W 732.	G(E1)	60-70		H:CDN1,D:SU1				
		G(K)	70-		H:CDN1,D:SU1				
		S(C)	22-		D:CDN3				
GRAND PRAIRIE A	A .5511N 11853W 668.	G(R)	54-56		D:CDN1				
EDMONTON MUNICIPAL A	A .5334N 11331W 676.	G(E1)	48-66		H:CDN1,D:SU1				
		UV	34*58		D	D			
		S(C)	43-		D:CDN3				
EDMONTON-STONY PLAIN	A .5333N 11406W 766.	G(E1)	66-71		H:CDN1,D:SU1				
		G(K)	71-		H:CDN1,D:SU1				
		D(K)	76-		H:CDN1				
		G(FU)66-			H:CDN1-SU1				
SUFFIELD A	A .5016N 11111W 770.	G(E1)	59-70		H:CDN1,D:SU1				
		G(E2)	70-		H:CDN1,D:SU1				
		S(C)	53-		D:CDN3				
LETHBRIDGE A	A .4938N 11248W 929.	G(R)	53-64		D:CDN1-SU1				
		Q*(FU)72-			H:CDN1-SU1				
HIGH LEVEL A	A .5837N 11710W 338.	S(C)	71-		D:CDN3				
FORT VERMILION CDA	A .5823N 11602W 279.	S(C)	08-		D:CDN3				
KEG RIVER	A .5747N 11752W 427.	S(C)	58-		D:CDN3				
MILDRED LAKE	A .5702N 11336W 310.	S(C)	73-		D:CDN3				
FORT MCMURRAY A	A .5639N 11113W 369.	S(C)	71-		D:CDN3				
FAIRVIEW	A .5604N 11823W 670.	S(C)	31-		D:CDN3				
SLAVE LAKE A	A .5518N 11447W 581.	S(C)	71-		D:CDN3				
COLD LAKE A	A .5425N 11017W 541.	S(C)	73-		D:CDN3				
EDSON A	A .5335N 11627W 921.	S(C)	63-		D:CDN3				
RANFURLY	A .5327N 11139W 686.	S(C)	19-		D:CDN3				
ELLERSLIE	A .5319N 11135W 723.	S(C)	64-		D:CDN3				
EDMONTON INT'L A	A .5319N 11335W 723.	S(C)	72-		D:CDN3				
LACOMBE CDA	A .5228N 11345W 847.	S(C)	08-		D:CDN3				
CORONATION	A .5206N 11127W 798.	S(C)	75-		D:CDN3				
OLDS	A .5147N 11406W 1040.	S(C)	63-		D:CDN3				
MOUNTAIN AIRE LODGE	A .5139N 11517W 1372.	S(C)	73-		D:CDN3				
CALGARY INT'L A	A .5106N 11401W 1080.	S(C)	39-		D:CDN3				
UNIV. OF CALGARY	A .5105N 11408W 1112.	S(C)	73-		D:CDN3				
KANANASKIS	A .5102N 11503W 1430.	S(C)	70-		D:CDN3				
BROOKS HORT. STN	A .5033N 11151W 758.	S(C)	53-		D:CDN3				
VAUXHALL CDA	A .5003N 11208W 779.	S(C)	54-		D:CDN3				
MEDICINE HAT A	A .5001N 11043W 717.	S(C)	06-		D:CDN3				
LETHBRIDGE CDA	A .4942N 11247W 899.	S(C)	08-		D:CDN3				
MANYBERRIES CDA	A .4907N 11028W 934.	S(C)	28-		D:CDN3				

## CANADA - BRITISH COLUMBIA

	2	3	4	5	6	7	8	9	10
FORT NELSON A	A .5650N 12235W 382.	G(K)	71-		H:CDN1,D:SU1				
PRINCE GEORGE A	A .5353N 1224W 676.	G(K)	73-		H:CDN1,D:SU1				
		S(C)	45-		D:CDN3				
SANDSPIT A	A .5315N 13149W 6.	G(E1)	67-71		H:CDN1,D:SU1				
		G(K)	71-		H:CDN1,D:SU1				
		S(C)	54-		D:CDN3				
CAPE ST.JAMES	A .5156N 13101W 89.	G(E1)	67-70		H:CDN1,D:SU1				
		G(K)	70-		H:CDN1,D:SU1				
KAMLOOPS A	A .5045N 12035W 345.	G(E2)	74*75		H:CDN2				
		Q*(FU)74*75			H:CDN2				
		S(C)	06-		D:CDN3				
PORT HARDY A	A .5041N 12722W 22.	G(E1)	67-76		H:CDN1,D:SU1				
		G(K)	76-		H:CDN1,D:SU1				
		D(K)	77-		H:CDN1				
		S(C)	71-		D:CDN3				
SUMMERLAND CDA	A .4934N 11939W 454.	G(R)	55-61		D:CDN1				
		G(E1)	61-71		H:CDN1,D:SU1				
		G(K)	71-		H:CDN1,D:SU1				
		Q*(FU)73-			H:CDN1-SU1				
		S(C)	71-		D:CDN3				
VANCOUVER UBC	A .4916N 12315W 93.	G(K)	61-61		H:CDN1,D:SU1				
		G(E1)	61-66		H:CDN1,D:SU1				
		G(K)	66-71		H:CDN1,D:SU1				
		S(C)	57-		H:CDN1,D:SU1				
VANCOUVER UBC	A .4915N 12315W 87.	I(EN)	76-		D:CDN3				
		G(K)	76-		H:CDN1				
		D(K)	76-		H:CDN1				
		G/(K)	76-		H:CDN1				
		G/(K)	76-		H:CDN1				
		R(K)	76-		H:CDN1				
NANAIMO-DEPARTURE BAY	A .4913N 12357W 8.	G(E1)	59-70		H:CDN1,D:SU1				
		G(E2)	70-		H:CDN1,D:SU1				
MT.KOBAU OBSERVATORY	A .4907N 11941W 1862.	G(K)	66-67		H:CDN1				
		G(E1)	67-71		H:CDN1				
		G(K)	71-		H:CDN1,D:SU1				
DEASE LAKE	A .5825N 13000W 815.	S(C)	72-		D:CDN3				
FORT ST.JOHN A	A .5614N 12044W 695.	S(C)	44-		D:CDN3				
STEWART A	A .5556N 12959W 7.	S(C)	74-		D:CDN3				
GERMANS LANDING	A .5547N 12442W 766.	S(C)	66-		D:CDN3				
FORT BABINE	A .5519N 12637W 716.	S(C)	72-		D:CDN3				
MACKENZIE A	A .5518N 12308W 700.	S(C)	71-		D:CDN3				
TOPLEY LANDING	A .5449N 12610W 722.	S(C)	66-		D:CDN3				
SIMITHERS A	A .5449N 12711W 523.	S(C)	70-		D:CDN3				
TERRACE A	A .5428N 12835W 217.	S(C)	73-		D:CDN3				
BADINE LAKE PINKUT CREEK	A .5427N 12527W 713.	S(C)	72-		D:CDN3				
PRINCE RUPERT A	A .5418N 13026W 34.	S(C)	62-		D:CDN3				
BURNS LAKE	A .5414N 12546W 707.	S(C)	69-		D:CDN3				
KITIMAT TOWNSITE	A .5403N 12838W 128.	S(C)	54*73,73-		D:CDN3				
MC BRIDGE NORTH	A .5322N 12015W 771.	S(C)	73-		D:CDN3				
WILLIAMS LAKE A	A .5211N 12204W 940.	S(C)	60-		D:CDN3				
PUNTZI MT	A .5207N 12405W 911.	S(C)	68-		D:CDN3				
BLUE RIVER	A .5207N 11918W 683.	S(C)	69-		D:CDN3				
GOLDEN	A .5118N 11658W 787.	S(C)	72-		D:CDN3				
REVELSTOKE A	A .5058N 11815W 443.	S(C)	69-		D:CDN3				
SALMON ARM	A .5042N 11915W 506.	S(C)	38-		D:CDN3				
KAMLOOPS A	A .5042N 12027W 345.	S(C)	51-		D:CDN3				
VERNON	A .504N 11917W 555.	S(C)	74-		D:CDN3				

	2	3.	4	5	6	7.	8.	9.	10
•	•	•	•	•	•	•	•	•	•
•LYTTON	•A .5014N 12135W 255. S(C) 71-	•D:CDN3	•H .H .18						
•KELOWNA A	•A .4957N 11923W 417. S(C) 73-	•D:CDN3	•H .H .24						
•PEACHLAND BRENDY MINES	•A .4952N 12000W 1463. S(C) 70-	•D:CDN3	•H .H .						
•MCCULLOCH	•A .4948N 11912W 1250. S(C) 67-	•D:CDN3	•H .H .						
•KIMBERLEY COMINCO	•A .4939N 11558W 1027. S(C) 68-	•D:CDN3	•H .H .						
•CRANBROOK A	•A .4936N 11547W 930. S(C) 70-	•D:CDN3	•H .H .24						
•ARRAWANA	•A .4935N 11934W 518. S(C) 70-	•D:CDN3	•H .H .						
•BEAVERDELL NORTH	•A .4928N 11902W 777. S(C) 75-	•D:CDN3	•H .H .						
•PENTICTON A	•A .4928N 11936W 344. S(C) 71-	•D:CDN3	•H .H .24						
•ESTEVAN POINT	•A .4923N 12632W 55. S(C) 60-	•D:CDN3	•H .H .14						
•HOPE A	•A .4922N 12129W 39. S(C) 73-	•D:CDN3	•H .H .18						
•CASTLEGAR A	•A .4918N 11738W 493. S(C) 65-	•D:CDN3	•H .H .24						
•VANCOUVER BCHPA	•A .4917N 12307W 115. S(C) 59-	•D:CDN3	•H .H .						
•HANGY UBC RF ADMIN	•A .4916N 12234W 143. S(C) 71-	•D:CDN3	•H .H .						
•AGASSIZ CDA	•A .4915N 12146W 15. S(C) 1891-	•D:CDN3	•H .H .						
•PORT ALBERNI A	•A .4915N 12450W 3. S(C) 75-	•D:CDN3	•H .H .						
•OLIVER STP	•A .4911N 11933W 297. S(C) 72-	•D:CDN3	•H .H .						
•VANCOUVER INT'L A	•A .4911N 12310W 3. S(C) 61-	•D:CDN3	•H .H .24						
•TRAIL TADANAC	•A .4906N 11745W 579. S(C) 59-	•D:CDN3	•H .H .						
•TOFINO A	•A .4905N 12546W 20. S(C) 71-	•D:CDN3	•H .H .24						
•NANAIMO A	•A .4903N 12352W 30. S(C) 53-	•D:CDN3	•H .H .16						
•ABBOTSFORD A	•A .4901N 12222W 60. S(C) 70-	•D:CDN3	•H .H .24						
•COWICHAN LAKE FORESTRY	•A .4850N 12408W 177. S(C) 49-	•D:CDN3	•H .H .						
•COWICHAN BAY	•A .4844N 12335W 104. S(C) 38-	•D:CDN3	•H .H .						
•VICTORIA INT'L A	•A .4839N 12326W 20. S(C) 68-	•D:CDN3	•H .H .24						
•SAANICHTON CDA	•A .4837N 12325N 61. S(C) 62-	•D:CDN3	•H .H .						
•VICTORIA GONZALES HTS	•A .4825N 12319N 67. S(C) 1898-	•D:CDN3	•H .H .12						

## CANADA - MANITOBA

	2	3.	4	5	6	7.	8.	9.	10
•	•	•	•	•	•	•	•	•	•
•CHURCHILL A	•A .5845N 9405W 35. G(E) 49-61	•D:CDN1	•D . .24						
•	•A .5845N 9404W 29. G(E) 64-73	•H:CDN1,D:SU1	•H .H .						
•	• . G(K) 73-	•H:CDN1,D:SU1	•H .H .						
•	• . Q*(SF)64-69	•H:CDN1-SU1	•H .H .						
•	• . Q*(EU)69-	•H:CDN1-SU1	•H .H .						
•	• . S(C) 66-	•D:CDN3	•H .H .						
•THE PAS A	•A .5358N 10106W 271. G(K) 72-	•H:CDN1,D:SU1	•H .H .24						
•	• . Q*(SK)60-63	•D:CDN1	•D . .						
•	• . S(C) 49-	•D:CDN3	•H .H .						
•WINNIPEG INT'L A	•A .4954N 9714W 239. G(E) 49-71	•H:CDN1,D:SU1	•H .H .24						
•	• . G(K) 71-	•H:CDN1,D:SU1	•H .H .						
•	• . D(K) 76-	•H:CDN1	•H .H .						
•	• . S(C) 61	•D:CDN3	•H .H .						
•LYNN LAKE A	•A .5652N 10104W 357. S(C) 68-	•D:CDN3	•H .H .24						
•THOMPSON A	•A .5548N 9752W 222. S(C) 67-	•D:CDN3	•H .H .24						
•PASQUA PROJECT PFR	•A .5343N 10135W 262. S(C) 74-	•D:CDN3	•H .H .						
•GRAND RAPIDS	•A .5311N 9916W 221. S(C) 70-	•D:CDN3	•H . .9						
•DAUPHIN A	•A .5106N 10003W 305. S(C) 50-	•D:CDN3	•H .H .24						
•BISSET	•A .5102N 9540W 256. S(C) 68-	•D:CDN3	•H .H .8						
•GIMLI	•A .5037N 9659W 230. S(C) 71-	•D:CDN3	•H .H .24						
•DELTA UNIV. FS	•A .5011N 9823W 248. S(C) 69-	•D:CDN3	•H .H .						
•BRANDON CDA	•A .4952N 9958W 366. S(C) 91-	•D:CDN3	•H .H .						
•GLENEALE RESEARCH STN	•A .4939N 9707W 234. S(C) 67-	•D:CDN3	•H .H .						
•INDIAN BAY	•A .4937N 9512W 327. S(C) 67-	•D:CDN3	•H .H .						
•MORDEN CDA	•A .4911N 9805W 302. S(C) 18-	•D:CDN3	•H .H .						

## CANADA - NEW BRUNSWICK

	2	3.	4	5	6	7.	8.	9.	10
•	•	•	•	•	•	•	•	•	•
•MONCTON A	•A .4607N 6441W 76. G(R) 53-61	•D:CDN1	•D . .24						
•	• . S(C) 55-	•D:CDN3	•H .H .						
•FREDERICTON CDA	•A .4555N 6337W 40. G(E) 61-71	•H:CDN1,D:SU1	•H .H .						
•	• . G(K) 71-	•H:CDN1,D:SU1	•H .H .						
•	• . R(K) 75-	•H:CDN1	•H .H .						
•	• . Q*(FU)75-	•H:CDN1-SU1	•H .H .						
•	• . Q(15)-	•D:CDN3	•H .H .						
•CHARLO A	•A .4600N 6620W 37. S(C) 66-	•D:CDN3	•H .H .24						
•CHATHAM A	•A .4701N 6527W 33. S(C) 50-	•D:CDN3	•H .H .24						
•ROYAL ROAD IND	•A .4603N 6643W 116. S(C) 65-	•D:CDN3	•H .H .						
•SAINT JOHN A	•A .4519N 6553W 93. S(C) 52-	•D:CDN3	•H .H .24						
•	• . 4517N 6604W . S(C) 16-52	•D:CDN3	•H . .						

## CANADA - NEWFOUNDLAND

	2	3.	4	5	6	7.	8.	9.	10
•	•	•	•	•	•	•	•	•	•
•GOOSE BAY	•A .5319N 6025W 44. G(R) 54-62	•D:CDN1	•D . .24						
•	• . G(E) 62-70	•H:CDN1,D:SU1	•H .H .						
•	• . G(K) 70-	•H:CDN1,D:SU1	•H .H .						
•	• . D(E) 62-76	•H:CDN1	•H .H .						
•	• . D(K) 76-	•H:CDN1	•H .H .						
•	• . R(E) 62-73	•H:CDN1	•H .H .						
•	• . R(K) 73-	•H:CDN1	•H .H .						
•	• . Q*(SF)62-67	•H:CDN1-SU1	•H .H .						
•	• . Q*(FU)67-	•H:CDN1-SU1	•H .H .						
•	• . S(C) 44-	•D:CDN3	•H .H .						
•SAINT JOHN'S WEST CDA	•A .4731N 5247W 114. G(R) 54-64	•D:CDN1-SU1	•D . .						
•	• . G(E) 64-71	•H:CDN1,D:SU1	•H .H .						
•	• . G(K) 71-	•H:CDN1,D:SU1	•H .H .						
•	• . S(C) 50-	•D:CDN3	•H .H .						
•RIGOLET	•A .5411N 5826W 30. S(C) 73-	•D:CDN3	•H .H .						
•CARTWRIGHT	•A .5342N 5702W 14. S(C) 73-	•D:CDN3	•H .H .24						
•CHURCHILL FALLS	•A .5333N 6406W 440. S(C) 68-	•D:CDN3	•H .H .24						
•WARUSH LAKE A	•A .5256N 6652W 548. S(C) 72-	•D:CDN3	•H .H .24						
•DANIELS HARBOUR	•A .5014N 5735W 24. S(C) 69-	•D:CDN3	•H .H .24						
•GANDER INT'L A	•A .4857N 5434W 151. S(C) 39-	•D:CDN3	•H .H .24						
•STEPHENVILLE A	•A .4832N 5833W 13. S(C) 68-	•D:CDN3	•H .H .24						
•ST. JOHN'S A	•A .4737N 5245W 147. S(C) 58-	•D:CDN3	•H .H .24						
•BURGEO	•A .4737N 5737W 11. S(C) 66-	•D:CDN3	•H .H .24						
•AVONDALE CDA	•A .4725N 5314W 133. S(C) 55-	•D:CDN3	•H .H .						
•PLACENTIA	•A .4714N 5401W 14. S(C) 70-	•D:CDN3	•H .H .						
•COLINET PEAT BOG CDA	•A .4713N 5530W 104. S(C) 57-	•D:CDN3	•H .H .						
•ST. SHOTT	•A .4638N 5335W 46. S(C) 71-	•D:CDN3	•H .H .						

	2	3.	4	5	6	7.	8.	9.	10
ALERT	A 8230N 6220W 63.	G(E1) 60-64 G(E1) 64-73 G(E2) 73- R(E1) 60-64 Q*(FU)68- S(C) 68-		H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1-SU1 D:CDN3		D	H	8	USWB
EUREKA	A 8000N 8556W 10.	G(E1) 55-60 G(E1) 60-70 G(E2) 70- R(E1) 64-70 Q*(SH)64-70 Q*(FU)70- S(C) 68-		H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1-SU1 H:CDN3		H	H		USWB
ISACHSEN	A 7847N 10332W 25.	G(E1) 64-70 G(E2) 70- R(E1) 64-70 Q*(FU)70- S(C) 68-		H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1-SU1 H:CDN3		D	H	8	USWB
MOULD BAY	A 7614N 11920W 15.	G(E1) 65-71 G(K) 71-73 G(E2) 73- D(E1) 57-72 D(K) 72- R(E1) 57-74 Q*(GD)58-60 Q*(SF)63-69 Q*(FU)69- R(K) 74-		H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1-SU1 H:CDN3		H	H	12	
RESOLUTE A	A 7441N 9454W 67.	G(E) 49-54 G(E1) 57-71 G(K) 71-73 G(E2) 73- D(E1) 57-72 D(K) 72- R(E1) 57-74 Q*(GD)58-60 Q*(SF)63-69 Q*(FU)69- R(K) 74-		H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1 H:CDN1 H:CDN1-SU1 H:CDN3		H	H		USWB
SACHS HARBOUR	A 7159N 12517W 86.	G(E2) 70- S(C) 56- G(K) 71- S(C) 68-		H:CDN1,D:SU1 D:CDN3		H	H	24	
CAMBRIDGE BAY	A 6906N 10507W 27.	G(K) 71- S(C) 68-		H:CDN1,D:SU1 D:CDN3		H	H	24	
HALL BEACH	A 6847N 8115W 8.	G(K) 70- G(E1) 60-72 G(E2) 73- S(C) 67-		H:CDN1,D:SUT H:CDN1,D:SU1 H:CDN1,D:SU1 D:CDN3		H	H	24	
INUVIK	A 6818N 13329W 103.	G(E1) 60-72 G(E2) 73- S(C) 67-		H:CDN1,D:SU1 H:CDN1,D:SU1 D:CDN3		H	H	24	
AKLAVIK	A 6814N 13500W 9.	G(E1) 48-51,52-59 G(E1) 60-60		D:CDN1 D:CDN1		H	H		USWB
BROUGHTON ISLAND	A 6734N 6403W 10.	I(E) 73*73 G(K) 71*73 G(E2) 73*73 Q*(FR)73*73 L*(FU)73*73		*CDN1 H:CDN1 H:CDN1 H:CDN1 H:CDN1		H	H		USWB
NORMAN WELLS A	A 6517N 12648W 73.	G(E1) 67-71 G(K) 71-72 G(E2) 72- Q*(FU)72- S(C) 59		H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1-SU1 D:CDN3		H	H	24	
BAKER LAKE	A 6441BN 9600W 12.	G(E2) 70- Q*(FU)69- S(C) 70-		H:CDN1,D:SU1 H:CDN1-SU1 D:CDN3		H	H	24	
CORAL HARBOUR A	A 6412N 2322W 64.	G(E2) 70- S(C) 49-		H:CDN1,D:SU1 D:CDN3		H	H	24	
FROBISHER BAY A	A 6345N 6833W 34.	G(E2) 72- Q*(FU)72- S(C) 56-		H:CDN1,D:SU1 H:CDN1-SU1 D:CDN3		H	H	24	
YELLOWKNIFE A	A 6226N 11427W 208.	Q*(SK)60-63 S(C) 69-		D:CDN3 D:CDN1 D:CDN3		H	H	24	
FORT SIMPSON	A 6152N 12121W 129.	G(R) 54-64 S(C) 55-		D:CDN3 D:CDN1-SU1 D:CDN3		H	H	24	
ENNADAI LAKE	A 6108N 10055W 325.	Q*(SK)60-61 S(C) 53-		D:CDN3 D:CDN2		D	*	18	
FORT SMITH A	A 6000N 11158W 203.	G(K) 71- S(C) 53-		H:CDN1,D:SU1 D:CDN3		H	H	24	
BATHURST ISLAND	A 7543N 9825W 3.	S(C) 73-		D:CDN3		H	H		
POND INLET A	A 7240N 7800W 59.	S(C) 75-		D:CDN3		H	H	24	
CLYDE	A 7027N 6833W 3.	S(C) 71-		D:CDN3		H	H	8	
COPPERMINE	A 6750N 11507W 7.	S(C) 49-		D:CDN3		H	H	24	
CAPE DORSET	A 6414N 7633W 9.	S(C) 70-		D:CDN3		H	H		

## CANADA - NOVA SCOTIA

	2	3.	4	5	6	7.	8.	9.	10
KENTVILLE CDA	A 4504N 6429W 49.	G(E1) 60-75 G(K) 75- Q*(FU)72- S(C) 13-		H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1-SU1 D:CDN3		H	H		
HALIFAX CITADEL	A 4439N 6335W 70.	G(E1) 64-70 G(K) 70- S(C) 13-		H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1-SU1 D:CDN3		H	H		
DARTMOUTH-HARTLEN POINT	A 4436N 6328W 25.	S(C) 41-65 G(E1) 57-65		H:CDN1 H:CDN1,D:SU1 H:CDN1,D:SU1		H	H		
SABLE ISLAND	A 4356N 6001W 4.	G(E1) 69-71 G(K) 71- Q*(FU)69- S(C) 61-		H:CDN1,D:SU1 H:CDN1,D:SU1 H:CDN1-SU1 D:CDN3		H	H	24	
SYDNEY A	A 4610N 6003W 62.	S(C) 48- S(C) 12-		D:CDN3 D:CDN3		H	H	24	
NAPPAN CDA	A 4546N 6415W 9.	S(C) 12-		D:CDN3		H	H		
TATAMAGOUCHE	A 4545N 6322W 8.	S(C) 72-		D:CDN3		H	H		
RIVER HEBERT	A 4536N 6421W 15.	S(C) 70-		D:CDN3		H	H		
EDDY POINT	A 4531N 6115W 62.	S(C) 72-		D:CDN3		H	H	24	
TRURO	A 4522N 6316W 40.	S(C) 62-		D:CDN3		H	H	8	
FRASER BROOK IHD	A 4520N 6310W 122.	S(C) 67-		D:CDN3		H	H		
SHARP BROOK IHD	A 4501N 6438W 3.	S(C) 69-		D:CDN3		H	H		
ANNAPOLIS ROYAL	A 4445N 6533W 23.	S(C) 64-		D:CDN3		H	H		
SHEARWATER A	A 4438N 6330W 51.	S(C) 61-		D:CDN3		H	H	24	
SANDY COVE NRC	A 4428N 6334W 10.	S(C) 75-		D:CDN3		H	H		
METEGHAN	A 4411N 6611W 12.	S(C) 73-		D:CDN3		H	H		
TARMOUTH A	A 4350N 6605W 48.	S(C) 58-		D:CDN3		H	H	24	
SHELBOURNE	A 4343N 6515W 28.	S(C) 72-		D:CDN3		H	H		
BACCARO	A 4328N 6528W 3.	S(C) 59-		D:CDN3		H	H		



## CANADA - ONTARIO

3-26

	2	3	4	5	6	7.	8.	9.	10
OAK RIDGES	•	•	•	S(C) 42-	D:CDN3	•H	•H	•	•
TURBINE	A	4623N	8134W 206.	S(C) 21-	D:CDN3	•H	•H	•	•
NORTH BAY A	A	4622N	7925W 370.	S(C) 63-	D:CDN3	•H	•H	24	•
PETAWAWE FOREST EXP STN	A	4600N	7726W 168.	S(C) 72-	D:CDN3	•H	•H	•	•
OTTAWA CDA	A	4523N	7543W 79.	S(C) 1898-	D:CDN3	•H	•H	•	•
CODER MERE	A	4522N	7573W 287.	S(C) 57-	D:CDN3	•H	•H	•	•
CORNWALL ONTARIO HYDRO	A	4502N	7448W 76.	S(C) 57-	D:CDN3	•H	•H	•	•
KEMPTVILLE	A	4500N	7538W 98.	S(C) 68-	D:CDN3	•H	•H	•	•
WIARTON A	A	4445N	8106W 222.	S(C) 72-	D:CDN3	•H	•H	24	•
LINDSAY FROST	A	4420N	7844W 262.	S(C) 75-	D:CDN3	•H	•H	•	•
MORVEN IHD	A	4415N	7651W 107.	S(C) 71-	D:CDN3	•H	•H	•	•
SMITHFIELD CDA	A	4405N	7740W 122.	S(C) 58-	D:CDN3	•H	•H	•	•
BURKEON MC LAUGHLIN IHD	A	4402N	7848W 312.	S(C) 69-	D:CDN3	•H	•H	•	•
MOUNT FOREST	A	4359N	8045W 412.	S(C) 62-	D:CDN3	•H	•H	24	•
OAK RIDGES	A	4358N	7928 322.	S(C) 42-	D:CDN3	•H	•H	•	•
ALBION FIELD CENTRE	A	4355N	7950W 290.	S(C) 69-	D:CDN3	•H	•H	•	•
HAMILTON RBC	A	4317N	7953W 102.	S(C) 62-	D:CDN3	•H	•H	•	•
VINELAND STATION	A	4311N	7924W 79.	S(C) 15-	D:CDN3	•H	•H	•	•
LONDON A	A	4302N	8109W 275.	S(C) 43-	D:CDN3	•H	•H	24	•
SARNIA A	A	4300N	8218W 181.	S(C) 70-	D:CDN3	•H	•H	•	•
DELHI CDA	A	4552W	8033W 232.	S(C) 36-	D:CDN3	•H	•H	•	•
PELEE ISLAND U OF W.	A	4146N	8240W 174.	S(C) 74	D:CDN3	•H	•H	•	•
				*	*	*	*	*	*

## CANADA - PRINCE EDWARD ISLAND

	2	3	4	5	6	7.	8.	9.	10
CHARLOTTETOWN CDA	A	4615N	6308W 23.	G(E1) 71-75	H:CDN1,D:SU1	•H	•H	•	•
				G(K) 75-	H:CDN1,D:SU1	•H	•H	•	•
				D(K) 77-	H:CDN1	•H	•H	•	•
				S(C) 10-	D:CDN3	•H	•H	•	•
TIGNESH	A	4657N	6404W 23.	S(C) 70-	D:CDN3	•H	•H	•	•
O'LEARY	A	4642N	6416W 38.	S(C) 70-	D:CDN3	•H	•H	•	•
EAST BALTIMORE	A	4626N	6210W 61.	S(C) 70-	D:CDN3	•H	•H	•	•
SUMMERSIDE	A	4626N	6350W 24.	S(C) 67-	D:CDN3	•H	•H	24	•
HUNTER RIVER	A	4621N	6220W 61.	S(C) 70-	D:CDN3	•H	•H	•	•
BANGOR	A	4621N	6241W 53.	S(C) 72-	D:CDN3	•H	•H	•	•
				*	*	*	*	*	*

## CANADA - QUEBEC

	2	3	4	5	6	7.	8.	9.	10
INOUDJOUAC	A	5827N	7807W 5.	G(K) 72-	H:CDN1,D:SU1	•H	•H	24	•
				Q*(FU)72-	H:CDN1-SU1	•H	•H	•	•
				S(C) 66-	D:CDN3	•H	•H	•	•
FORT CHIMO A	A	5806N	6825W 36.	G(K) 72-	H:CDN1,D:SUT	•H	•H	24	•
				S(C) 69-	D:CDN3	•H	•H	•	•
KNOB LAKE	A	5448N	6649W 512.	G(R) 57-62	D:CDN1	•D	•	•	•
				G(E1) 62-65	H:CDN1,D:SU1	•H	•H	•	•
				G(R) 66-69	H:CDN1-SU1	•D	•	•	•
				Q*(SF)62-65	H:CDN1-SU1	•H	•H	24	•
NITCHEQUON	A	5312N	7054W 537.	G(K) 73-	H:CDN1,D:SU1	•H	•H	24	•
				S(C) 67-	D:CDN3	•H	•H	•	•
				G(E1) 67-73	H:CDN1,D:SU1	•H	•H	•	•
				S(C) 63-	D:CDN3	•H	•H	•	•
SEPT-ILES A	A	5013N	6616W 58.	G(K) 73-	H:CDN1,D:SU1	•H	•H	24	•
				S(C) 63-	D:CDN3	•H	•H	•	•
NORMANDIN CDA	A	4851N	7232W 137.	G(E1) 57-74	H:CDN1,D:SU1	•H	•H	•	•
				G(K) 74-	H:CDN1,D:SU1	•H	•H	•	•
				S(C) 36-	D:CDN3	•H	•H	•	•
ST. AUGUSTIN	A	4644N	7130W 58.	Q*(FU)68-76	H:CDN1-SU1	•H	•H	•	•
				S(C) 64-	D:CDN3	•H	•H	•	•
MONTRÉAL JEAN BREBEUF	A	4530N	7337W 133.	G(R) 56-64	H:CDN1-SU1	•D	•	•	•
				G(E1) 64-71	H:CDN1,D:SU1	•H	•H	•	•
				G(K) 71-71	H:CDN1-SU1	•H	•H	•	•
				G(E1) 71-72	H:CDN1,D:SU1	•H	•H	•	•
				G(K) 72-	H:CDN1,D:SU1	•H	•H	•	•
				D(E1) 64-71	H:CDN1	•H	•H	•	•
				D(K) 71-	H:CDN1	•H	•H	•	•
				S(C) 58-	D:CDN3	•H	•H	8	•
KOARTAK	A	6104N	6941W 27.	S(C) 71-	D:CDN3	•H	•H	8	•
BORDER	A	5520N	6313W 486.	S(C) 67-	D:CDN3	•H	•H	16	•
POST-DE-LA-BALEINE	A	5517N	7746W 18.	S(C) 70	D:CDN3	•H	•H	24	•
SCHEFFERVILLE A	A	5448N	6649W 522.	S(C) 67-	D:CDN3	•H	•H	24	•
HELENE	A	5317N	7730W 152.	S(C) 75-	D:CDN3	•H	•H	•	•
EASTMAIN	A	5215N	7830W 6.	S(C) 62-70,72-	D:CDN3	•H	•H	•	•
GAGNON	A	5157N	6808W 572.	S(C) 66-	D:CDN3	•H	•H	•	•
BLANC SABLON	A	5125N	5712W 8.	S(C) 65-	D:CDN3	•H	•H	•	•
CAMP H-107	A	5104N	6729W 488.	S(C) 74-	D:CDN3	•H	•H	•	•
RIVIERE TEMISCAMIE	A	5057N	7302W 411.	S(C) 73	D:CDN3	•H	•H	•	•
MATAMEK	A	5017N	6558W 5.	S(C) 75-	D:CDN3	•H	•H	•	•
RIVIERE AU TONNERRE	A	5017N	6446W 15.	S(C) 65-	D:CDN3	•H	•H	•	•
NATASHOUAN A	A	5011N	6149W 11.	S(C) 69-	D:CDN3	•H	•H	16	•
CHI BOUGAMAU	A	4949N	7425W 402.	S(C) 71-	D:CDN3	•H	•H	24	•
MATAGAMI A	A	4946N	7748W 279.	S(C) 74	D:CDN3	•H	•H	24	•
BAIE COMEAU	A	4901N	6624W 213.	S(C) 66-	D:CDN3	•H	•H	•	•
CAP SEIZE	A	4901N	6624W 41.	S(C) 67-	D:CDN3	•H	•H	•	•
RIVERE AU RENARD	A	4854N	6638W 1126.	S(C) 67-70,71-	D:CDN3	•H	•H	•	•
MOUNT LOGAN	A	4853N	7227W 127.	S(C) 22-	D:CDN3	•H	•H	•	•
ALBANEL	A	4846N	7203W 107.	S(C) 51-	D:CDN3	•H	•H	•	•
PERIBONCA CDA	A	4844N	6905W 86.	S(C) 63-	D:CDN3	•H	•H	•	•
FORESTVILLE	A	4837N	7859W 297.	S(C) 69-	D:CDN3	•H	•H	•	•
POULAIRES	A	4836N	6812W 52.	S(C) 70-	D:CDN3	•H	•H	24	•
MOUNT JOLI A	A	4834N	7808W 305.	S(C) 63-	D:CDN3	•H	•H	•	•
AMOS	A	4833N	7826W 311.	S(C) 62-	D:CDN3	•H	•H	•	•
MANNEVILLE	A	4827N	6831W 36.	S(C) 62-	D:CDN3	•H	•H	•	•
RIMOUSKI	A	4825N	7145W 160.	S(C) 56-	D:CDN3	•H	•H	•	•
LAC STE CROIX	A	4821N	7171W 312.	S(C) 69-	D:CDN3	•H	•H	•	•
SENNETERRE	A	4818N	6813W 244.	S(C) 63-	D:CDN3	•H	•H	•	•
OUIMET	A	4817N	6737W 396.	S(C) 72-	D:CDN3	•H	•H	•	•
LAC HUMQUI	A	4815N	6932W 31.	S(C) 51-	D:CDN3	•H	•H	•	•
BRAND BERGERONNES	A	4809N	6551W 7.	S(C) 64-	D:CDN3	•H	•H	•	•
NEW RICHMOND	A	4803N	7747W 337.	S(C) 69-	D:CDN3	•H	•H	24	•
VALDORA	A	4759N	6704W 290.	S(C) 72	D:CDN3	•H	•H	•	•
ST ALEXIS MATAPELIA	A	4755N	7437W 439.	S(C) 70-	D:CDN3	•H	•H	8	•
PARENT	A	4754N	7437W 439.	S(C) 70-	D:CDN3	•H	•H	•	•

2	3.	4	5	6	7.	8.	9.	10
•	•	•	•	•	•	•	•	•
•NOTRE DAME DU LAC	•A .4737N	6848W 174. S(C) 69-	•D:CDN3	•H	•H	•	•	•
•ST ELEUTHERE	•A .4729N	6917W 289. S(C) 73-	•D:CDN3	•H	•H	•	•	•
•GRINDSTONE ISLAND	•A .4723N	6152W 60. S(C) 69-	•D:CDN3	•H	•H	•	•	•
•ST CASSIEN DES CAPS	•A .4722N	7037W 37. S(C) 72-	•D:CDN3	•H	•H	•	•	•
•LA POCATIERE CDA	•A .4721N	7002W 30. S(C) 64-	•D:CDN3	•H	•H	•	•	•
•FORET MONTMORENCY	•A .4719N	7109W 640. S(C) 65-	•D:CDN3	•H	•H	•	•	•
•VILLE MARIE	•A .4719N	7926W 192. S(C) 70	•D:CDN3	•H	•H	•	•	•
•PETITE RIV ST FRANCOIS	•A .4719N	7034W 12. S(C) 72-	•D:CDN3	•H	•H	•	•	•
•ST FRANCOIS IO	•A .4659N	7050W 49. S(C) 69-	•D:CDN3	•H	•H	•	•	•
•DUCHESNAY	•A .4652N	7139W 166. S(C) 40-	•D:CDN3	•H	•H	•	•	•
•LAC AUX SABLES	•A .4652N	7224W 160. S(C) 69-	•D:CDN3	•H	•H	•	•	•
•QUEBEC A	•A .4648N	7123W 72. S(C) 57-	•D:CDN3	•H	•H	24	•	•
•ARMAGNAC STN	•A .4643N	7037W 351. S(C) 69-	•D:CDN3	•H	•H	•	•	•
•BARRAGE TEMISCAMINSUE	•A .4643N	7906W 181. S(C) 68-	•D:CDN3	•H	•H	•	•	•
•FERME NEUVE CDA FE	•A .4642N	7527W 216. S(C) 64-70,71-	•D:CDN3	•H	•H	•	•	•
•SAINT MICHEL DES SAINTS	•A .4641N	7355W 351. S(C) 69-	•D:CDN3	•H	•H	•	•	•
•LAC MINOGAMI	•A .4640N	7252W 259.	•	•	•	•	•	•
•VALLEE JUNCTION	•A .4623N	7158W 152. S(C) 65-	•D:CDN3	•H	•H	•	•	•
•MANIWAKI	•A .4623N	7558W 166. S(C) 62-	•D:CDN3	•H	•H	8	•	•
•ST GERMAINE	•A .4622N	7030W 411. S(C) 63-	•D:CDN3	•H	•H	•	•	•
•STE AGATHE DES MONT	•A .4603N	7417W 395. S(C) 66-	•D:CDN3	•H	•H	24	•	•
•VICTORIAVILLE	•A .4603N	7158W 137. S(C) 52-70,74-	•D:CDN3	•H	•H	•	•	•
•BERTHIERVILLE	•A .4603N	7311W 12. S(C) 52-	•D:CDN3	•H	•H	•	•	•
•ARTHABASKA	•A .4602N	7155W 152. S(C) 69-	•D:CDN3	•H	•H	•	•	•
•DISraeli	•A .4557N	7117W 299. S(C) 69-	•D:CDN3	•H	•H	•	•	•
•HARRINGTON FOREST FRAM	•A .4551N	7438W 183. S(C) 64-72,73-	•D:CDN3	•H	•H	•	•	•
•L'ASSOMPTION CDA	•A .4549N	7326W 21. S(C) 30-	•D:CDN3	•H	•H	•	•	•
•ST LUGGER	•A .4545N	7040W 328. S(C) 65-	•D:CDN3	•H	•H	•	•	•
•ST HYACINTE	•A .4538N	7257W 31. S(C) 64-	•D:CDN3	•H	•H	•	•	•
•SHAWVILLE	•A .4536N	7630W 168. S(C) 65-	•D:CDN3	•H	•H	•	•	•
•MONTREAL JAR BOT	•A .4534N	7333W 46. S(C) 63-	•D:CDN3	•H	•H	•	•	•
•MONTREAL MCGILL	•A .4530N	7335W 57. S(C) 1881-	•D:CDN3	•H	•H	•	•	•
•MONTREAL INT'L	•A .4528N	7345W 36. S(C) 69-	•D:CDN3	•H	•H	24	•	•
•ST ANNE DE BELLEVUE	•A .4526N	7356W 40. S(C) 63-	•D:CDN3	•H	•H	•	•	•
•WEST DITTON	•A .4524N	7119W 508. S(C) 65-	•D:CDN3	•H	•H	•	•	•
•SAWYERVILLE NORO	•A .4522N	7132W 442. S(C) 65-	•D:CDN3	•H	•H	•	•	•
•LENNOXVILLE	•A .4522N	7151W 152. S(C) 15-	•D:CDN3	•H	•H	•	•	•
•MAPLE LEAF EAST	•A .4520N	7124W 445. S(C) 65-	•D:CDN3	•H	•H	•	•	•
•BERVILLE	•A .4519N	7315W 30. S(C) 63-	•D:CDN3	•H	•H	•	•	•
•ST ISIDORE D'AUCKLAND	•A .4516N	7131W 394. S(C) 65-	•D:CDN3	•H	•H	•	•	•
•ST CLOTHIDE	•A .4510N	7341W 56. S(C) 40-	•D:CDN3	•H	•H	•	•	•
•SUTTON JUNCTION	•A .4509N	7238W 213. S(C) 69-	•D:CDN3	•H	•H	•	•	•

CANADA - SASKATCHEWAN

	2	3	4	5	6	7	8	9	10
SASKATOON SRC		A .5208N 10638W 51.	G(EI) 56-67		H:CDN1,D:SU1	H	H		
BAD LAKE IHD		A .5119N 10824W 63-	S(C) 65-		D:CDN3	H	H		
			G(K) 71-		H:CDN1,D:SU1	H	H		
			R(K) 71-		H:CDN1	H	H		
			Q*(FU)71-		H:CDN1-SU1	H	H		
SWIFT CURRENT CDA		A .5016N 10744W 825.	S(C) 71		D:CDN3	H	H		
		G(EI) 60-73			H:CDN1,D:SU1	H	H		
CREE LAKE		A .5721N 10708W 499.	S(C) 69-		D:CDN3	H	H		
NIPAWIN		A .5320N 10400W 374.	S(C) 73-		D:CDN3	H	H		
PRINCE ALBERT A		A .5313N 10541W 428.	S(C) 42-		D:CDN3	H	H		
MELFORT CDA		A .5249N 10636W 480.	S(C) 37-		D:CDN3	H	H		
NORTH BATTLEFORD A		A .5246N 10815W 547.	S(C) 75-		D:CDN3	H	H		
SCOTT CDA		A .5222N 10850W 660.	S(C) 11-		D:CDN3	H	H		
WYNARD		A .5146N 10412W 560.	S(C) 66-		D:CDN3	H	H		
OUTLOCK PFRA		A .5129N 10705W 541.	S(C) 62-		D:CDN3	H	H		
YORKTON A		A .5116N 10228W 498.	S(C) 65-		D:CDN3	H	H		
INDIAN HEAD CDA		A .5032N 10340W 586.	S(C) 1891-		D:CDN3	H	H		
INDIAN HEAD FORESTRY		A .5031N 10341W 585.	S(C) 60-		D:CDN3	H	H		
REGINA A		A .5026N 10440W 577.	S(C) 45-		D:CDN3	H	H		
BROADVIEW		A .5023N 10235W 599.	S(C) 68-		D:CDN3	H	H		
MOOSE JAW A		A .5020N 10533W 577.	S(C) 54-		D:CDN3	H	H		
SWIFT CURRENT A		A .5017N 10741W 817.	S(C) 38-		D:CDN3	H	H		
ORMISTON		A .4943N 10522W 697.	S(C) 69-		D:CDN3	H	H		
WEYBURN		A .4939N 10350W 570.	S(C) 72-		D:CDN3	H	H		
ESTEVAN A		A .4904N 10300W 571.	S(C) 62-		D:CDN3	H	H		

CANADA - YUKON TERRITORY

	2	3	4	5	6	7	8	9	10
WHITEHORSE A	A	6043N 13504W	703.	G(E2) 70-	H:CDN1,D:SU1	H	H	24	.
	.	.	.	G*(FU)70-	H:CDN1,SU1	H	H	.	.
	.	.	.	S(C) 57-	D:CDN3	H	H	.	.
FORT SELKIRK	A	6249N 13722W	454.	S(C) 66-	D:CDN3	H	H	*	.
HAINES JUNCTION	A	6046N 13735W	599.	S(C) 58-	D:CDN3	H	H	.	.
WATSON LAKE A	A	6607N 12849W	689.	S(C) 69	D:CDN3	H	H	24	.

COSTA RICA

	2	3	4	5	6	7	8	9	10
SANTA ROSA	.	.	.	G(R)	72-	.	.	.	.
TABOGA	A	.1021N	8509W	20.	G(R)	71-	.	D	.
COLON	A	.1015N	8340W	50.	G(R)	71-	.	D	.
DIAMANTES	A	.1013N	8346W	249.	G(R)	71-	.	D	.
NICOYA	A	.1009N	8327W	120.	G(R)	70-	.	D	5
PUEBLO	.	.	.	S( )	.	.	.	.	.
PUERTO LIMON	A	.1000N	8303W	3.	G(R)	69-74	.	D	5
PUNTA	.	.	.	S( )	.	.	.	.	.
IRAZU	A	.0959N	8351W3320.	6.	G(R)	70-	.	D	.
PUNTARENAS	A	.0958N	8450W	3.	G(R)	69-	.	D	.
SAN JOSE	.	.	.	S( )	.	.	.	5	.
SAN JOSE	A	.0956N	8405W1172.	6.	G(R)	70-	.	D	.
SAN JOSE	.	.0959N	8413W	920.	S( )	.	.	24	.
PALMAR SUR	A	.0857N	8328W	16.	G(R)	73-	.	D	5
PALMAR SUR	.	.	.	S(C)	.	.	.	.	.

## CUBA

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
CASA BLANCA, HABANA	A	.2310N	8221W	85. G(E1)	.	.	.	.24	.
JOVELLANOS, MATANZAS	A	.2248N	8110W	25. G( )	.	.	.5	.	.
CAMAGUEY, CAMAGUEY	A	.2125N	7751W	118. G( )	.	.	.24	.	.
SANTIAGO DE CUBA, ORIENTE	A	.2003N	7550N	44. G(E1)	.	.	.5	.	.
GRAN PIEDRA, ORIENTE	A	.2000N	7538N	920. G( )	.	.	.5	.	.

## EL SALVADOR

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
NUEVA CONCEPTION	A	.1408N	8917W	320. G(R)	D:SU1, SU2	D	.	.	.
AHUACHAPAN	A	.1357N	8952W	725. G(R)	D:SU1, SU2	D	.	.	.
SAN SALVADOR	A	.1343N	8912W	710. I( ) 57*	.	D	.	.	.
	.	.	.	G(BS) 57-	D:SU1, SU2	D	.	.	.
	.	.	.	G(R) 71-	D:SU1, SU2	D	.	.	.
	.	.	.	S( )	SU2	D	.	.	.
SANTA TECLA	A	.1341N	8917W	965. I( ) 57*	.	D:SU1, SU2	D	.	.
	.	.	.	G(BS) 57-	D:SU1, SU2	D	.	.	.
	.	.	.	S( )	SU2	D	.	.	.
SANTA CRUZ	A	.1326N	8849W	30. I( ) 57*	.	D:SU1, SU2	D	.	.
	.	.	.	G(BS) 57-	D:SU1, SU2	D	.	.	.
	.	.	.	S( )	SU2	D	.	.	.
LA UNION	A	.1320N	8753W	95. G(R)	D:SU1, SU2	D	.	.	.
	.	.	.	S( )	.	D	.	.	.

## GUADELOUPE

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
LE RIZET	A	.1616N	6131W	7. G(K) 73-	D:SU1, SU2	H	.	.24	.
	.	.	.	S(C)	M0:SU1-2	.	.	.	.

## HONDURAS

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
ISLAS DEL CISNE/SWAN IS.	B	.1724N	8356W	17. G(E1) 49-72	D:SU1, SU2	H	H	6	.
	.	.	.	G(E2) 72-	D:SU1, SU2	H	H	.	.
	.	.	.	.	.	A	.	.	.

## JAMAICA

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
MONTEGO BAY/SANGSTER	A	.1828N	7755W	60. G(BS) 74-	.	D	.	.24	.
	.	.	.	S(C) 66-	.	.	.	.	.
ORANGE RIVER	A	.1815N	7652W	326. G(BS) 72-	.	D	.	.	.
	.	.	.	S(C) 45-	.	.	.	.	.
KINGSTON/N. MANLEY INT'L A.	A	.1756N	7646W	2. G(BS) 74-	.	.	.	.24	.
	.	.	.	S(C) 11-	.	.	.	.	.
BODLES	A	.1756N	7708W	40. G(BS) 72-	.	D	.	.	.

## MARTINIQUE

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
LAMENTIN	A	.1436N	6100W	3. G(K) 74-	D:SU1,	H	.	.24	.
	.	.	.	S(C)	M0:SU1	.	.	.	.

## MEXICO

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
CHIHUAHUA UNIV., CHIH	A	.2836N	10605W	1430. G(R) 59-	D:SU1, SU2	H	.	8	.
	.	.	.	G(R) 67-	D:SU1, SU2	H	.	.	.
ORIZABA, HGO	A	.2035N	9912W	1745. G(K) 66-	M0:SU1-2	.	.	.	.
	.	.	.	G(R) 68-	D:SU1, SU2	H	.	.	.
TACUBAYA	A	.1924N	9906W	2300. I( )	M0:SU1-2	.	.	.	.
CIUDAD UNIV. MEXICO	A	.1920N	9911W	2268. G(BS) 67-69	D:SU1, SU2	D	.	.	.
	.	.	.	G(R) 57-	D:SU1	H	.	.	.
	.	.	.	G(E1) 69-71	D:SU1, SU2	H	.	.	.
	.	.	.	G(K) 71-	D:SU1, SU2	H	.	.	.
VERACRUZ	A	.1912N	9608W	12. G( ) 57-58	SU2	.	.	.	.

## PANAMA

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
AEROP. DE BOCAS, BOCAS D.T.A.	D	.0920N	8215W	2. G(R) 72-74	.	D	.	.	.
SALUD (ICACAL), COLON	A	.0912N	8009W	11. G(R) 72-	.	D	.	.	.
TOCOMEN, PANAMA	A	.0903N	7922W	14. G(R) 70-	.	D	.	.5	.
BAJO GRANDE, CHIRIQUI	A	.0851N	8233W	2300. G(R) 71-	.	D	.	.	.
ALBROOK	B	.0839N	7934W	6. G(E1)	.	D	.	.5	.
ANTON, COCLE	A	.0823N	8016W	33. G(R) 69-	.	D	.	.	.
EL REAL, DARIEN	A	.0808N	7745W	10. G(R) 73-	.	D	.	.	.
LA RAYA, VERAGUAS	A	.0808N	8048W	43. G(R) 71-	.	D	.	.	.
LOS SANTOS, LOS SANTOS	A	.0757N	8025W	16. G(R) 72-	.	D	.	.	.
COIBA, VERAGUAS	A	.0729N	8143W	8. G(R) 71-	.	D	.	.	.
BALBOA	C	.0900N	7930W	6. G(XE2) 73-75	US 6	.	.	.	.

	2	3.	4	5	6	7.	8.	9.	10
ST PIERRE MIQUELON	A .4646N 5610W	3. G(E) 72-	S(C) 72-		D:SU1, SU2	H	24		
	.	.	.		M:SU1-2	.	.	.	.

## TRINIDAD AND TOBAGO

	2	3.	4	5	6	7.	8.	9.	10
PIARCO, TRINIDAD	A .1035N 6121W	12. G(R) 72-	S(C) 72-			D	24		
	.	.	.		D	.	.	.	.

## USA - ALABAMA

	2	3.	4	5	6	7.	8.	9.	10
FLORENCE	M .3458N 8813W 170. G(E8) 78-	Q(TG)78-				.	.	.	.
STEVENSON	M .3452N 8545W 187. G(E8) 75-	Q(TG)75-				M	X	.	.
HUNTSVILLE	B1 .3444N 8640W 201. I(E) 77-	G(E2) 77-				SM	.	24	.
	.	G/E277-				SM	.	.	.
SCOTTSBORO	M .3443N 8555W 187. G(E8) 78-	D(WM) 77-				SM	.	.	.
TUSCUMBIA	M .3442N 8742W 143. G(E8) 76-	Q(TG)76-				SM	.	.	.
DECATUR	M .3442N 8706W 182. G(E8) 67-	Q(TG)				M	X	.	.
MUSCLE SHOALS	M .3439N 8746W 162. G(E8) 67-76	Q(TG)68-76				M	X	.	.
HUNTSVILLE	BFR .3493N 8645W 191. I( ) 75-77					.	.	.	.
REDSTONE ARSENAL	N .3437N 8640W 183. G(E8) 76-				H:USS	H	.	.	.
AUBURN	L .3215N 8530W 198. G(E1) 58-				D:USS	D	.	.	.
MONTGOMERY	A .3218N 8624W 61. I(E) 78-	G( ) 78-					.	24	.
	.	S(F) 61-			D:SU1	.	.	.	.
BIRMINGHAM	A .3334N 8645W 191. S(F) 64-	D:SU1			D:SU1	.	.	24	.

## USA - ALASKA

	2	3.	4	5	6	7.	8.	9.	10
BARROW	AB .7118N 15642W 11. G(E2)68-75	G(XE2)68-75			US6				VAR. ANGLES
BARROW	A .7118N 15647W 19. G(E1) 48-51	G(E1) 51-74			D:US1	H	24		
	.	G(XE2)74-			D:US1-SU1, SU2	H	H,D		
	.	G(XE2)74-				.	X	.	OUA
	.	G(XE2)74-				.	X	.	661
	.	G(XE2)74-				.	X	.	DG1
	.	UV( )				.	X	.	R68
FAIRBANKS	A .6449N 14743W 138. G(E1) 31-55	6449N 14752W 454. G(E1) 55-76			D:US1-2	H	H,D	24	
FAIRBANKS	B0 .6449N 14743W 138. I(E) 78-	G(E2) 78-			D:US1-SU1, SU2	H	H,D	.	
	.	G(E2) 78-				.	.	.	.
	.	G(E2) 78-				.	.	.	.
	.	D(E2) 78-				.	.	.	.
MATANUSKA	A .6134N 14916W 52. G(E) 54-	Q( ) 62-			D:US1	H	D	.	.
PALMER	A .6134N 14915W 72. G(E) 65-71	G(E2) 71-			D:US1	D	D	.	.
	.	Q( ) 65-			D:US1	D	D	.	.
BETHEL	A .6047N 16141W 49. G(E) 49-58	6047N 16148W 150.			D:US1	H	H,D	24	
	.	G(E) 58-			D:US1-SU1, SU2	H	H,D	.	.
ANNETTE	A .5502N 13141W 46. G(E) 49-	5502N 13141W 46. G(E) 49-			D:US1-SU1, SU2	D	D	.	.
NONE	A .6430N 16526W 7. S(F) 60-				D:US1	.	.	24	.
ANCHORAGE	A .6110N 15001W 40. S(F) 58-				D:US1	000.	24	.	.
JUNEAU	A .5622N 13435W 7. S(F) 60-				D:US1	.	24	.	.

## USA - ARIZONA

	2	3.	4	5	6	7.	8.	9.	10
PAGE	A .3656N 11128W 305. G(E1) 59-70				D:US1	.	.	.	.
PHOENIX	BS .3350N 11210W 610. I(E) 69-	G(E2)69-			US10	D	X	STRIP CHARTS	
	.	D(SR) 69-			US10	D	.	45S	
FLAGGSTAF	P .3511N 11139W2112. G(I) 74-75	D(E) 77-			US9	S	.	.	.
	.	SC 69-				.	.	.	.
MOUNT HARQUA	A .3340N 11320W1721. I( ) 2025	SC 69-			US4	.	.	24	.
PHOENIX	A .3326N 11201W 347. I(E) 78-	G(E1) 49-67			D:UST-SU1	H	.	.	.
	.	G(E1) 67-73			D:SU1, SU2	D	D	.	.
	.	G(E2) 73-			D:US1-SU1, SU2	D	D	.	.
	.	S(F) 60-			D:US1, SU1-2	.	.	.	.
TEMPE	O .3326N 11156 354. I( ) 77-	G(I) 77-			D:US1-SU1, SU2	.	.	45S	.
	.	D(E) 77-				.	.	.	.
MESA	A .3320N 11138W 424. G(E1) 56-	G(E) 66-			D:US1	D	D	DAILY FROM 1973	.
	.	G(E) 66-			US9	.	.	45S	.
YUMA	K .3250N 11424W 99. G(E) 61-74	G(E) 75-				.	.	45S	.
	.	G(E) 75-				.	.	45S	.
YUMA	.3250N 11450W 60. I( ) 77					.	.	.	.
TUCSON	A .3215N 11057W 742. I(E) 56*	G(E) 55-			+US1	.	.	24	.
	.	G(E) 55-			D:US1-SU1	H	H,D	.	.
PHOENIX	.3207N 11056W 774. S(F) 61-	S(F) 61-			D:US1	.	.	.	.
	.	S(F) 61-				.	.	.	.
NEW RIVER	A .3348N 11212W 610. I( ) 75-	G( ) 74-75				.	.	.	.
FLAGGSTAFF	A .3508N 11140W2127. S(F)					.	.	.	.
YUMA	A .3240N 11436W 62. S(F) 57-	S(F) 57-				.	.	.	.
	.	S(F) 57-				.	.	.	.

## USA - ARKANSAS

	2	3	4	5	6	7	8	9	10
LITTLE ROCK	A .3444N 9214W	84	G(E1)	49-52,73-76	D:US1-SU1, SU2	H	D	24	H. IN TABLES
FORT SMITH	.3450N 9216W	171	S(F)	65-	D:US1, SU1-2				1949-52,73-76
	A .3520N 9422W	140	S(F)	65-	D:US1				

## USA - CALIFORNIA

	2	3	4	5	6	7	8	9	10
ALTURAS	B .4128N 12031W	1329.	G(R)	58*69	D:USS				
GLENBURN	.B .4104N 12109W	1010.	G(R)	65*66	D:USS				
MCARTHUR	.B .4101N 12121W	1021.	G(R)	58*58	D:USS				
EUREKA	.BE .4048N 12410W	13.	G(E8)	78-					
BATLER VALLEY RANCH	.BU .4046N 12354W	126.	G(R)	70-75	USS				
REDDING	.B .4033N 12218W	152.	G(R)	58*58	D:USS				
RUTH RES.	.B .4023N 12327W	777.	G(R)	67*67	D:USS				
RED BLUFF	.B .4010N 12208W	85.	G(R)	67*69	D:USS				
GERBER	.B .4003N 1010.	G(R)	65*66	D:USS					
RED BLUFF	.BU .4009N 12215W	104.	G(E8)	71-	USS				
GERBER ISM	.B .4003N 12210W	70.	G(R)	73-	USS				
COVELO	.B .3948N 12315W	425.	G(R)	66*69	D:USS				
NEWVILLE	.B .3948N 12231W	198.	G(R)	66*70	D:USS				
CHALLENGE	.F .3929N 12113W	780.	G(E )	*					
WILLOWS	.B .3926N 12211W	29.	G(E )	58*67	D:USS				
SODA SPRINGS	.A .3920N 12222W	2100.	G(E1)	46-50	D:SU1-2				
UPPERLAKE	.B .3909N 12254W	205.	G(R)	70*72	D:USS				
COON CREEK	.L .3859N 12108W	152.	G(E1)	61*66	USS				
FINLEY 2SW	.B .3859N 12254W	415.	G(R)	72-73	USS				
AUBURN	.BU .3854N 12104W	394.	G(E8)	77-					
PLACERVILLE IFG	.G .3848N 12044W	840.	G(PH)	76-	USS				
WARM SPRINGS DAM	.K .3843N 12259W	68.	G(R)	73-75	USS				
FOLSOM DAM	.G .3842N 12110W	107.	G(SO)	74-	USS				
SACRAMENTO	.CV .3833N 12126W	8.	G(E2)	76-	USS				
DAVIS	.A .3832N 12145W	32.	G(E1)	42-76	D:US1-2-SU1	D	D		TAPE FR. 52- VAR. ANGLES
			G( )						
SANTA ROSA	.J .3831N 12243W	137.	G( )	72-	USS				
SANTA ROSA	.J .3822N 12242W	51.	G(E8)	77-	USS				
VACAVILLE	.G .3822N 12157W	30.	G(SO)	76-	USS				
NAPA	.J .3817N 12217W	5.	G(E1)	72-74	USS				
DAVIS	.B.J.		G(E1)	78-					
THORNTON	.B .3812N 12125W	2.	G(R)	63*68	D:USS				
VALLEJO	.J .3806N 12216W	15.	G(E1)	72-75	USS				
PITTSBURG	.J .3801N 12150W	30.	G(R)	70*73	USS				
RICHMOND	.J .3800N 12230W	.	G(R)	70*73					
SAN RAFAEL	.J .3758N 12232W	8.	G(E1)	70-	USS				
RICHMOND	.J .3756N 12221W	30.	G(E1)	70-75	USS				
BERKELEY	.DU .3752N 12215W	105.	G(E8)	77-					
OAKLAND	.J .3750N 12218W	.	G(R)	70*71					
STOCKTON	.B .3756N 12114W	6.	G(R)	60*61	D:USS				
SAN FRANCISCO	.DX .3748N 12230W	72.	G(WM)		USS				STRIP CHART
OAKLAND	.J .3747N 12210W	30.	G( )	70-71	USS				
SAN FRANCISCO	.J .3747N 12225W	16.	G(E )	49*53	USS				
LIVERMORE	.A0 .3741N 12147W	207.	I(EN)	74-					
LIVERMORE	.J .3740N 12146W	207.	I( )	70*70	USS				
			G(E8)	70*70	M				
			G(E1)	71-73					
			G(E8)	74-	USS				
MAZE BRIDGE	.B .3737N 12113W	11.	G(R)	62*65					
PACIFIC GROVE	.G .3736N 12158W	.	G( )	70-					
BURLINGAME	.J .3735N 12221W	8.	G(E8)	73-76	USS				
REDWOOD CITY	.J .3730N 12215W	.	G(R)	70*73					
PEDWOOD CITY	.J .3729N 12214W	30.	G(E1)	64-	USS				
SAN FRANCISCO	.CU .3727N 12205W	7.	G(S)	70-	USS				
FELT LAKE	.J .3725N 12209W	57.	G(E1)	54-62					
SAN JOSE	.J .3721N 12154W	21.	G(E1)	63-	USS				
			G(E8)	69-					
SAN JOSE	.J .3720N 12200W	.	G(R)	70*72					
BERENDA	.B .3704N 12008W	82.	G(R)	62*63	D:USS				
SAN LUIS DAM	.B .3703N 12104W	34.	G(R)	66-	USS				
LOS BANOS	.B .3701N 12054W	55.	G(R)	59*62	D:USS				
FRESNO	.A .3646N 11943W	102.	I(EN)	76-					
			G(E1)	58-67	D:SU1, USS-9-18	H	D		
			G(E1)	67-74	D:SU1, USS-9-18	D			
			G(E2)	74-	D:SU1-SU1, USS-9-18	D			
			.3643N 11949W	102.	D:SU1-2	H			
			G(E1)	25-58					
			S(F)	60-	D:US1, SU1-2				
FRESNO	.A .3649N 11944W	104.	G(E8)	72-	CVUSS				
KERMAN	.B .3643N 12001W	69.	G(R)	64*64	D:USS				
COIT RANCH	.CT .3642N 12028W	85.	G(R)	74-	USS				
METZLER RANCH	.CT .3641N 11938W	104.	G(PH)	76-	USS				
SALINAS HARTNELL	.B .3641N 12137W	26.	G(R)	74-	USS				
SALINAS	.BE .3640N 12136W	23.	G(E8)	77-					
TRANQUILLITY	.G .3639N 12015W	50.	G(E8)	76-	USS				
MONTEREY	.H .39636N 12152W	.	G(E1)	71-	USS				
MOUNT WHITNEY	.J .3635N 11817W	4420.	I( )	09-10	USS				
SOLEAD	.B .3628N 12123W	70.	G(R)	63*63	D:USS				
FIVE POINTS	.G .3622N 12006W	80.	G(WM)	72-	USS				
VISALIA	.CQ .3620N 11918W	99.	G(E8)	77-					
COALINGA-ALLEN	.CT .3610N 12014W	171.	G(SO)	74-	USS				
JOLON	.A .3557N 12114W	274.	G( )	69*69,71-	USS				
HIGH POINT	.K .3554N 12109W	564.	G( )	72*72					
CHINA LAKE-INYOKERN	.A .3539N 11749W	747.	G(E )	50*	D:US1	D	D		
CHINA LAKE	.BU .3539N 11740W	825.	G(E2)	76-	USS				
INYOKERN	.A .3539N 11740W	700.	G(E1)	48-	D:US1	D	D		
			BU.						
RIDGECREST	.CO .3537N 11740W	696.	I(EN)	76-	US18				
			G(E8)	76-					
SHAFTER	.D .3532N 11917W	94.	G( )	75-	USS				
WASCO SSW	.I .3532N 11927W	85.	G(R)	75-	USS				
BUTTONWILLOW	.B .3523N 11927W	82.	G(R)	65*66	D:USS				
SAN LUIS OBISPO	.B .3518N 12040W	91.	G(R)	69*69	D:USS				
GOLDSTONE	.BV .3518N 11648W	981.	G(SR)	74-	USS				
ARVIN FRICK	.B .3514N 11852W	133.	G(R)	59*66	D:USS				
BAKERSFIELD	.B .3514N 11859W	100.	G(R)	69*70	D:USS, US18				
OLD RIVER	.B .3513N 11906W	102.	G(R)	65*67	D:USS				
CUMMING'S VALLEY	.B .3507N 11834W	1195.	G(R)	65*72	D:USS				
GUADALUPE	.B .3500N 12032W	30.	G(R)	61*64	D:USS				
SANTA MARIA	.A .3456N 12025W	82.	G(E1)	49-63					
			G(E1)	63-67	H	H			
			G(E2)	67-73	D:SU1, SU2	D	D		
			G( )	73-75	D:SU1	D	D		
BARSTOW	.CO .3453N 11700W	664.	I(EN)	76-	USS-9				
LANCASTER	.CO .3442N 11809W	714.	G(E8)	76-					
			I(EN)	76-					
LOMPOC	.D .3436N 12027W	152.	G(E )	50*52	USS				
VICTORVILLE	.CO .3433N 11717W	870.	I(EN)	76-	USS				
			G(E8)	76-	USS				

	2	3	4	5	6	7.	8.	9.	10
•PARDEE	•CO.3427N	11835W	315°	G(E8)	76-	•	USS	•	•
•TABLE MOUNTAIN	•A .3422N	11741W	2286°	I(.,)	25*	•	US1-2-4	•	•
•ARROWHEAD	•CO.3417N	11713W	1542°	G(E8)	77-	•	•	X	•
•MOORPARK	•CO.3417N	11854W	141°	G(E8)	•	•	USS	•	•
•LOS ANGELES	•A .3417N	11410W	734°	G(S)	75-	•	•	•	•
•NORTHRIDGE	•	•	•	D(.,)	-	•	•	•	•
•MOUNT WILSON	•CV.3414N	11832W	261°	G(K)	63-	•	USS	•	•
•MANDALAY	•.3413N	11803W	1780°	I(.,)	05*20	•	US4	•	•
•YUCCA VALLEY	•CO.3412N	11915W	6°	G(E8)	76-	•	USS	•	•
•	•CO.3407N	11625W	1024°	I(EN)	76	•	•	•	•
•RIALTO	•	•	•	G(E8)	76	•	USS	•	•
•POINT MUGU	•CO.3406N	11721W	369°	G(E8)	•	•	USS	•	•
•LOS ANGELES	•H .3406N	11906W	3°	G(E8)	66-	•	US5-18	•	•
•	•A .3403N	11814W	107°	I(EN)	78-	•	•	•	•
•	•	•	•	G(E1)	49-74	•	D:US1	•	D,H
•WALNUT	•	•	•	G( )	78-	•	•	•	•
•LAGUNA BELL	•CO.3401N	11758W	107°	G(E8)	76-	•	USS	•	•
•RIVERSIDE	•CO.3358N	11808W	41°	G(E8)	76-	•	USS	•	•
•LOS ANGELES	•A .3358N	11720W	320°	G(E1)	33-	•	D:US1-2-SU1	•	D
•	•A .3356N	11823W	36°	G(E1)	50-	•	D:US1-SU1,	SU2+D	+D
•EL SEGUNDO	•	•	•	S(F)	58-	•	•	•	•
•VILLA PARK	•CO.3355N	11825W	12°	G(E8)	76-	•	USS	•	•
•COTTONWOOD	•CO.3349N	11751W	77°	G(E8)	77-	•	USS	•	•
•PALM SPRINGS	•C .3348N	117	W 457°	G(E2)	73-74	•	USS	•	•
•	•CO.3347N	11628W	93°	I(EN)	•	•	•	•	•
•LONG BEACH	•	•	•	G(E8)	•	•	USS	•	•
•COACHELLA	•CV.3346N	11811W	11°	G(S)	71-	•	•	•	•
•BLYTHE	•G .3340N	11610W	25°	G(R)	67*73	•	•	•	•
•	•E .3337N	11436W	81°	I(EN)	•	•	•	•	•
•HUNTINGTON BEACH	•	•	•	G(E8)	*	•	US9	•	•
•SALTON SEA	•CO.3338N	11758W	6°	G(E8)	76-	•	USS	•	•
•SANDY BEACH	•.3331N	11604W	-68°	G(E1)	73-	•	•	•	•
•ESCONDIDO	•C .3330N	11603W	-69°	G(E1)	67*68	•	USS	•	•
•	•C .3311N	11550W	-69°	G(E1)	61*62	•	•	•	•
•BRAWLEY	•CO.3308N	11706W	216°	I(EN)	75-	•	USS,US15	•	•
•DEL MAR/CARLSBAD	•	•	•	G(E8)	75-	•	•	•	•
•SAN VICENTE	•D .3257N	11533W	30°	G(E1)	62*72	•	USS	•	•
•LA JOLLA	•CO.3257N	11716W	104°	G(E8)	75-	•	USS,US15	•	•
•ALPINE	•C .3255N	11655W	201°	G(E1)	57*59	•	•	•	•
•SAN DIEGO	•A .3252N	11715W	26°	G(E1)	29-42	•	D:US2	•	D
•TORREY PINES	•	•	•	G(E1)	-50	•	D:US1-2	•	D
•IMPERIAL	•CO.3251N	11647W	747°	G(E8)	75-	•	US15	•	X
•EL CENTRO	•R .325CN	11710W	143°	G(E8)	74-	•	•	•	H
•EL CENTRO	•.3250N	11715W	114°	G(E1)	40-41	•	•	•	D
•EL CAJON	•CO.3249N	11523W	-8°	G(E8)	77-	•	•	•	•
•SPRING VALLEY	•BU.3248N	11540W	-3°	•	•	•	•	•	•
•INDIO	•A .3248N	11514W	4°	G(E1)	31-72	•	D:D	•	D
•BARRET RES	•	•	•	G(E2)	72-	•	D:US1	•	D
•CHULA VISTA	•CO.3247N	11658W	140°	G(E8)	75-	•	USS,US15	•	•
•FINLEY	•R .3246N	11705W	137°	G(E8)	74-	•	USS,US15	•	•
•BERKLEY	•R .3244N	11655W	216°	G(E8)	76-	•	USS,US15	•	•
•FREMONT	•.3243N	11614W	11°	G(E1)	40-41	•	•	•	STRIP CHART
•CHINA LAKE	•C .3241N	11640W	495°	G(E1)	60*61	•	•	•	•
•PASADENA	•CO.3240N	11702W	20°	G(E8)	75-	•	USS	•	•
•LIVERMORE	•B .3059N	12254W	415°	G(R)	72*73	•	D:USS	•	•
•LOS ANGELES	•BA.	•	•	I(.,)	75*	•	•	X	•
•PALO ALTO	•	•	•	G(E2)	75*	•	•	X	•
•EUREKA	•	•	•	G(SR)	74-	•	•	X	•
•RED BLUFF	•B.	•	•	G(E8)	74-	•	•	X	•
•SACRAMENTO	•B.	•	•	G(.,)	75-	•	•	•	•
•SAN FRANSISCO	•BG.	•	•	G(.,)	74-	•	•	•	•
•SAN DIEGO	•A .4048N	12410W	18°	S(F)	57-	•	•	•	•
•	•A .4009N	12215W	107°	S(F)	60-	•	•	•	•
•	•A .3831N	12130W	8°	S(F)	58-	•	•	•	•
•	•A .3729N	12212W	731°	S(F)	58-	•	•	•	•
•	•A .3244N	11710W	9°	S(F)	56-	•	•	•	•

USA - COLORADO

	2	3	4	5	6	7	8	9	10
	.	.	.	.	.	.	.	.	.
GRAND LAKE		A .4015N 10551W2540.	G(E1) 48-61		D:US1-2	.	.	.	.
GRANBY		A .4014N 10551W2541.	G(E.) 51-		D:US1	.	.	.	.
BOULDER		T .4000N 10516W1654.	I(EN) -			.	.	.	.
			G(E1) 44-48		D:US2	.	.	.	.
			G(..) -			.	.	.	.
			D(..) -			.	.	.	.
GOLDEN		BH .3953N 10512W1841.	G(E1) 75-			.	.	.	.
			.	D(E2) 76*		.	.	.	.
DENVER		.	3940N 10500W1635.	G(E1) 50-51		.	.	.	.
CLIMAX		A .3922N 10611W3511.	I( ) 46-49			.	.	.	.
			G(E1) 46-52		D:US1-2	.	.	.	.
GRAND JUNCTION		A .3907N 10832W1473.	I(EN) 78-			.	.	.	.
		.	3907N 10832W1473.	G(E1) 49-75	D:SU1, SU2	.	.	.	.
			.	G(E2) 75-	D:US1-SU1	.	.	.	.
			S(F) 61-		D:US1, SU1-2	.	.	.	.
COLORADO SPRINGS	U	.3855N 10650W2057.	G(E2) 75-			.	X	.	.
USAF. ACADEMY	S	.39..N 105..W1981.	G(E2) 75-			.	H	.	.
DENVER	A	.3945N 10252W1616.	S(F) 57-			.	.	.	.
PUEBLO	A	.3817N 10431W1430.	S(F) 59-			.	.	.	.

U.S.A. - CONNECTICUT

	2	3.	4	5	6	7.	8.	9.	10
HARTFORD	.	4156N	7251W	179	G(E1) 59-62	.	.	.	.
WINDSOR LOCKS	.	4150N	7240W	.	S(F)	.	D	.	.
AVON	.	BD.4148N	7248W	285	G(PB) 68-	D:USS	H	.	.
.	.	.	.	I(EN) 78-	.	.	15M.	.	.
MIDDLETON	.	CW.4132N	7234W	18	G(E8) 78-	.	.	15M.	.
WATERFORD	.	CW.4118N	7210W	23	G(E8) 73-	.	.	15M.	.
.	.	.	I(EN) 78-	.	.	.	15M.	.	.
BRIDGEPORT	.	CW.4112N	7306W	11	6.	.	.	.	.
AVERY POINT	.	.	.	G(E8) 73-	.	.	.	.	.
BLOOMFIELD	.	.	I(EN) 78-	.	.	.	15M.	.	.
COVENTRY	.	.	G(E8) 78-	.	.	.	.	.	.
DANBURY	.	.	G(MK) 74-	.	.	.	.	.	.
DERBY	.	.	G( ) 75-	.	.	.	.	.	.
ENFIELD	.	.	G(E ) 68-	.	.	.	.	.	.
HARTFORD	.	.	G(MK) 76-	.	.	.	.	.	.
MIDDLETOWN	.	.	G(MK) 76-	.	.	.	.	.	.
MOUNT CARMEL	.	CY.	G(R) 59-	.	.	.	.	.	.
NEW BRITAIN	.	.	G(MK) 76-	.	.	.	.	.	.
NEW HAVEN	.	.	G(MK) 75-	.	.	.	.	.	.
STAMFORD	.	.	G(MK) 75-	.	.	.	.	.	.
WATERBURY	.	.	G(MK) 75-	.	.	.	.	.	.

USA - DELAWARE

	2	3	4	5	6	7	8	9	10
•	.	.	.	.	.	.	.	.	.
•	.	.	.	.	.	.	.	.	.
•	NEWARK	V 3940N 7545W	G(E8) 74-	.	.	H	.	.	.
•	.	-G(E8) 74-	.	.	H	.	.	.	455

USA - FLORIDA

USA - GEORGIA

	2	3.	4	5	6	7+	8.	9.	10
ATLANTA		A 3339N 8425W 310.	G(E1) 49-73 G(E2) 73-74	D:US1-SU1, D:US1-SU1,	SU2,D SU2,D	D D			
ATLANTA		A0 3322N 8447W 280.	I(EN) 77- S(F) 60- G(E2) 77- S( ) 78-	SU2		M	M		
GRIFFIN		A 3314N 8425W 305.	G(E1) 50-66	D:US-SU1	D	D			
MACON		A 3242N 8339W 110.	S(F) 63-						
SAVANNAH		A 3208N 8112W 16.	S(F) 63-						

U.S.A. - HAWAII

			4		5		6		7	8.	9.	10
MAUNA LOA	A .1950N	1528W		IX(EN)72-					M		MULTI-X	
	.	.		I(EN)	.	US1	.	M	.	D	DIA.	
	.	.		G(E2) 57-	.		.	M	.	D	BULB	
	.	.		G(E2) 72-	.		.	M	.	D	QUA.	
	.	.		G(E2) 72-	.		.	M	.	D	GG22	
	.	.		G(E2) 72-	.		.	M	.	D	OG1	
	.	.		G(E2) 72-	.		.	M	.	D	RGB	
KEAHOLE AIRPORT	CZ.2943N	15504W	3.	G(E8) 76-				.	.	.	.	
HONOLULU	A .			I( ) 78-				.	.	.	.	
	.	.		G( ) 78-				.	.	.	.	
KEALAKEKUA	CZ.2930N	15554W	640.	G(E8) 76-				.	.	.	.	
KAUAI	DA.2155N	15932W	192.	G(E8) 62-				.	.	.	.	
KAHUKU	CZ.2140N	15758W	148.	76-				.	.	.	.	
KAENA	CZ.2136N	15815W	378.	G(E8) 76-				.	.	.	.	
WILLILANI	CZ.2126W	15801W	146.	76-				.	.	.	.	
WAIMANOE HOME	CZ.2126W	15756W	320.	76-				.	.	.	.	
KUNIA	CZ.2124W	15802W	87.	G(E8) 72-				.	.	.	.	
OAHU	DA.2123W	15802W	87.	G(E8) 63-				.	.	.	.	
PALEHUA	CZ.2123N	15807W	649.	76-				.	.	.	.	
MAUNAWILI	CZ.2121N	15746W	125.					.	.	.	.	
TANTULUS	CZ.2120N	15749W	610.					.	.	.	.	
LYON	CZ.2120W	15748W	152.	76-				.	.	.	.	
HONOLULU	A .2120N	15756W	5.	I(EN) 78-				.	.	.	.	
	.	.		G( ) 78-				.	.	.	.	
	.	.		S(F) 62-				.	.	.	.	
HONOLULU AIRPORT	DB.2119N	15755W	2.	41-70			US18	.	.	.	.	
	.	.		76-			US18	.	.	.	.	
HUELANI	CZ.2119N	15749W	98.	76-				.	.	.	.	
MOLOKAI	DA.2118N	15750W	15.	G(E8) 47-75				.	.	.	.	
MAKIKI	CZ.2118N	15750W	15.	72-				.	.	.	.	
HOLMES	CZ.2118N	15749W	23.	G(E8) 76-				.	.	.	.	
WAIKIKI	CZ.2117N	15750W	3.	76-				.	.	.	.	
KAUNA KAKIA	CZ.2106N	15701W	3.	G(E8)				.	.	.	.	
MAUI	CZ.2050N	15628W	32.	G(E8) 74-				.	.	.	.	
MAUNA LOA	A .1950N	15528W	3399.	IX(EN)72-			US1	M	.	D	MULTI-X	
	.	.		G(E2) 57-				M	.	D	VAR+ANGLES	
	.	.		G(E2)79-				M	.	D	QUA,GG22	
	.	.		GX(E2)72-				M	.	D	OG1,RGB	
HILO	DA.1944N	15506W	67.	G(E8) 60-				.	.	.	.	
HONOLULU	A .2120N	15756W	5.	S(F) 62-				.	.	.	.	
KAHLUI	A .2054N	15626W	20.	S(F)				.	.	.	.	
HILO	A .1943N	15504W	10.	S(F) 58-				.	.	.	.	

	2	3.	4	5	6	7.	8.	9.	10
BOISE	A	4334N	11613W	881. I(E1) 76- G(E1) 49- G( ) 78- S(F) 60-	D:US1-SU1, SU2,D D:US1-2	H	D		
TWIN FALLS	A	4227N	11434W	1149. G(E1) 27-63	D:US1-2	D			
POTACELLO	A	4235N	11421W	1197. G(E1) 63-66		D			ON TABLES
	A	4255N	11236W	1357. S(F) 61-					

## USA - ILLINOIS

	2	3.	4	5	6	7.	8.	9.	10
CHICAGO	A	4147N	8725W	208. G(E1) 23-43	US2	H			
ARGONNE	A	4142N	8759W	227. G(E1) 57-74	D:US1-SU1	H	D		
LEMONT	A	4142N	8759W	227. G(E8) 75- D(E6) 75-	D:US1-SU1	H	H		
JOLIET	A	4130N	8810W	179. G(E1) 49-53	D:US1				
MACOMB	Y	4025N	9040W	231. G(R) 73-		D			
URBANA	C	4006N	8814W	226. G(WM) 66-		H			
CHICAGO	A	4147N	8745W	189. S(F) 60-					CHARTS
MOLINE	A	4127N	9031W	180. S(F) 61-					
PEORIA	A	4040N	8941W	201. S(F) 62-					
SPRINGFIELD	A	3950N	8946W	186. S(F) 60-					
CARIO	A	3700N	8910W	108. S(F) 65-					

## USA - INDIANA

	2	3.	4	5	6	7.	8.	9.	10
FORT WAYNE	A	4100N	8512W	251. S(F) 64-					
WEST LAFAYETTE	C	4028N	87...W	215. G(E2) 65-					
EVANSVILLE	C	3803N	8732W	118. S(F) 64-		H	H		
INDIANAPOLIS	A	3944N	6613W	254. G(E1) 49-65	D:US1-SU1, SU2,D D:US1	D			
	A	3944N	8617W	251. I(EN) 65-74					
				G(E1) 65-74	D:US1-SU1,MO:SU,D	D			
				G( ) 76-					
				S(F) 64-	MO:SU1-2				

## USA - IOWA

	2	3.	4	5	6	7.	8.	9.	10
AMES	A	4202N	9338W	315. G(E1) 59-74	D:US1-SU1	H	D		
DES MOINES	A	4132N	9339W	963. G(E1) 59-71	D:US1				-390NM
				292. S(F) 61-					
SIOUX CITY	A	4224N	9623W	334. S(F) 62-					

## USA - KANSAS

	2	3.	4	5	6	7.	8.	9.	10
MANHATTAN	A	3912N	9635W	344. G(E1) 57-					
DODGE CITY	A	3746N	9958W	800. I(EN) 78- G(E1) 49-	D:US1-SU1,MO:SU,H	H	D		
				G( ) 78-					
CONCORDIA	A	3933N	9739W	450. S(F) 62-	MO:SU1-2				
TOPEKA	A	3904N	9538W	266. S(F) 63-					
WICHITA	A	3739N	9726W	406. S(F) 62-					

## USA - KENTUCKY

	2	3.	4	5	6	7.	8.	9.	10
LEXINGTON	A	3601N	6431W	313. G(E1) 50-73	D:US1	H,D,D			ON TAPE 57-61,
DRAKESBORO	A	3608N	8430W	320. G(E1) 73-		H	D		.68-
	M	3716N	8700W	157. G(E8) 67-78					
PAUDUCAM	M	3709N	8846W	111. G(E8) 75-			X		
LOUISVILLE	A	3811N	8544W	148. S(F) 62-			X		

## USA - LOUISIANA

	2	3.	4	5	6	7.	8.	9.	10
RUSTON	A	3230N	9235W	8. G(E1) 60-	D:US1	H	D		
SHREVEPORT	A	3225N	9345W	67. G(E1) 57-65	D:US1-SU1	H	D		
				D(E1) 58-65					
LAKE CHARLES	A	3228N	9349W	78. S(F) 60-			D		
	A	3019N	9309W	18. G(E1) 49-61	D:US1-SU1	H	H,D		HOURLY IN TABL.
				3007N 9313W 18. G(E1) 63-64	D:US1-SU1	H	H,D		49-52,73-
				3013N 9317W 18. G(E1) 64-	D:US1,SU2	H	H,D		
				G( ) 78-					
JEANERETTE	A	2956N	9140W	8. G(E1) 51-55	MO:SU1				
NEW ORLEANS	A	2956N	9007W	42. G(E1) 31-47	D:US2	D			
				2957N 9005W 54. S(F) 62-					

## USA - MAINE

	2	3.	4	5	6	7.	8.	9.	10
CARIBOU	A .4652N	6801W	195.	I(EN) 78-					
				G(E1) 49-72					
				G(E2) 72-					
PORTRLAND	A .4339N	7019W	30.	G(E1) 45-	D:US1-2-SU1,SU2,H				
				19. S(F) 63-	D:US1, SU1-2				ON TAPE FR. 52

## USA - MARYLAND

	2	3.	4	5	6	7.	8.	9.	10
ROCKVILLE	AB .3910N	7710W		G(XE2) 66-75	US6				
COLLEGE PARK	AA .3859N	7657W	20.	I(EN)					
				G(E1) 69-					
UPPER MARLBORO	A .3852N	7647W	30.	G(E1) 59-		H			
SILVER HILL	A .3850N	7657W	89.	G(E1) 53-60		D			
SALISBURY	A .3822N	7540W	11.	G(E1) 73-		D			
GODDARD SFC, GREENBELT	Z .39..N	7651W	79.	I(EN) 75-76		X			
				G(E8) 75-76		X			
BALTIMORE	A .3911N	7640W	47.	S(F) 60-		X			

## USA - MASSACHUSETTS

	2	3.	4	5	6	7.	8.	9.	10
LYNN	A .4227N	7058W	23.	G(E1) 49-52	D:US1-2				
AMHERST	A .4224N	7232W	90.	G(E1) 50-51	D:US1-2				
MAYNARD	K .4224N	7130W	63.	I( ) 63-					
BOSTON	A .4221N	7104W	110.	I(E1) 44-53	US1-2				
				G(E1) 44-68	D:US1-2-SU1,SU2,H	H			STRIP CHART
				9. S(F) 60-	D:US1				ON TAPE 52-
CAMBRIDGE	A .4221N	7106W	9.	G(E1) 39-43	D:US2				
NATICK	A .4217N	7122W		G( )					
BLUE HILL	A .4213N	7107W	204.	I(SD) 32*	US2				
				I(E1) 33-	US1-2				
				I(E1) 78-					
				G(E1) 32-	D:US1-2-SU1, SU2,H	H			ON TAPE 52-
EAST WAREHAM	A .4146N	7040W	15.	G(E1) 42-57					
BOSTON	DF.			G(E8) 74-75		X			

## USA - MICHIGAN

	2	3.	4	5	6	7.	8.	9.	10
SAULT STE MARIE	A .4628N	8422W	221.	G(E1) 50-	D:US1-SU1, SU2,D	D			
				S(F) 58-	SU2				HOURLY ON TAPE
EAST LANSING	A .4242N	8428W	274.	G(E1) 42-71		D			52-58
DETROIT	AD .4225N	8301W	191.	I(EN) 76-75	US1E				
				G(E2) 76-78	US18		15K,		
				G(E2) 76-78	US18		15K,		
ANN ARBOR	AC .4217N	8345W	220.	I(EN) 72-					
				G( ) 62-					
				G(E2) 78-					
				G(E2) 79-					
UNIVERSITY OF MICHIGAN	AC.			G( ) 72-					VAR-ANGLES
4 STN IN WEST-MICH.							H		
MARQUETT	A .4634N	8724W	222.	S(F) 65-					
ALPENA	A .4504N	8334W	210.	S(F) 63-					
GRAND RAPIDS	A .4253N	8531W	243.	S(F) 63-					
LANCING	A .4247N	8436W	265.	S(F) 63-					
DETROIT	A .4214N	8320W	201.	S(F) 59-					

## USA - MINNESOTA

	2	3.	4	5	6	7.	8.	9.	10
SAINT CLOUD	A .4535N	9411W	318.	G(E1) 49-72	D:US1-SU1, SU2,D	D			
				G(E1) 72-	D:SU1, SU2	D			
ST. PAUL	CG .4459N	9311W	295.	G(E1) 65-					CHARTS
				D(F) 65-					
DULUTH	A .4650N	9211W	429.	S(F) 65-					

## USA - MISSISSIPPI

	2	3.	4	5	6	7.	8.	9.	10
STARKVILLE	BD .3326N	8848W	122.	G(E1)					
JACKSON	A .3219N	9005W	100.	S(F) 64-					

	2	3.	4	5	6	7.	8.	9.	10
COLUMBIA	.	.3856N	9219W	232. G(E1) 43-49	D:US2	.	.	.	.
COLUMBIA	.	.3858N	9222W	233. Q*(E2)58-60	D:	.	.	.	.
COLUMBIA	A	.3857N	9220W	277. I(EN) 78-	D:US1-SU1	.	.	.	.
ST. LOUIS	.	.	.	G(E1) 49-	D:	.	.	.	.
ST. LOUIS	CH.	.	.	G(E1) 78-	D:	.	.	.	.
ST. LOUIS	.	.	.	I(E ) 72-	D:	.	.	.	.
ST. LOUIS	.	.	.	G(E ) 72-	D:	.	.	.	.
KANSAS CITY	A	.3907N	9436W	227. S(F) 60-	D:	.	.	.	.
COLUMBIA	A	.3849N	9213W	227. S(F) 64-	D:	.	.	.	.
ST. LOUIS	A	.3845N	9023W	171. S(F) 62-	D:	.	.	.	.
SPRINGFIELD	A	.3714N	9323W	385. S(F) 63-	D:	.	.	.	.

## USA - MONTANA

	2	3.	4	5	6	7.	8.	9.	10
SUMMIT	.	.	.	.	D:US1-2	.	.	.	.
PLENTYWOOD	.	.4818N	11322W	1478. G(E1) 47-50	D:US1	.	.	.	.
GLASGOW	.	.4847N	10434W	617. G/(PH)77-	D:US1-SU1,	SU2,D	D	.	.60S,STRIP CH.
HAVRE	.	.4813N	10637W	699. G(E1) 50-75	D:US1	.	.	.	.60S,STRIP CH.
GREAT FALLS	.	.4834N	10940W	758. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
BROWNING	.	.4729N	11121W	1130. I(EN) 78-	D:US1-SU1,	SU2,H	H	.	.
HUNTLEY	.	.	.	G(E1) 49-67	D:US1-SU1,	SU2,D	D	.	.
LIBBY	.	.4824N	11535W	626. G/(PH)77-	D:US1	.	.	.	.
SUMMIT	A	.4818N	11322W	1478. G(E8) 47-50	D:US1-2	.	.	.	.
KALISPELL	.	.4813N	11416W	902. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
GLASGOW	.	.4813N	10637W	699. G(E1) 50-75	D:US1-SU1,SU2	D	D	.	.
CHOATEAU	.	.4749N	11212W	1158. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
FORTBENTON	.	.4748N	11040W	792. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
SIDNEY	.	.4742N	10410W	588. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
POLSON	.	.4741N	11410W	899. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
THOMPSON FALLS	.	.4735N	11520W	751. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
GREAT FALLS	.	.4731N	11118W	1015. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
GREAT FALLS	A	.4729N	11121W	1130. I(EN) 78-	D:US1-SU1,SU2	H	H	.	.
JORDAN	.	.	.	G(E1) 49-67	D:US1-SU1,SU2	D	D	.	.
GLENDIVE	.	.4719N	10654W	853. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
LEWISTOWN	.	.4707N	10444W	631. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
MISSOULA	.	.4704N	10925W	1207. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
HELENA	.	.4652N	11400W	982. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
HARLOWTON	.	.4635N	11202W	1257. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
MILES CITY	.	.4628N	10950W	1270. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
HAMILTON	.	.4625N	10549W	72. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
ANACONDA	.	.4615N	11409W	1097. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
BUTTE	.	.4640N	11230W	1754. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
HUNTLEY	.	.4555N	10815W	911. Q*(E2)62-69	D:US1	.	.	.	.60S,STRIP CH.
COLSTRIP	.	.4553N	10636W	774. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
BILLINGS	.	.4547N	10830W	950. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
BOZEMAN	.	.4546N	11102W	1449. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
LIVINGSTON	.	.4539N	11034W	1369. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
ENNIS	.	.4521N	11444W	1502. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
DILLON	.	.4515N	11238W	1541. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
RED LODGE	.	.4511N	10915W	1691. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
WEST YELLOWSTONE	.	.4555N	11104W	2031. G/(PH)77-	D:US1	.	.	.	.60S,STRIP CH.
HAVRE	A	.4833N	10946W	788. S(F) 61-	D:US1	.	.	.	.
MISSOULA	A	.4655N	11405W	966. S(F) 60-	D:US1	.	.	.	.
HELENA	A	.4655N	11405W	966. S(F) 60-	D:US1	.	.	.	.
HELENA	A	.4636N	11200W	1181. S(F) 62-	D:US1	.	.	.	.
BILLINGS	A	.4548N	10832W	1082. S(F) 62-	D:US1	.	.	.	.
BILLINGS	A	.4546N	10822W	1082. S(F) 62-	D:US1	.	.	.	.

## USA - NEBRASKA

	2	3.	4	5	6	7.	8.	9.	10
MONTOMA	.	.	.	.	US1	.	.	.	.
MONTOMA	A	.4122N	9601W	403. I(EN) 56*57-	D:US1-SU1,MO:SU1-H	H	.	.	.
MONTOMA	.	.	.	G(E1) 56-	D:US1-SU1,MO:SU1-H	H	.	.	.
MONTOMA	.	.	.	G(E1) 78-	D:US1-SU1,MO:SU1-H	H	.	.	.
LINCOLN	A	.4049N	9642W	381. I(EN) 11*47	US2	.	.	.	.
LINCOLN	.	.	.	I(E ) 47*59	US1-2	.	.	.	.
LINCOLN	.	.	.	G(E ) 10-47	D:US2	H	.	.	.
LINCOLN	.	.	.	G(E1) 47*59	D:US1-2	H	H	.	.
LINCOLN	CI	.	.	G(E1) 60-	D:US1-SU1,MO:SU1-H	H	.	.	.
VALENTINE	.	.4252N	10033W	787. S(F) 62-	D:US1-SU1,MO:SU1-H	H	.	.	.
OMAHA	A	.4119N	9554W	298. S(F) 62-	D:US1-SU1,MO:SU1-H	H	.	.	.
NORTH PLATTE	A	.4108N	10041W	845. S(F) 56-	D:US1-SU1,MO:SU1-H	H	.	.	.

## USA - NEVADA

	2	3.	4	5	6	7.	8.	9.	10
RENO	.	.	.	.	US12	.	.	.	.
RENO	.	.3940N	11940W	1514. I(EN) 74-	US12	.	.	.	.
RENO	.	.3930N	11049W	1347. G(E1) 65-	D:US1, SU2	D	D	.	.CHARTS
ELY	A	.3917N	11452W	1912. G(F) 62-	SU1-2	.	.	.	.
LAS VEGAS	A	.3605N	11510W	670. I(EN) 75-75	D:US1-SU1, SU2,H	H	.	.	.
BOULDER CITY	.	.	.	G(E1) 49-67	D:US1-SU1, SU2,H	H	.	.	.
LAKE MEAD	C	.3559N	11451W	770. G(E ) 52*53	D:US1-SU1, SU2,H	H	.	.	.
LAKE MOJAVE	C	.3512N	11434W	200. G(E ) 59*61	D:US1-SU1, SU2,H	H	.	.	.
WINNEMUCCA	A	.4054N	11748W	1307. S(F) 60-	D:US1-SU1, SU2,H	H	.	.	.
WINNEMUCCA	A	.3600N	11458W	762. G(E2) 74-	D:US1-SU1, SU2,H	H	.	.	.CHARTS

	2	3.	4	5	6	7.	8.	9.	10
MOUNT WASHINGTON	.4416N	7118W1904.	G(E1)	32-36	D:US2	D	.	.	.
HOPKINTON	.4311N	7141W 121.	I(A)	08-08	.	.	.	.	.
CONCORD	.4312N	7130W 105.	S(F)	63-	.	.	.	.	.

## USA - NEW JERSEY

	2	3.	4	5	6	7.	8.	9.	10
NEW BRUNSWICK	.CJ.4030N	7428W 45.	G(E )	47-61+63-72-76	.	.	.	.	.
SEABROOK	.A .3930N	7514W 34.	G(E1)	49-57	D:US1-2	D	D	.	CHARTS
TRENTON	.A .4013N	7446W 58.	S(F)	57-	.	.	.	.	.
ATLANTIC CITY	.A .3927N	7434W 20.	S(F)	58-	.	.	.	.	.

## USA - NEW MEXICO

	2	3.	4	5	6	7.	8.	9.	10
SANTA FE	.3541N	10557W2125.	I(SD)	10+10	.	.	.	.	.
ALBUQUERQUE	.A .3503N	10637W1627.	I(E1)	41-	US1-2	.	.	.	.
			G(E1)	39-73	D:US1-2-SU1,SU2,H	H	.	.	ON TAPE 52-
			G(E2)	73-	D:US1-SU1,	SU2,H	H	.	.
			D( )	-	.	.	.	.	.
TYRONE	.	.	S(F)	59-	SU1-2	.	.	.	.
ALBUQUERQUE	AQ.3503N	10640W1615.	I(EN)	73*76-	US4	.	.	.	.
			G(E2)	73*76-	.	M	X	.	.
			D(E2)	.	.	M	X	.	.
LOS ALAMOS	CJ.	.	G(E8)	74-	.	.	X	.	.
ALBUQUERQUE	BU.	.	I( )	76-	.	X	.	.	.
FARMINGTON	BC.	.	G(E2)	76-	.	X	.	.	INSTANTANEOUS
ROSWELL	A .3318N	10432W1112.	G( )	76-	.	10M	.	.	VALUES
			S(F)	61-	.	10M	.	.	.

## USA - NEW YORK

	2	3.	4	5	6	7.	8.	9.	10
OSSUEGO	.4329N	7630W	G(X)	73+73	.	.	.	.	.
SYRACUSE	CL.4307N	7607W	G(MK)	73	.	.	.	.	.
			S(F)	62-	.	.	.	.	.
GENEVA RES. FARM	.A .4253N	7702W	219.	G(E2)	72-74	D:US1,US13	D	D	.
GENEVA	.A .4253N	7700W	180.	G(E1)	62-72	.	D	D	ON TAPE 69-
SHENECTADY	.A .4252N	7353W	148.	G(E1)	51-59	D:US1	D	D	.
ALBANY	BK.4245N	7548N	I(EN)	78-	.	.	.	.	.
	A .4245N	7548W	94.	G(E1)	49+51	D:US1-2	D	D	.
		89.	S(F)	61-	D:US1	.	.	.	.
			G( )	73-	US13	.	.	.	.
ITHACA	BK.	.	G(E2)	79-	.	.	.	.	.
MONTAUK	A .4227N	7628W	290.	G(E1)	34-	D:US1-2-SU1	H,D,D	.	VAR ANGLES
UPTON	AF.4103N	7157W	23.	G(E8)	72-	US13	.	.	HOURLY 34-51
	A .4052N	7253W	G(E1)	49-57	D:US1	H	D	.	CHARTS
NEW YORK	A .4047N	7358W	59.	G(E1)	24-74	D:US1-2-SU1,SU2,H	.	.	.
			G(E2)	74-75	D:US1	H	H	.	.
			S(F)	.	SU1-2	.	.	.	.
SAYVILLE	A .4046N	7305W	17.	G(E1)	49-63	.	H	D	ON TAPE 52-
NEW YORK	A .4043N	7400W	80.	G(E1)	49-51	D:US1	.	.	.
BETHPAGE	AE.	.	G(E8)	74-75	US13	.	.	.	CHARTS
AURORA	BK.4244N	7639W	253.	G(E1)	70-73	US13	D	.	.
CANTON	BK.4434N	7507W	134.	G(E1)	70-73	US13	D	.	.
LAKE GEORGE	BK.4328N	7347W	88.	G(E1)	71-74	US13	D	.	.
WHITEFACE MT.	BK.4424N	7352W	604.	G(K)	72-73	US13	D	.	.
ALBANY	BK.4224N	7350W	143.	G(K)	73-74	US13	D	.	.
BROCKPORT	BK.4315N	7758W	126.	G(E8)	70-73	US13	D	.	.
IKE PARK	BK.4045N	7335W	26.	G(E8)	73-73	US13	D	.	.
FONDA	BK.4252N	7426W	122.	G(E8)	73-73	US13	D	.	.
MAMARONECK	BK.4056N	7346W	23.	G(E8)	73-73	US13	D	.	.
SCHENECTADY	BK.4248N	7356W	69.	G(E8)	73-73	US13	D	.	.
WELFARE ISLAND	BK.4046N	7356W	8.	G(E8)	73-73	US13	D	.	.
ROCHESTER	A .4307N	7740W	168.	S(F)	61-	US13	D	.	.
BUFFALO	A .4256N	7844W	214.	S(F)	59-	.	.	.	.
BINGHAMTON	A .4213N	7559W	494.	S(F)	63-	.	.	.	.
NEW YORK	A .4026N	7359W	26.	S(F)	59-	.	.	.	.

## USA - NORTH CAROLINA

	2	3.	4	5	6	7.	8.	9.	10
HUMP MOUNTAIN	.3608N	8200W1500.	I( )	17-18	US4	.	.	.	.
GREENSBORO	.A .3605N	7957W	279.	G(E1)	49-	D:US1-SU1,	SU2,D	D	ON TAPE 52-
			269.	S(F)	60-	D:US1,	SU1-2	.	.
RALEIGH	.A .3547N	7849W	139.	I(EN)	78-	.	.	.	.
			G(E1)	50-59	D:US1	D	D	.	DATA 57-59
			G(E2)	72-75	.	D	.	.	.
			G( )	78-	.	.	.	.	.
ASHEVILLE	.3536N	8232W	667.	I(A)	02*03	D:US1	.	.	.
			S(F)	61-	US3	.	.	.	.
BLACK MOUNTAIN	.3536N	8219W	727.	I(A)	03*03	D:US1	.	.	.
CAPE HATTERS	A .3516N	7533W	8.	G(E1)	49-	US3	.	.	.
			S(F)	62-	D:US1-SU1,	SU2,H	H	.	ON TAPE 52-
SOUTHPORT	AN.3355N	7800W	8.	G(E8)	75-	D:US1,SU1-	SU1-2	.	.
APEX	AN.3539N	7801W	87.	G(E8)	73-	.	.	.	.
RESEARCH TRIANGLE PARK	AH.3552N	7845W	132.	I(E)	.	.	.	.	.
			G(E2)	72-	.	.	.	.	.
			L+(E)	7576	.	.	.	.	.
CHARLOTTE	A .3513N	8056W	233.	S(F)	63-	.	.	.	.
WILMINGTON	A .3416N	7755W	12.	S(F)	63-	.	.	.	.

	2	3.	4	5	6	7.	8.	9.	10
BISMARCK	A .4646N 10045W 511.	G(E1) 50-72 G(E2) 72- G( ) - UV( ) 73-74	SU1, SU2, SU1, SU2+D	H H					
WILLISTON	A .4811N 10338W 577.	S(F) 61- S(F) 62-	SUT-2						
FARGO	A .4654N 9648W 272.	S(F) 56-							

ERYTHEMA SPECT

## USA - OHIO

	2	3.	4	5	6	7.	8.	9.	10
PUT-IN-BAY	A .4139N 8250W 187.	G(E1) 42-53	D:US1-2	H D					
CLEVELAND	A .4124N 8151W 265.	G(E1) 49-72 G(E2) 72-75 G( )	D:US1-2-SU1, SU2, D:US1, SU2	D D					ON TAPE 52-53
COLUMBUS	A .4000N 8301W 245.	G(E1) 48-59 3958N 8300W 245. G(E1) 43-43	D:US1						ON TAPE 52-57
FAYETTEVILLE	A .3911N 8355W 252.	S(F) 59-	D:US1						
CINCINNATI	A .3907N 8431W 190.	G(E1) 68-69 G(E2) 68-69 UV(EU) 67-69	D:US5	H H					STRIP CHART
COSHOCOTON	CP.	S(F) 61- G(E8) 72-	D:US5						
TOLEDO	A .4136N 8348W 210.	S(F) 61-	D:US1	H					CHART
DAYTON	A .3954N 8412W 304.	S(F) 63-							

## USA - OKLAHOMA

	2	3.	4	5	6	7.	8.	9.	10
STILLWATER	A .3609N 9705W 300.	G(E1) 67-67	D:SU1	H D					
OKLAHOMA CITY	A .3524N 9736W 397.	G(E1) 50-66 G(E2) 73-75	D:US1-SU1, D:US1, SU2	H D D					ON TAPE 52-75
TULSA	A .3612N 9554W 205.	S(F) 56-	D:SU1, SU2	D D					
			SU1-2						

## USA - OREGON

	2	3.	4	5	6	7.	8.	9.	10
ASTORIA	A .4609N 12353W 7.	G(E1) 53-	D:US1-SU1	D D					
PORTRLAND	DH.4530N 12240W 6.	G(E8) 76-		X					
TIGARD	DH.4525N 12245W 6.	G(L1) 75-							
GLADSTONE	DE.4521N 12235W 6.	G(E8) 76-		X					
CARTY WEST	DE.4530N 12030W 204.	G(E8) 73-		X					
BANKS	DE.45..N	G(E8) 76-		X					
SALEM	DE.4455N 123..W 70.	G(E6) 77-	US1E	X					
CORVALIS	A .4433N 12313W 72.	G(E1) 56-66	D:US1	D D					
	BN.4436N 12313W 91.	G(E2) 73-							
		G(E2) 79-							
PEBBLE SPRINGS	DE.44..N 120..W 228.	G(E8) 74-		X					VAR ANGLES
BEND	BF.4404N 12130W 1097.	G(S) 77-							STRIP CHART
EUGENE	BF.4402N 12304W 152.	G(S) 74-							
		G(E2) 77-							
COOS BAY	BF.4319N 12420W 15.	G(S) 77-							STRIP CHART
GARDEN VALLEY	BG.4310N 12323W 128.	G( ) 70-							STRIP CHART
MELROSE	BG.4310N 12252W 228.	G( ) 71-							
MEDFORD	A .4222N 12252W 402.	I(EW) 78-							
		G(E1) 49-67	D:US1-SU1, MO:SUH	H					ONTAPE 52-
		G( ) 67-74	D:SU1, MO:SU2	D					
		G( ) 78-							
MYRTLE CREEK	BG.4303N 12304W 362.	G( ) 71*							CHART
GRANTS PASS	DH.4225N 12320W 282.	G(L1) 76-							
LA GRANDE	BF.4519N 11805W 847.	G(S) 77-							STRIP CHART
PORTRLAND	A .4536N 12236W 12.	G(R) 74-	US1E						CHART
		S(F) 60-							

## USA - PENNSYLVANIA

	2	3.	4	5	6	7.	8.	9.	10
STATE COLLEGE	A .4048N 7752W 375.	G(E1) 41-	D:US1-2	H D					
BETHLEHEM	AR.4036N 7523W 118.	G(E8) 75-							
PITTSBURG	A .4022N 7956W 280.	G(E1) 29-35							
	A .4027N 8000W 279.	G(E1) 35-36							
		I(EW) 78-							
		G( ) 78-							
AVOCA	A .4120N 7544W 287.	S(F) 57-							
PITTSBURG	A .4030N 8013W 371.	S(F) 63-							
HARRISBURG	A .4013N 7651W 106.	S(F) 62-							
PHILADELPHIA	A .3953N 7515W 9.	S(F) 63-							

## USA - PUERTO RICO

	2	3.	4	5	6	7.	8.	9.	10
RIO PEFRAS	.1824N 6604W 4.	G(E1) 55-62							
SAN JUAN	A .1826N 6600W 19.	S(F) 60-	D						

	2	3.	4	5	6	7.	8.	9.	10
PROVIDENCE		.4144N	7125W	57. I(A) 01+02					
NEWPORT		.A .4130N	7119W	16. G(E1) 37+66	D:US1				
PROVIDENCE				. G(E2) 66-	D:US1-2, US13	D	D	ON TAPE 52-	
	.DM	.41 N	7130W	61. G( ) 73-	D:US1-2, US13	D,H,D			

## USA - SOUTH CAROLINA

	2	3.	4	5	6	7.	8.	9.	10
HARTSVILLE		.AN .3423N	E002W	72. G(E8) 74+75-					
CHARLESTON		.A .3254N	8002W	21. G(E1) 49-	D:US1-SU1,	SU2,H	H		ON TAPE 52-
BLACKVILLE				. G(E2) 61-	D:US1,	SU1-2			
CLEMSON		.AO .3322N	8119W	99. G(R) 68-			D		
POINTIAC		.AI .3441N	8242W	250. G(R) 64+76			D		
AIKEN		.AY .3408N	8052W	134. G(R) 65+76			D		
GREENVILLE		.CA .3317N	8142W	44. G(E8) 74-					CHARTS
COLUMBUS		.A .3454N	8213W	294. S(F) 62-					
	.A .3357W	8107W	68. S(F) 62-						

## USA - SOUTH DAKOTA

	2	3.	4	5	6	7.	8.	9.	10
BROOKINGS									
RAPID CITY		.A .4419N	9648W	507. G(E1) 69-	D:US1		D	D	ON TAPE 70-
	.A .4409N	10306W	972.	G(E1) 49-50	D:US1		D		
	.A .4403N	10304W	969.	G(E1) 50-72	D:US1-SU1,	SU2,D	D		ON TAPE 52-75
				. G(E2) 72-75	D:US1,	SU2	D	D	
				. S(F)	SU1-2				
HURON		.A .4423N	9813W	391. S(F) 65-					

## USA - TENNESSEE

	2	3.	4	5	6	7.	8.	9.	10
KINGSPORT		.A .3633N	8236W	367. G( ) 75+76					
NASHVILLE		.A .3607N	8641W	187. I(E1) 78-	D:US1-2-SU1,	SU2,H	H		ON TAPE 52-
				. G(E1) 42-					
				. G( ) 78-					
				. G(E2) 52-	M0:,SU1-2				
CLINTON		.M .3606N	8410W	317. G(E8) 69-			X	X	
OAK RIDGE		.A .3601N	8414W	287. G(E1) 49+73	D:US1-SU1,	SU2,H	D		ON TAPE 52-
				. G(E2) 73-	D:US1-SU1,	SU2,H	D		
OAK RIDGE		.C6 .3601N	8414W	287. I( ) 77-			X		
				. G(E, ) 53-					
				. G(SD) 71-73					CHART
				. UV( ) 77-					
CUMBERLAND CITY		.M .3623N	8738W	200. G(E8) 71-			X	X	
DAISY		.M .3513N	8506W	227. G(E8) 71-			X	X	
KINGSTON		.M .3554N	8431W	260. G(E8) 75-			X	X	
NEW JOHNSONVILLE		.M .3601N	8759W	120. G(E8) 75-			X	X	
WATTS BAR		.M .3535N	8447W	217. G(E8) 73-			X	X	
KNOXVILLE		.A .3549N	8359W	297. S(F) 60-					
CHARRANOOGA		.A .3502N	8512W	209. S(F) 56-					
MEMPHIS		.A .3502N	9000W	86. S(F) 63-					

## USA - TEXAS

	2	3.	4	5	6	7.	8.	9.	10
FORT WORTH		.A .3249N	9721W	175. G(E1) 49+53	D:US1,M0:SU2		H		ON TAPE 52-74
		.A .3250N	9703W	175. G(E) 53-74	D:US1-SU1,	SU2,H	H		
BIG SPRINGS		.A .3214N	10130W	789. G(E1) 49+53			D	D	
STEPHENVILLE		.A .3213N	9828W	794. G(E1) 74-	D:US1		H		
MIDLAND		.A .3156N	10212W	874. I(E1) 78-	D:US1-SU1,	SU2,D	D		
				. G(E1) 53-					
				. G( ) 76-					
EL PASO		.A .3148N	10642W	1205. I(E1) 76-					
				. G(E1) 49+74	D:US1-SU1,	SU2,H	H		ON TAPE 52-
				. G(E2) 74-	D:US1-SU1		H		
FORT HOOD		.K .3105N	9751W	320. I( ) 74-	M0:,SU1-2				
				. G(E2) 76-					
				. G( )					
				. GX( )					
				. O( )					
COLLEGE STATION		.A .3039N	9616W	92. G(E1) 48+50	D:US1-2				
		.CC .3036N	9620W	17. G(E ) 66+			H		
				. G/(E2)73			H		
				. GX(E2)73			H		
SAN ANTONIO		.A .2932N	9828W	258. G(E1) 49+74	D:US1-SU1,	SU2,D	D		ON TAPE 52-
				. S(F) 63-	SU1-2				
				. I(E1)					
				. G(E2) 78-					
				. G/(E2)79-					
HONDO		.A .2921N	9910W	289. G(E1) 75-	D:SU1		D	D	
				. S(F)	SU1				
BROWNSVILLE		.A .2554N	9726W	15. G(E1) 49-	D:US1-SU1,	SU2,D	D		ON TAPE 52-
				. G( )					
				. D( ) -					
				. 6. S(F) 63-	SU1-2				
AMARILLO		.A .3514N	10142W	1092. S(F) 63-					
LUBBOCK		.A .3339N	10149W	982. S(F)					
ABILENE		.A .3225N	9941W	542. S(F) 62-					
AUSTIN		.A .3018N	9742W	188. S(F) 63-					
HOUSTON		.A .2958N	9521W	33. S(F)					
PORT ARTHUR		.A .2957N	9401W	7. S(F) 65-					
GALVESTON		.A .2918N	9448W	16. S(F) 62-					
CORPUS CHRISTI		.A .2746N	9730W	13. S(F) 60-					

VARANGLES

	2	3.	4	5	6	7.	8.	9.	10
• FLAMING GORGE	A .4056N 10925W1911.	G(E1) 59-70	D:US1-SU1	H .D	.	.	.	.	.
•	.	G(E1) 70-74	D:US1-SU1	D .D	.	.	.	.	.
• SALT LAKE CITY	A .4046N 11154W1313.	G(E1) 46-66	D:US1-SU1	D .D	.	.	.	.	.
•	.	I(E1) 78-	D:US1-2-SU1	D .D	.	.	.	.	HOURLY IN TAB
•	.	G(E1) 66-74	D:SU1, SU2	D .D	.	.	.	.	46-52,59-66;
•	.	G(E1) 78-	SU1-2	D .D	.	.	.	.	ON TAPE 52-53,
• TOOEL	A .4030N 11220W	G(E1) 44-	.	D .D	.	.	.	.	59-
• VERNAL	A .4026N 10930W1582.	G(E8) 70-	.	D .D	.	.	.	.	.
• LOGAN	CD .4145N 11150W1487.	G(K) 68-	.	.	.	.	.	.	STRIP CHART
• MILFORD	A .3826N 11301W1525.	S(F)	.	.	.	.	.	.	.

## USA - VERMONT

	2	3.	4	5	6	7.	8.	9.	10
• BURLINGTON	A .4428N 7309W 111.	I(EN) 78-	.	.	.	.	.	.	.
•	.	G(E1) 62-	D:SU1, MO:SU2	D .D	.	.	.	.	.
•	.	G(E1) 78-	.	.	.	.	.	.	.
•	.	103. S(F) 64-	D:US1, MO:SU1-2	.	.	.	.	.	.

## USA - VIRGINIA

	2	3.	4	5	6	7.	8.	9.	10
• MOUNT WEATHER	A .3904N 7753W 537.	I(A) 07+11	.	.	.	.	.	.	.
•	.	I( ) 11+14	US3	.	.	.	.	.	.
•	.	G(CL) 12-14	US3	.	.	.	.	.	.
• STERLING	A .3859N 7728W 86.	I(EN) 78-	.	.	.	.	.	.	.
•	.	G(E1) 60-	D:US1-SU1, SU2-H	.	.	.	.	.	.
•	.	G(E1) 60-	D:US1-SU1, SU2	.	.	.	.	.	.
•	.	G(E1) 78-	.	.	.	.	.	.	.
•	.	D( )	.	.	.	.	.	.	.
• GLOUCESTER POINT	A .3715N 7630W 18.	G(E1) 71-	D:US1	D .D	.	.	.	.	.
• HAMPTON	AKA .3704N 7608W	G(S) 74-	.	.	.	.	.	.	CHARTS
• CAMP LEE	.	G( )	US4	.	.	.	.	.	.
• WALLOPS ISLAND	AL.	G( )	.	.	.	.	.	.	.
• WARRENTON	AM.	G(HC) 75-	.	.	.	.	.	.	.
• RICHMOND	A .3730N 7720W 54.	S(F) 61-	.	.	.	.	.	.	.
• LYNCHBURG	A .3720N 7912W 284.	S(F) 62-	.	.	.	.	.	.	.
• NORFOLK	A .3654N 7612W 9.	S(F) 63-	.	.	.	.	.	.	.

## USA - WASHINGTON

	2	3.	4	5	6	7.	8.	9.	10
• FRIDAY HARBOR	A .4832N 12301W 5.	G(E1) 32-42	D:US2	.	.	.	.	.	.
• SEATTLE U. OF WASH.	A .4739N 12218W 68.	I(EN) 78-	D:US1	D .D	.	.	.	.	ON TAPE 52-74
•	.	G(E1) 50-74	.	.	.	.	.	.	.
•	.	G( ) 78-	.	.	.	.	.	.	.
• SPOKANE	A .4737N 11731W 726.	G(E1) 49-65	D:US1-SU1, SU2-D	D .D	.	.	.	.	ON TAPE 52-
•	A .4738N 11732W 718.	G(E1) 65-	D:US1, SU2	D .D	.	.	.	.	.
•	.	S(F) 62-	.	.	.	.	.	.	.
• SEATTLE-TACOMA	A .4727N 12218W 137.	G(E1) 49-67	D:US1-SU1, SU2-H	H .D	.	.	.	.	ON TAPE 52-
•	.	G(E1) 67-73	D:US1-SU1, SU2	D .D	.	.	.	.	.
•	.	G(E2) 73-	D:US1-SU1	D .D	.	.	.	.	.
•	.	D( )	.	.	.	.	.	.	.
•	.	S(F) 60-	SU1-2	.	.	.	.	.	.
• LINO	AV .4700N 11833W	G( ) 74-	.	.	.	.	.	.	.
• PULLMAN	AV .4646N 11712W 775.	G(E8) 74-	.	.	.	.	.	.	.
• PULLMAN	A .4644N 11710W 786.	G(E1) 55-73	D:US1	D .D	.	.	.	.	ON TAPE 55-70
• HANFORD	AT .4635N 11913W 223.	I(C) 11-	.	.	.	.	.	.	.
•	.	G(E1) 53-	D:US1	D .D	.	.	.	.	CHART
• RICHLAND	AT .4634N 11935W 223.	G(E1) 53-	D:US1	D .D	.	.	.	.	ON TAPE 65-
• NORTH HEAD	AW .4619N 11916W 114.	.	D:US1	D .D	.	.	.	.	.
• PROSSER	A .4618N 12405W 221.	G(E1) 49-53	D:US1	D .D	.	.	.	.	ON TAPE 52-53
•	A .4615N 11945W 255.	G(E1) 53-74	D:US1	D .D	.	.	.	.	.
• WEST ROOSEVELT	AX .4612N 11945W 206.	G(E) 65-	.	.	.	.	.	.	.
• QUILLAYATTE	AU.	G(E8) 76-	.	.	.	.	.	.	STRIP CHART
• WALLA WALLA	A .4757N 12433W 62.	S(F)	.	.	.	.	.	.	.
•	A .4602N 11820W 300.	S(F) 62-	.	.	.	.	.	.	.

## USA - WASHINGTON D.C.

	2	3.	4	5	6	7.	8.	9.	10
• WASHINGTON D.C. AM. UNIV.	A .3856N 7705W 137.	I( ) 14*	.	.	.	.	.	.	.
•	.	127. I( ) 14-40	US2	.	.	.	.	.	.
•	.	127. I( ) *40	.	.	.	.	.	.	.
•	.	121. G(R) 14-	US2	D .D	.	.	.	.	.
•	.	137. G(CL) 14-22	US2	D .D	.	.	.	.	.
•	.	137. G( ) 22-	US2	D .D	.	.	.	.	.
•	.	137. G(E1) 42-53	D:US1-2	D .D	.	.	.	.	.
• WASHINGTON D.C. WBO	A .3854N 7703W 46.	I(KA) 01+14	.	.	.	.	.	.	.
•	.	36. I(KA) 03-10	.	.	.	.	.	.	.
•	.	46. I(C) 54*59	.	.	.	.	.	.	.
•	.	• G(R) 09-14	.	.	.	.	.	.	.
•	.	• G(CL) 09-12	.	.	.	.	.	.	.
•	.	• G(E1) 50-58	.	.	.	.	.	.	.
•	.	• S(F) 58-	.	.	.	.	.	.	.
• WASHINGTON D.C. (S.I.)	AB .3853N 7702W 10.	I(C) 02-	US4	.	.	.	.	.	.
•	.	• G(E2) 68-72	US6	.	.	.	.	.	.

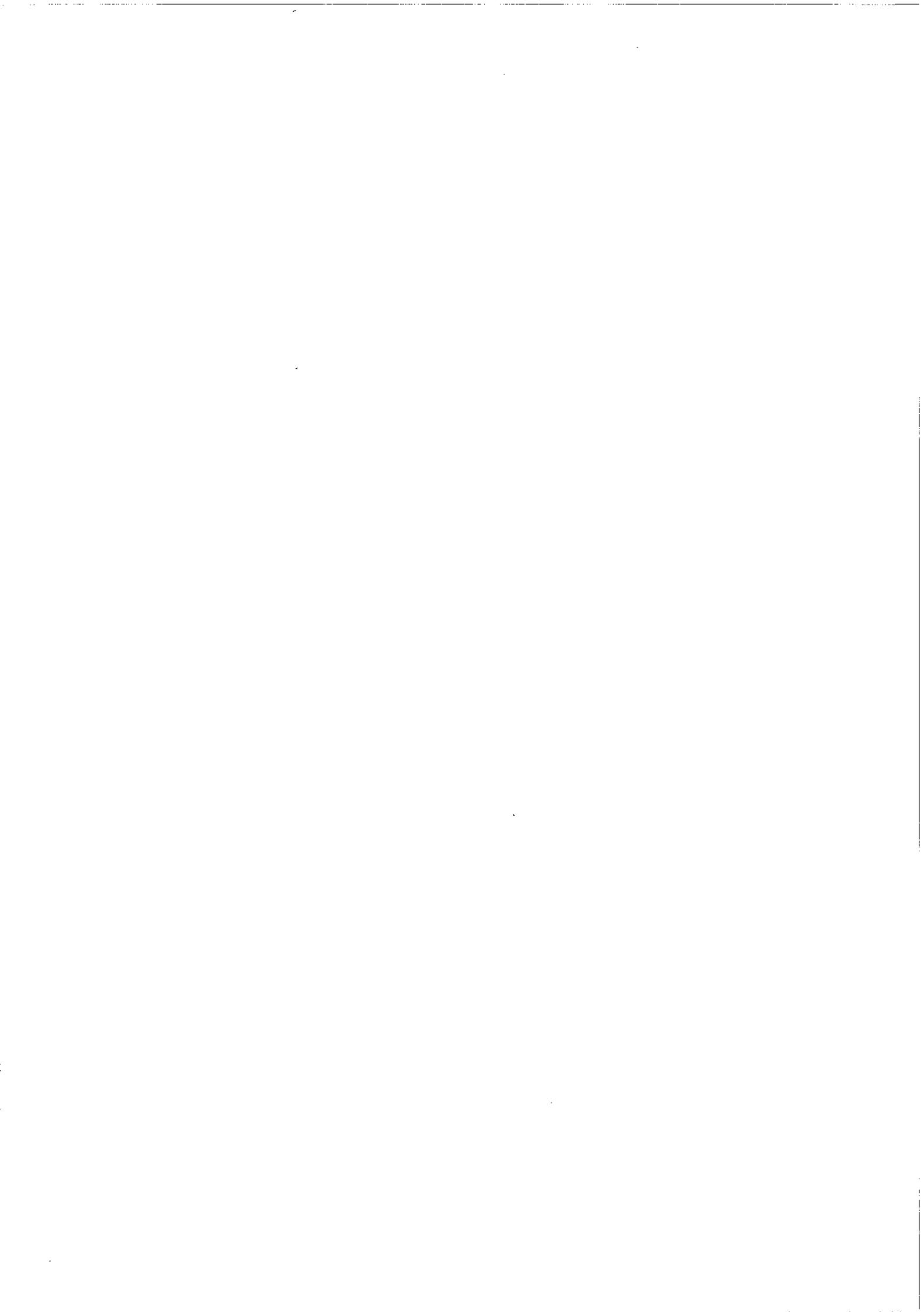
	2	3.	4	5	6	7.	8.	9.	10
PARSONS	.F	.3906N	7939W	509. G(K)	65+72-			M	.STRIP CHART
TRAPP	.A	.3903N	7750W	226. I(SD)	09+09				
PARKERSBURG	.A	.3916N	8134W	193. S(F)	60-				

## USA - WISCONSIN

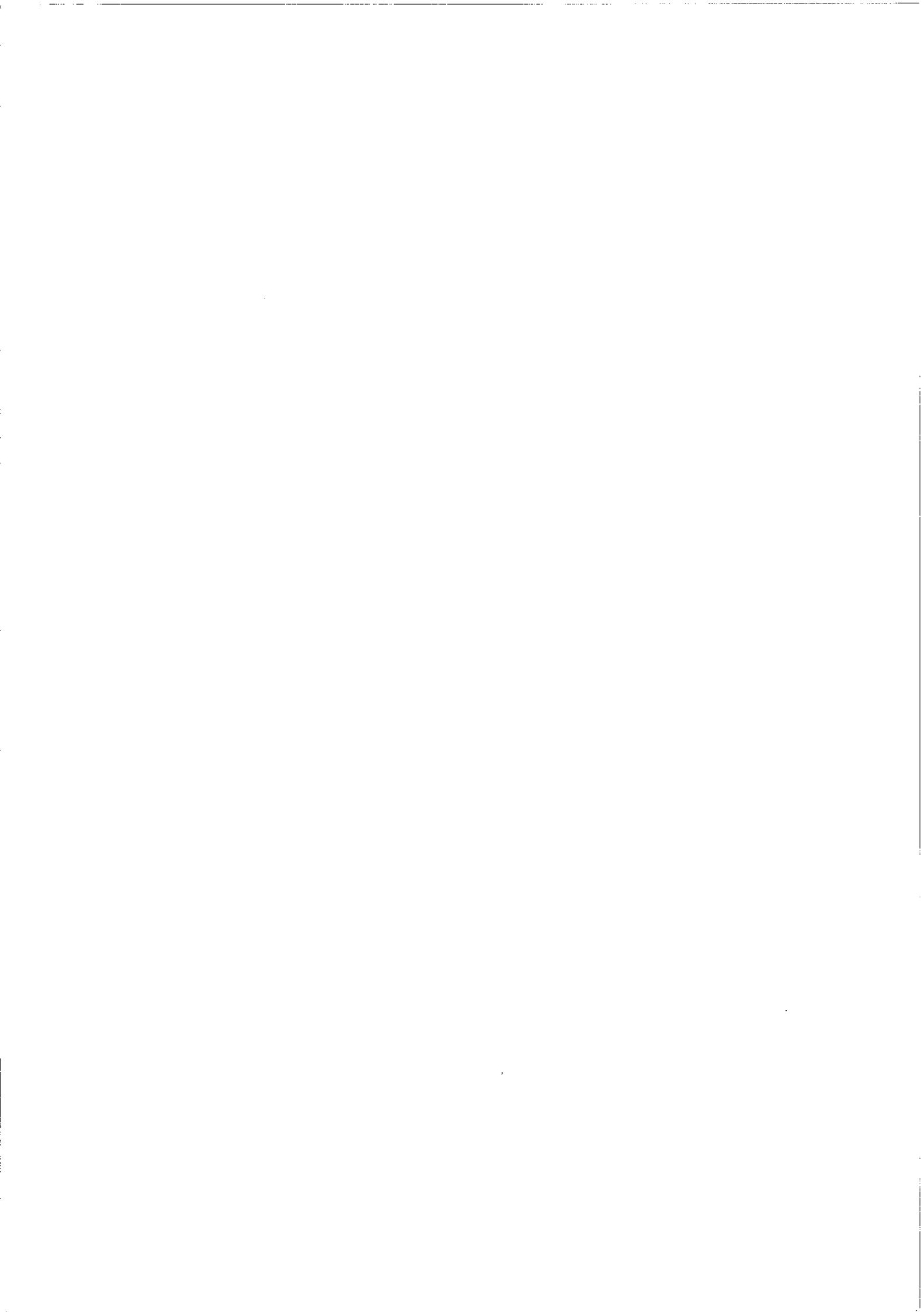
	2	3.	4	5	6	7.	8.	9.	10
MADISON	.A	.4309N	8924W	297. I(C)	11+47	US2			
	.	.4309N	8924W	297. I(E)	47+53	US1			
	.	.4308N	8920W	271. I(E)	53*	US1			
	.	.	.	I(EN)	78-				
	.	.4309N	8924W	297. G(C)	11+47	US2	H		
	.	.4309N	8924W	297. G(E1)	47+53	D:US1-2	H H	ON TAPE 52-	
	.	.4308N	8920W	271. G(E1)	53-	D:US1-SU1,	D,H,H		
	.	.	.	G(C)	78-	MO:SU2			
	.	.	.	G(C)	77-				
GREEN BAY	.A	.4429N	8808W	213. S(F)	62-	MO:SU1-2			
MILWAUKEE	.A	.4257N	8754W	210. S(F)	63-				

## USA - WYOMING

	2	3.	4	5	6	7.	8.	9.	10
LANDER	.A	.4248N	10843W	1699. I(EN)	75-				
	.	.	.	G(E1)	49-	D:US1-SU1,	D D	DN TAPE 52-	
	.	.	.	G(C)	78-	MO:SU2			
	.	.	.	S(F)	63-	MO:SU1-2			
ROCK SPRINGS	.BB	.4140N	10845W	2090. I(MA)	71*		10M.		INSTANTANEOUS
	.	.	.	D(MK2)	71*		10M.		
LARAMIE	.A	.4118N	10534W	2211. G(E1)	57-	D:US-SU1	D,H,D		
	.	.	.	I(EN)	78-				
	.	.	.	G(E2)	76-		H		
	.	.	.	G(E2)	78-		H		
	.	.	.	G(XE2)	78-		H		
SHERIDAN	.A	.4446N	10658W	1202. S(F)	63-		H		
CHEYENNE	.A	.4109N	10449W	186. S(F)	63-		H		



REGION V  
SOUTH WEST PACIFIC



	2	3.	4	5	6	7.	8.	9.	10
DARWIN	A 1228S 13050E	15.	G(R) 57-68,70-71	MO:SU2	D .	H .	13 .		
			G(E) 68-74	MO:SU2	30M.				
			S(C) 67-73	MO:SU2	H .				
			G(K) 74-76-		30M.				
COASTAL PLAINS,N.T.	B 1236S 13120E		S(C) 65-67		D .				
			G(K) 70-72		H .				
KATHERINE,N.T.	B 1428S 13218E		G(K) 68-		D .				
KIMBERLEY RESEARCH,W.A.	B 1547S 12842E		G(K) 70-		D .				
WILLIS IS.	A 1618S 14959E	8.	G(B) 83-74-77		BCM.		7 .		
MAREeba,QLD.	C 1701S 14528E		G(K) 72-75		D .				
HALL'S CREEK	A 1814S 12740E	425.	G(E) 69-		30M.				
			S(C) 70-		H .				
TOWNSVILLE AIRPORT	A 1915S 14646E	6.	G(R) 53-68,71-	MO:SU2	D .	H .	24 .		
			S(C) 57-	MO:SU2	H .				
TOWNSVILLE	B 1919S 14646E		G(K) 71-		H .				
			D(K) 78-		H .				
			D(K) 78-		H .		20 DEGREES		
PORT HEDLAND	A 2023S 11837E	7.	G(E) 68-		30M.		24 .		
			D(E) 71-		3CM.				
ROCKHAMPTON	A 2323S 15029E	8.	G(E) 73-		30M.		24 .		
			D(E) 74-		3CM.				
LONGREACH	A 2326S 14416E	190.	G(E) 68-		10M-30M.		7 .		
			G(R) 71-		D .				
EMERALD,QLD.	D 2326S 14609E		G(R) 67-69		D .				
ALICE SPRINGS	A 2349S 13353E	542.	G(R) 53-71	MO:SU2	D .		24 .		
			G(E) 68-	MO:SU2	30M-30M.				
			D(E) 74-		30M-30M.				
			S(C) 54-		H .				
GLADSTONE	B 2351S 15116E	75.	G(C) 64-66	MO:SU2					
NAMBOUR	D 2638S 15256E	30.	G(C) 73-	MO:SU2	D .				
			S(C) 65-		H .				
SAMFORD,QLD.	B 2722S 15253E		G(C) 71-		D .				
GOONADATTA	A 2733S 13527E	113.	G(E) 69-		3CM-30M.		13 .		
			S(C) 51-		H .				
GERALDTON	A 2348S 11442E	34.	G(E) 58-		3CM-30M.				
			D(E) 71-		30M-30M.				
WOLLONGBAR			G(K) 72-76		D .				
			R(K) 75-		H .				
			Q(FU72-76)		D .				
			S( )		H .				
COOPER PEDY,S.A.	U 2902S 13442E		G(K) 47-58		D .				
			G(K) 67-73		H .				
FORREST	A 3050S 12806E	160.	G(E) 69-		3CM-30M.		21 .		
KALGOORLIE	A 3047S 12128E		G(E) 79-		3CM-30M.				
			D(E) 79-		3CM-30M.				
WOOMERA	A 3109S 13648E	165.	G(E) 68-		3CM-20M.		19 .		
			S(C) 51-		H .				
PEARCE	A 3141S 11601E	40.	G(E) 72-75		30M-30M.		12 .		
			D(E) 72-75		3CM-30M.				
MURESK,W.A.	B 3144S 11641E	166.	G(K) 56-72	MO:SU2	H .				
			G(C) 76-	MO:SU2	D .				
			S(C) 62-76	MO:SU2	H .				
PERTH-GUILDFORD	A 3156S 11558E	12.	G(R) 53-75	MO:SU2	D .		24 .		
			G(E) 75-		3CM-30M.				
			D(E) 75-		3CM-33M.				
WILLIAMTOWN	A 3249S 15150E	3.	G(R) 53-71		D .				
			G(E) 68-	MO:SU2	3CM-30M.		24 .		
			S(C) 57-	MO:SU2	H .				
KULNURRA,W.S.W.	L 3314S 15112E		G(K) 70-71		D .				
ORANGE	A 3320S 14904E	930.	G(C) 77-		D .				
			S(C) 76-		H .				
KENSINGTON	F 3354S 15108E		G(K) 69-		H .				
			D(K) 69-		H .				
MILDURA	A 3414S 14205E	50.	G(E) 69-		3CM-30M.		22 .		
			D(E) 71-		3CM-33M.				
GRIFFITH,N.S.W.	U 3417S 14601E	125.	G(K) 67-	D:SU1,MO:SU2	H .				
			G( ) 75		H .		30 DEGREES		
			G( ) 77-		H .		34 DEGREES		
			D(K) 67-73		H .				
			D( ) 76-		H .		34 DEGREES		
			S(C) 62-	MO:SU2	H .				
ALBANY	A 3457S 11748E	68.	G(E) 68-		3CM-30M.		22 .		
			D(E) 71-		3CM-30M.				
WAGGA WAGGA	A 3507S 14728E	218.	G(E) 68-		3CM-30M.		21 .		
			D(E) 72-		3CM-30M.				
			S(C) 65-		H .				
CANBERRA	A 3516S 14907E	564.	G(C) 76-		H .				
			S(C) 74-		H .				
WAMBROOK	A 3611S 14853E	1311.	G(C) 65-	MO:SU2					
MT. GAMBIER	A 3746S 14046E	63.	G(E) 68-		3CM-30M.				
			D(E) 71-		3CM-3CM.				
			S(C) 66-		H .				
HAMILTON	A 3747S 14204E	205.	G(C) 74-		H .				
			S(C) 65-		H .				
MELBOURNE	A 3750S 14458E	38.	G(R) 53-67,70-76	MO:SU2	D .		8 .		
			G(E) 67-		3CM-30M.				
			D(E) 69-74		3CM-30M.				
			S(C) 55-65		H .				
MOUNT MERCER	A 3750S 14353E		G(C) 78-		D .				
LAVERTON	A 3753S 14445E	14.	G(E) 68-	MO:SU2	3CM-30M.		22 .		
			D(E) 75-		3CM-30M.				
			S(C) 67-	MO:SU2	H .				
HIGHETT,VIC.	U 3757S 14502E		G(E) 66-		H .		ON TAPE 66-		
			G(E) 66-		H .		LAT. ANGLE		
			D(E) 56-		H .				
			D(E) 56-		H .		LAT. ANGLE		
ASPENDALE	U 3802S 14506E	5.	I(A)						
			I(SD)						
			I(LF) 65*						
			I( ) 68-						
			I(X,-)						
			G(K) 65-	D:SU1,MO:SU2	H .		INTERV.100NM		
			D(K) 67-		H .				
			Q( ,) 356-		H .				
			Q(FU68-	H:SU1,MO:SU2	H .				
			UV(CU67-		H .				
			S(C) 65-	MO:SU2	H .				
HOBART AIRPORT	A 4250S 14730E	8.	G(E) 67-		30M-30M.		24 .		
			D(E) 71-		30M-30M.				
			S(C) 68-		H .				
MACQUARIE ISLAND	A 5430S 15857E	6.	G(E) 68-		30M-30M.		2 .		
			D(E) 71-		30M-30M.				
			S(C) 48-53,64-		H .				

	2	3.	4	5	6	7.	8.	9.	10
• NANDI	•	•	•	• 1746S 17721E 15. G(E1) 57- • S(C)	• D:SU1, MO:NZ1, • MO:SU1-2	• H	• 24	• MO:SU2	•

## INDONESIA

	2	3.	4	5	6	7.	8.	9.	10
• MEDAN/POLONIA	•	• 334N 9841E 25. G(E) • S(C)	•	•	•	•	•	• 20	•
• MENADO	• A	• 132N 12455E 26. G(E) • S(C)	•	•	•	•	•	• 24	•
• SENTANI/DJAJAPURA	• B	• 234S 14029E 96. G(K) 57- • S(C) 56-	•	•	•	•	•	• 16	•
• PALEMBANG/TALANGBETUTU	•	• 254S 10442E 10. G(E) • S(C)	•	•	•	•	•	• 24	•
• BANJARMASIN/SYAMSUDDIN	•	• 327S 11445E 20. G(E) • S(C)	•	•	•	•	•	• 24	•
• JAKARTA	• A	• 611S 10650E 25. G(K) 64-76 • G(E) • S(C)	•	•	• D:SU2	• H	•	• 24	•
• LEMBANG/BANDUNG	• A	• 650S 10737E 1. G(K) • S(C)	•	•	• D:SU2	•	•	• 7	•
• SEMARANG/ARMADYAN	•	• 659S 11023E 3. G(E) • S(C)	•	•	•	•	•	• 24	•
• MERAUKE/MOPAH	• A	• 323S 14023E 3. G(E) • S(C)	•	•	•	•	•	• 16	•
• DENPASAR/NGURAH-RAI	• A	• 640S 11513E 6. G(K) 78- • S(C)	•	•	• D:SU2	•	•	• 24	•
• KUPANG/PENFUI	• A	• 1009S 12336E 20. G(K) 72- • S(C)	•	•	• D:SU2	•	•	• 24	•

## JOHNSTON ISLAND

	2	3.	4	5	6	7.	8.	9.	10
• JOHNSTON ISLAND	•	• US-1644N 16931W 3. G(E) 74- • S(F) 62-	•	• D:US1-SU1	• H	• H	• 24	•	•
•	•	•	•	• D:SU1	•	•	•	•	•

## MALAYSIA

	2	3.	4	5	6	7.	8.	9.	10
• KOTA BARU	• A	• 610N 10217E 5. G(K) • S(C)	•	• D:SU1	• H	• H	• 24	•	•
• KUALA TRENGGANU	• A	• 520N 10308E 35. G(K) • S(C)	•	• MO:SU1	•	• H	•	• 24	•
• PENANG	• A	• 513N 10016E 3. G(K) • S(C)	•	• D:SU1	• H	• H	• 48	•	•
• IPOH	• A	• 434N 10106E 39. G(K) • S(C)	•	• MO:SU1	•	• H	• H	• 24	•
• CAMERON HIGHLANDS	• A	• 425N 10123E 1471. G(K) • S(C)	•	•	•	• H	• H	• 12	•
• SITAWAN	• A	• 413N 10042E 7. G(K) • S(C)	•	•	•	• H	• H	• 24	•
• KUALA LUMPUR	• A	• 307N 10133E 17. G(K) • S(C)	•	• D:SU1, MO:SU2	• H	• H	• 48	•	•
• MERSING	• A	• 227N 10350E 45. G(K) • S(C)	•	• MO:SU1-2	•	• H	• H	• 7	•
• MALACCA	• A	• 216N 10215E 6. G(K) • S(C)	•	•	•	• H	• H	• 24	•
• KLUANG	• A	• 201N 10319E 88. G(K) • S(C)	•	•	•	• H	• H	• 24	•

## MARSHALL ISLANDS

	2	3.	4	5	6	7.	8.	9.	10
• KWAJALEIN ISLAND	• US	• 843N 16744E 3. G(E) 49-52	•	•	•	•	•	•	• ON TAPE 74-75
• MAJURO ISLAND	• US	• 844N 16744E 3. G(E) 52- • S(F) 53-	•	• D:SU1	• H	• D	• 20	•	•
•	•	•	•	• MO:SU1	•	•	•	•	•

## NEW ZEALAND

	2	3.	4	5	6	7.	8.	9.	10
• KAITAIA	• A	• 3504S 17317E 80. G(R) 69- • S(C)	•	• MO:NZ1	• D	• D	• 21	•	•
• PUKEKURA	• A	• 3540S 17405E 101. G(R) 66-75	•	• MO:NZ1	• D	• D	•	•	•
• LEIGH	• A	• 3616S 17448E 27. G(R) 72-	•	• MO:NZ1	• D	• D	•	•	•
• PURUKOHOKOHU	• A	• 3626S 17613E 631. G(R) 72-77	•	• MO:NZ1	• D	• D	•	•	•
• WHENUAPAI	• A	• 3647S 17438E 26. G(E1) 54-69	•	• MO:NZ1-SU2	• H	• D	• 15	•	•
• AUCKLAND AIRPORT	• A	• 3701S 17448E 6. G(E1) 69- • S(C)	•	• SU2	•	•	•	•	•
• RUKUHIA	• A	• 3750S 17518E 66. G(R) 60- • S(C)	•	• MO:NZ1-SU2, D:SU1	• D	• D	• 24	•	•
• ROTORUA AERODROME	• A	• 3807S 17619E 287. G(R) 69- • S(C)	•	• MO:NZ1	• D	• D	• 20	•	•
• OTUTIRA	• A	• 3838S 17549E 579. G(R) 67-75	•	• MO:NZ1	• D	• D	•	•	•
• GISBORNE AERODROME	• A	• 3840S 17759E 4. G(R) 69- • S(C)	•	• MO:NZ1	• D	• D	• 20	•	•
• MAKAHU SADDLE	• A	• 3917S 17624E 974. G(R) 69-75	•	• MO:NZ1	• D	• D	•	•	•
• OHAKEA	• A	• 4012S 17523E 48. G(E1) 54- • S(C)	•	• MO:NZ1-SU2, D:SU1	• D	• D	• 24	•	•
•	•	•	•	• MO:SU1-2	•	•	•	•	•

	2	3.	4	5	6	7.	8.	9.	10
LEVIN	A	4039S 17516E	46. G(E1) 71-	S(C)	MO:NZ1	H	D		
PAUTAHANUI	A	4107S 17454E	30. G(R) 76-		MO:NZ1	D	D		
TAITA	A	4111S 17458E	65. G(E1) 66-68		SU2				
NELSON AERODROME	A	4117S 17314E	2. G(R) 69-	S(C)	MO:NZ1	D	D	22	
KELBURN-WELLINGTON	A	4117S 17446E	125. G(E1) 54-		MO:NZ1-SU2,D:SU:H	D	24	020NE	
			D(E1) 77-	S(C)	MO:NZ1	H	D		
KAIKOJRA	A	4225S 17342E	99. G(R) 69-		MO:SU1-2				
HOKITIKA AERODROME	A	4243S 17059E	39. G(R) 69-		MO:NZ1	D	D	16	
			S(C)		MO:NZ1	D	D	20	
SKI BASIN	A	4303S 17141E 1154	G(R) 69-74		MO:NZ1	D	D		
CRAIGIEBURN	A	4309S 17143E	91. G(R) 64-		MO:NZ1	D	D	1	
CHRISTCHURCH	A	4330S 17233E	30. G(E1) 60-		MO:NZ1-SU2,D:SU:H	D	24		
			S(C)		MO:SU1-2				
WINCHMORE	A	4348S 17148E	160. G(R) 60-	S(C)	MO:NZ1	D	D		
MT. JOHN	A	4359S 17028E 1027	66-	S(C)	MO:NZ1-SU2,D:SU:H	D	5		
					MO:SU1-2				
ALEXANDRA	A	4516S 16923E	141. G(R) 65-		MO:NZ1	D	D	1	
			S(C)						
DUNDEEN AIRPORT	A	4556S 17012E	1. G(R) 69-	S(C)	MO:NZ1	D	D	24	
INVERCARGILL AERODROME	A	4625S 16820E	0. G(E1) 54-	S(C)	MO:NZ1-SU2,D:SU:H	D	24		
					MO:SU1-2				

## PAPUA NEW GUINEA

	2	3.	4	5	6	7.	8.	9.	10
RABAUL	A	0413S 15215E	13. G(R) 55-63,73	S(C)	MO:SU2	D		14	
PORT MORESBY	A	929S 14709E	41. G(E) 65-	D(E) 66-	MO:SU2	H		48	
			S(C)	57-	MO:SU2	H			

## PHOENIX ISLANDS

	2	3.	4	5	6	7.	8.	9.	10
CANTON ISLAND	US	240S 17143E	4. G(E1) 43-67		MO:SU2	H	D	10N TAPE 52-67	

## PHILIPPINES

	2	3.	4	5	6	7.	8.	9.	10
BAGUIO CITY	A	1625N 12036E 1482	G(K) 71-	S(C)	H:PH1	H	H	8	
HACIENDA LUIS STA	D	1527N 12038E	30. G(C)	S(C)	H:PH1	H			
			S(C)		H:PH1	H			
MANILA	B	1436N 12105E	1( ) 72-						
QUEZON CITY	A	1436N 12104E	70. G(E1) 60-70		D:SU1	H			
			G(K) 70-	S(C)	H:PH1,D:SU1	H			
CUYAMDAY	A	1430N 12117E	4. G(R)	S(C)	H:PH1	H			
LOS BANOS	F	1413N 12115E	23. G(E1)	S(C)	H:PH1	H			
CATARMAN	C	1231N 12440E	4. G(K) 72-	S(C)	H:PH1	H	H	8	
VICTORIAS MILLING CO.	A	1053N 12304E	10. G(JP) 71-	S(C)	H:PH1	H			
KADACAN	E	0726N 12413E	20. G(C)	S(C)	H:PH1	H			
LAOAG CITY	A	1011N 12032E	2. S(C)	S(C)	H:PH1	H			
TUGUEGARAO	A	1737N 12103E	24. S(C)	G(E2) 76-	H:PH1	H			
AMBULONG	A	1405N 12103E	10. S(C)	G(E2) 76-	H:PH1	H			
ZAMBOANGA CITY	A	0654N 12204E	6. S(C)	S(F)	H:PH1	H			

## SAMOA

	2	3.	4	5	6	7.	8.	9.	10
APIA	A	1348S 17147W	2. G(R) 75-	S(C)	MO:NZ1	D		7	
PAGO PAGO	US	1415S 17343W	9. I(EH) 76-	G(E2) 76-					
			G(E2) 76-	G(XE2) 76-				24	GLA,
			S(F)	S(F)					GG22,OG1,RC8

## SINGAPORE

	2	3.	4	5	6	7.	8.	9.	10
SINGAPORE AIRPORT	A	122N 10355E	32. G(R) 85-	S(C)	D:SU1,MO:SU2			24	
					MO:SU1-2				

## TIMOR

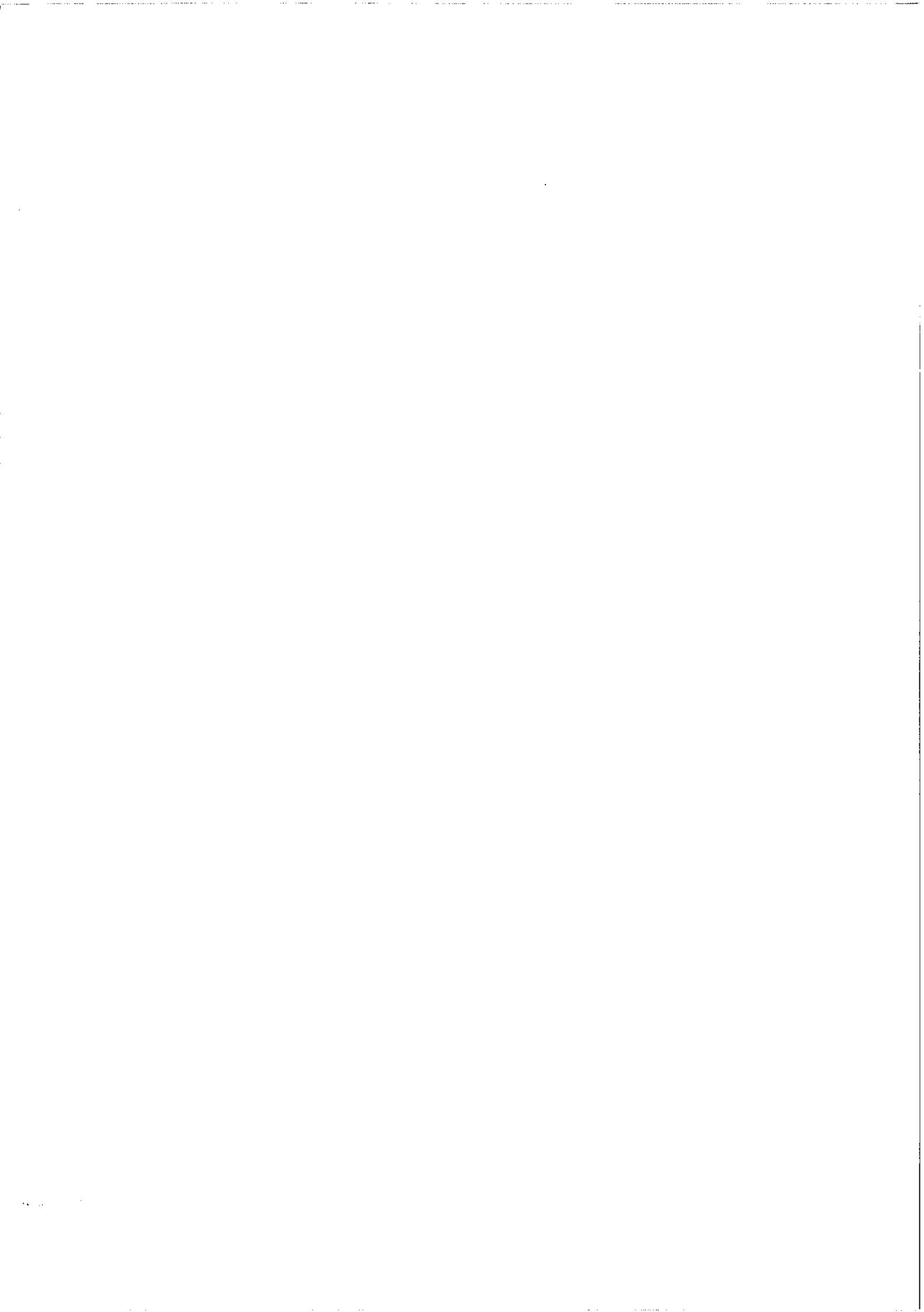
	2	3.	4	5	6	7.	8.	9.	10
DILI	A	835S 12535E	4. I( ) *	G(R) -6?	*P1			11	061,RG2
			G(E) 70-	S(C)	D:P1-SU1,MO:SU2				
					D:P1-SU1,MO:SU2				
					MO:P1-SU1-2				

## WAKE

	2	3.	4	5	6	7.	8.	9.	10
WAKE ISLAND	US	1917N 16639E	4. G(E) 50-	S(F)	D:SU1,MO:SU2	H	D	24	HOURLY ON TAPE
					MO:SU1-2				FROM 74-



**REGION VI  
EUROPE**



	2	3.	4	5	6	7.	8.	9.	10
SHKODER		A 4206N	1932E	43 G(R) 76- R(K) 76- S(C)		D			
PESHKOPI		A 4141N	2026E	657 G(R) 76- S(C)		D			
TIRANA		A 4120N	1947L	89 I(Y) G(R) 65-71 G(K) 71- D(Y) R(K) 71- S(C)		D			
FIER		A 4044N	1931E	12 G(R) S(C)		D			
ERSEKE		A 4020N	2041L	1030 G(R) 68- S(C)		D			
XARRE		A 3943N	2003E	4 G(R) 71-75 G(K) 75- R(K) 75- S(C)		D			

AUSTRIA

	3.	4.	5.	6.	7.	8.	9.	10.
RETZ	A 4846N	1558E 243.	G(R) 57-78 G(S) 78- S(C) 48-	D:A1,MO:A2 H				
DUERNSTEIN	C 4624N	1530E 20.	G(S) 59-67,74- G(S) 60-69+74-	H:A1,MO:A2 H				
ASCHACH	B 4623N	1402E 282.	G(S) 53- S(C)	H:A1,MO:A2 H				
ALTENWOLRTH	A 4622N	1551E 195.	G(S) 79- D(S) 66- Q*(FU)67- S(C) 53- R(S) 64-	H:A1,D:SU1, H				
OBERSIEBENBRUNN	A 4616N	1643E 150.	G(S) 56-60,64- G(S) 48-	H:A1,D:SU1, H				MO:A2-SU2
				H:A1-SU1, SU2 H				GRASS
WIEN-HOHE WART	A 4515N	1622E 202.	I(A) I(SD) I(MI) I(LF) *	H:A1,D:A2-SU1, H				
			G(S) 48- G(R) 32-38-47 D(S) 49-74 Q*(FU)63-66 E(BL)	SU2 H:A1,D:A2 H				061,RG2 061,RG2,QUA.
YBBS-PERSENDEB	B 4511N	1504E 228.	S(C) 1E80- G(S) 56-66,67-	D:A2 D:A2,MO:SU1-2 H:A1,MO:A2				
PETZENKIRCHEN	A 4609N	1509E 252.	G(R) 48-63 G(S) 68-72	D:A1,MO:A2 H				
STEYR	A 4604N	1436E 309.	S(C) 46- D(S) 59-63	H:A1,D:SU1, H				MO:A2-SU2
NEUSIEDL AM SEE	A 4757N	1651E 116.	S(C) 56- G(S) 50-53	MO:A2-SU1-2 H:A1,MO:A2				
GMUNDEN	D 4755N	1347E 425.	S(C) 26-30-41+48- G(S) 56-70,73-	H:A1,MO:A2 H				
LUNG AM SEE	A 4751N	1504E 615.	S(C) 29- G(R) 37-40 G(S) 42-48	MO:A2 H:A1,MO:A2-SU2 D:SU1				
			S(C) 27-	H				
FEUERKOGEL	A 4749N	1344E 1598.	G(S) 64- S(C) 30-	H:A1,MO:A2-SU2 D:SU1, MO:A2-SU1-2				
SALZBURG	A 4748N	1300E 435.	I(LF) * G(S) 57- D(S) 70- R(S) 70-	H: H:A1,MO:A2-SU2 H: H:A1,MO:A2				061,RG2-8,QUA., D:SU1
PUCHBERG	A 4747N	1554E 590.	G(S) 63-67 S(C) 57-66	MO:A2-SU1-2 D:A1,MO:A2				
SEMMERING	A 4739N	1550E 985.	G(R) 57-66 S(C)	D:A1				
ADMONT	F 4735N	1427E 641.	G(R) 48-55 S(C) 38-55	MO:A2				
BAD MITTERNDORF	A 4733N	1357E 203.	G(S) 77- G(S) 57-					
KRIPPENSTEIN	A 4731N	1342E 2050.	S(C) 57- G(S) 57-	H:A1,MO:A2 MO:A2				
MONICHKIRCHEN	A 4731N	1603E 955.	G(S) 57-70 S(C)	D:A1,MO:A2-SU2 MO:SU1-2				061,SU1
IRDNING-GUMPENSTEIN	F 4730N	1406E 710.	G(R) 55-76 S(C) 54-	D:A1,MO:A2 MO:A2				
FUSSACH	A 4729N	0940E 400.	G(S) 61-64 S(C)	H:A1,MO:A2 H				
PERTISAU	A 4726N	1142E 933.	G(R) 53-69 S(C)	D:A1,MO:A2				
ST.VEIT-GRAFENHOF	A 4719N	1310E 766.	G(R) 56-60 S(C) 25-27-37+40	D:A1,MO:A2				
FELDKIRCH	A 4716N	0936E 439.	G(S) 65-68,79-					
INNSBRUCK	E 4716N	1124E 578.	I(MI) I(LF) G(R) 50-57 G(S) 58-					061,RG2-8
			D(S) 74- Q*(SH)	D:SU1				
			S(C) 1898- G(R) 43- G(S) 60- E(BL)	MO:A2-SU1-2 D H:A1,D:A3				
RINN	A 4715N	1129E 900.	G(R) 43- G(S) 57- G(S) 60- E(BL)	MO:A2 H: H				
PATSCHERKOFEL	A 4713N	1127E 2045.	S(C) 43- G(S) 59-64 S(C) 3544-43+46-	MO:A2-3 H:A1,MO:A2				13
SONNBLICK	A 4703N	1575E 3106.	I(LF) * G(R) 37-46 G(S) 57- G(J/S)					061,RG2-8,QUA.
			D(S) 68-73,76- S(C) 1887-	H: H:A1,MO:A2 MO:A2-SU1-2				
HOCHSERFAUS	A 4702N	1036C 1817.	G(R) 67-75	A4				
GRAZ-THALERHOF	A 4659N	1527E 342.	G(S) 62- S(C) 69-	H:A1,MO:A2-SU2 MO:A2-SU1-2				D:SU1
OBERGURGL	A 4652N	1102E 1950.	G(S) 57-59 S(C) 53-					060S
LIENZ	A 4649N	1247E 670.	G(S) 78- G(R) 31-44					
KLAGENFURT	A 4639N	1420E 448.	G(S) 57- S(C) 39-49,52-	A4 H:A1,MO:A2-SU2 MO:A2-SU1-2				D:SU1

## AUSTRIA

	2	3.	4	5	6	7.	8.	9.	10
•SCHOENFELD A.D.WILD	A .4846N	1524E	585. S(C)				H		
•SCHLAEGL	A .4838N	1358E	546. S(C)	69-			H		
•HOHENAU	A .4837N	1656E	155. S(C)				H		
•STIFT ZWETTL	A .4837N	1512E	531. S(C)				H		
•SCHLEINBACH	A .4835N	1626E	199. S(C)	68-			H		
•LANGENLOIS	A .4828N	1542E	210. S(C)	65-			H		
•OBERNEUKIRCHEN	A .4827N	1421E	685. S(C)	67-			H		
•KREMS A.D.DONAU	A .4825N	1536E	227. S(C)				H		
•MATZEN	A .4824N	1642E	189. S(C)	68-			H		
•REICHERSBERG	A .4820N	1323E	350. S(C)				H		
•PABNEUKIRCHEN	A .4820N	1450E	595. S(C)	70-			H		
•HOERSCHING	A .4814N	1411E	297. S(C)	60-			H		
•ENNS	A .4813N	1429E	260. S(C)				H		
•GALLSPACH	A .4812N	1349E	390. S(C)	66-			H		
•ASPACH	A .4811N	1318E	442. S(C)	69-			H		
•AMSTETTEN	A .4807N	1452E	339. S(C)				H		
•WOLFSSEGG	A .4806N	1340E	650. S(C)	64-			H		
•POYSDORF	A .4804N	1637E	218. S(C)	65-			H		
•KREMSMUNSTER	A .4803N	1408E	388. S(C)				H		
•BADEN	A .4801N	1614E	260. S(C)	65-			H		
•GROSSRAMMING	A .4753N	1431E	376. S(C)				H		
•MONDSEE	A .4752N	1321E	488. S(C)				H		
•WEYER	A .4752N	1440E	410. S(C)	68-			H		
•WIENER NEUSTADT	A .4748N	1616E	271. S(C)				H		
•MARIAZELL	A .4746N	1519E	875. S(C)	70-			H		
•BAD ISCHL	A .4743N	1337E	490. S(C)				H		
•BAD GOISERN	A .4735N	1337E	500. S(C)	67-			H		
•VILS	A .4734N	1036E	835. S(C)	65-			H		
•ABTENAU	A .4734N	1321E	710. S(C)	64-			H		
•BAD MITTERNDORF	A .4733N	1357E	803. S(C)	65-			H		
•AFLENZ	A .4733N	1514E	780. S(C)	67-			H		
•KIRCHBICHL	A .4731N	1205E	498. S(C)	69-			H		
•HANNENKAMM	A .4726N	1222E	1760. S(C)				H		
•JENGACH	A .4723N	1145E	530. S(C)	69-			H		
•BAD TATZMANSDORF	A .4720N	1614E	360. S(C)				H		
•SONNENHALM/ZELL AM SEE	A .4720N	1246E	1376. S(C)				H		
•SCHMITTERHOFHE	A .4720N	1244E	1964. S(C)				H		
•ZELL AM SEE	A .4719N	1248E	754. S(C)				H		
•RECHBERG	A .4716N	1526E	926. S(C)	70-			H		
•FELDKIRCH	A .4715N	0935E	439. S(C)				H		
•IMST	A .4714N	1045E	785. S(C)				H		
•ZELL AM ZILLER	A .4714N	1155E	585. S(C)				H		
•RAURIS	A .4713N	1300E	945. S(C)				H		
•SEMRIACH	A .4713N	1524E	720. S(C)	68-			H		
•OEDERWELZ	A .4712N	1417E	810. S(C)				H		
•SCHOECKL	A .4712N	1528E	1436. S(C)				H		
•STRADEGUND	A .4711N	1529E	725. S(C)				H		
•MARIAPFARR	A .4709N	1345E	1120. S(C)				H		
•UMHAUSEN	A .4708N	1056E	1036. S(C)	47-			H		
•STOLZALPE	A .4708N	1412E	1305. S(C)				H		
•ST.MICHAEL/LUNGAU	A .4706N	1338E	1096. S(C)	68-			H		
•NEUMARKT	A .4705N	1426E	842. S(C)	67-			H		
•GRAZ-UNI.	A .4705N	1527E	377. S(C)				H		
•LUENERSEE	A .4704N	0945E	197. S(C)	63-			H		
•PRUTZ	A .4704N	1040E	870. S(C)	67-			H		
•PIOESMES	A .4703N	1052E	1410. S(C)	62-			H		
•KOPS	A .4655N	1007E	1829. S(C)	63-			H		
•FLATTNITZ	A .4657N	1402E	1415. S(C)	70-			H		
•FRIESACH	A .4657N	1425E	636. S(C)				H		
•OBERVELLACH	A .4656N	1314E	778. S(C)	70-			H		
•NAUDERS	A .4654N	1030E	1360. S(C)	59-			H		
•BAD GLEICHENBERG	A .4653N	1554E	300. S(C)				H		
•VENT	A .4652N	1056E	1904. S(C)				H		
•LIENZ	A .4650N	1247E	668. S(C)				H		
•WOLFSBERG-RED.	A .4650N	1451E	440. S(C)				H		
•RADENTHEIN	A .4647N	1342E	685. S(C)				H		
•DIEB	A .4665N	1437E	1159. S(C)				H		
•KLOECH	A .4665N	1600E	340. S(C)	71-			H		
•DELLACH	A .4664N	1305E	620. S(C)				H		
•TECHENDORF	A .4663N	1318E	946. S(C)				H		
•WEISSENSEE-NEUSACH	A .4663N	1320E	941. S(C)	54-			H		
•ST.LORENZEN	A .4642N	1247E	1160. S(C)	63-			H		
•LAAS	A .4642N	1259E	800. S(C)				H		
•WEISSGRIGLACH	A .4641N	1315E	817. S(C)	66-			H		
•XANZELHOEHE	A .4641N	1354E	1526. S(C)				H		
•LEUTSCHACH	A .4640N	1528E	345. S(C)	64-			H		
•VELDEN	A .4637N	1402E	535. S(C)				H		
•VILLACH-SEEBAKH	A .4637N	1353E	492. S(C)	69-			H		
•VILLACHERALPE	A .4636N	1340E	2140. S(C)				H		
•FERLACH	A .4632N	1418E	470. S(C)				H		

## BELGIUM &amp; LUXEMBOURG

	2	3.	4	5	6	7.	8.	9.	10
•OOSTENDE	A .5112N	252E	5. G(E1)	68-	D:B2	30M	30M	24	
•LEMBERGE	A .5059N	346E	25. G(E1)	59-	D:B1				
•MELLE	A .5059N	350E	15. G(E8)	67-	D:B1				
•UCCLE	A .5048N	421E	105. I(CA)	65-	D:B1				
			I(CA)						
			I(CD)						
			I(C..)						
			I(LF)	51-	30M:B2	30M	30M	TBL	
			G(E1)	51-	D:SU1				
			G(D)	71-					
			G(X..)	76-					
			D(V..)	51-	30M:B2	30M	30M		
			Q+(FU)	71-	30M:B2				
			Q+(SF)						
			UV(CU)58-		30M:B2				
			E(C..)	70-					
			S(C..)	01-					
			S(C..)	51-	12H:81,30M:B2	30M	30M		
					30M:B2				
•VAL BENOIT	A .5037N	534E	90. G(E..)		D:B1				
•ODEIGNE	A .5015N	544E	640. G(E8)	68-	D:B2	30M	30M		
•SAINT-HUBERT	A .5002N	524E	558. G(E8)	62-	D:B1	H			
•DAVERDISSE	A .5001N	507E	295. G(E8)	73-	D:B2	30M	30M	24	
•LA CUISINE	A .4943N	514E	305. G(E8)	73-	D:B1	H			

	2	3.	4	5	6	7.	8.	9.	10
DORDEREN	.A .5118N	419E	3. S(C)	59-	.	.	.	.	.
MOL	.A .5113N	506E	40. S(C)	62-	.	H	.	.	.
SIJSELE	.A .5112N	319E	10. S(C)	60-	.	H	.	.	.
KLEINE BROGEL	.A .5111N	528E	55. S(C)	59-	.	H	.	48	.
WEVELGEM-MUNTE	.A .5056N	344E	25. S(C)	59-	.	H	.	3	.
GORSEM	.A .5049N	510E	40. S(C)	61-	.	H	.	.	.
JUPRELLE	.A .5043N	530E	5. S(C)	67-	.	H	.	.	.
COINTE	.A .5037N	534E	100. S(C)	67-	.	H	.	.	.
SART-TILMAN	.A .5036N	535E	242. S(C)	66-	.	H	.	.	.
CHIEVRES	.A .5035N	350E	62. S(C)	59-	.	H	.	.	.
GEMBLoux	.A .5035N	442E	165. S(C)	60-	.	H	.	.	.
BOTRANGE	.A .5030N	606E	693. S(C)	59-	.	H	.	6	.
GOSSELIES	.A .5028N	427E	187. S(C)	60-	.	H	.	.	.
DOURBES	.A .5006N	436E	224. S(C)	59-	.	H	.	.	.
CARLSBOURG	.A .4954N	505E	397. S(C)	62-	.	H	.	.	.
LUXEMBOURG	.A .4937N	612E	376. S(C)	60-	.	H	.	48	.

## BULGARIA

	2	3.	4	5	6	7.	8.	9.	10
PLEVEN	.A .4327N	2434E	131. G(R)	59-	D:SU1,MO:SU2	.	.	8	.
VARNA	.A .4312N	2755E	14. G(R)	58-	D:SU1,MO:SU2	.	.	8	.
SOFIA	.A .4241N	2320E	588. I(Y)	32-	SU1-2	.	.	8	.
	.	.	G(R)	55-	D:SU1,MO:SU2	.	.	.	.
	.	.	G(K)	.	.	.	.	.	.
	.	.	D(K)	.	.	.	.	.	.
	.	.	Q*(Y)	.	.	.	.	.	.
	.	.	Q+(Y)	.	.	.	.	.	.
	.	.	S(C)	.	MO:SU1-2	.	.	.	.
CHERNE VRAH	.A .4235N	2315E	2286. G(R)	54-	D:SU1,MO:SU2	.	.	.	.
	.	.	S(C)	30-	MO:SU1-2	.	.	.	.
CHIRPAN	.A .4212N	2528E	175. G( )	.	.	.	.	8	.
	.	.	S(C)	31-	.	.	.	.	.
KURDJALE	.A .4139N	2522E	240. G(R)	.	D:SU1,MO:SU2	.	.	8	.
	.	.	S(C)	31-	MO:SU1-2	.	.	.	.

## CYPRUS

	2	3.	4	5	6	7.	8.	9.	10
PRODROMOS FORESTRY C.	.A .3457N	3250E	1380. G(R)	59-	.	H	.	.	.
	.	.	S(C)	59-	.	H	.	.	.
LARNACA AIRPORT	.A .3453N	3338E	2. S(C)	.	.	.	.	24	.
PAPHOS	.A .3445N	3224E	9. S(C)	.	.	.	.	24	.

## CZECHOSLOVAKIA

	2	3.	4	5	6	7.	8.	9.	10
HRADEC KRALOVE	.A .5011N	1550E	286. I(A)	.	.	.	.	24	.OZONE
	.	.	I(N1) 54*	.	.	.	.	.	.061,RG2
	.	.	G(R) 53-63	.	D	.	.	.	.
	.	.	G(K) 63-	.	H	.	.	.	.
	.	.	G(BS) 56-75	.	D	.	.	.	.
	.	.	D(K) 64-	.	H	.	.	.	.
	.	.	R(K) 66-	.	H	.	.	.	.
	.	.	Q*(SH)66-70,76-	.	H:SU1,MO:SU2	.	.	.	.
	.	.	Q*(FU)70-76	.	H:SU1,MO:SU2	.	.	.	.
	.	.	UV(EU)71-74,77-	.	H	.	.	.	.
	.	.	S(C) 52-	.	MO:SU1-2	H	.	.	.
PRAHA	.A .5004N	1426E	262. G(K)	.	D:SU1,MO:SU2	.	.	.	.
	.	.	S(C)	.	MO:SU1-2	.	.	.	.
STRBSKE PLESO	.A .4907N	2046E	1330. G(K)	.	D:SU1,MO:SU2	.	.	5	.
	.	.	S(C)	.	MO:SU1-2	.	.	.	.
BRATISLAVA-KOLIDA	.A .4810N	1706E	289. I(LF) 54*	.	.	*	.	.	.061,RG2-8
	.	.	G(R) 57-64	.	D	.	.	.	.
	.	.	G(K) 65-	.	H	.	.	.	.
	.	.	G(BS) 52-	.	D	.	.	.	.
	.	.	D(K) 65-	.	H	.	.	.	.
	.	.	Q*(FU)73-76	.	H	.	.	.	.
	.	.	S(C) 54-	.	H	.	.	.	.

## DENMARK

	2	3.	4	5	6	7.	8.	9.	10
TRSTRUP	.B .5540N	1218E	28. G(K)	55-	D:DK3-SU1, SU2-H	10M.x	10M	INT. OF	.
	.	.	D(K)	67-	.	H	10M	TEMP,HUM,WIND	.
	.	.	R(K)	67-	.	H	10M	.	.
	.	.	Q(.,.255-	.	H:SU1, SU2	H	10M	.	.
	.	.	S(C)	.	MO:SU1-2	.	.	.	.
HJORTEGAER	.C .5546N	1232E	20. G(F) .60*37	.	.	H	H	24	.VERT,THROUGH
	.	.	.	.	.	H	H	.	WINDOW TOW,SUN
LENDUM	.A .5725N	1016E	69. S(C)	73-	MO:DK1	H	H	3	.
TYLSTRUP	.A .5711N	957E	13. S(C)	15-	MO:DK1	H	H	3	.
SILSTRUP	.A .5656N	839E	43. S(C)	76-	MO:DK1	H	H	3	.
EERSLEV	.A .5650N	844E	25. S(C)	50-61,62-	MO:DK1	H	H	3	.
ANHOLT	.A .5642N	1133E	6. S(C)	60-	MO:DK1	H	H	6	.
BØVBJÆRG	.A .5631N	807E	41. S(C)	91-44,61-	MO:DK1	H	H	3	.
STANGHEDE	.A .5623N	919E	63. S(C)	23-	MO:DK1	H	H	3	.
ODUM	.A .5618N	1008E	61. S(C)	60-	MO:DK1	H	H	3	.
HESSELØ	.A .5612N	1143E	18. S(C)	59-	MO:DK1	H	H	3	.
LYNGVIG FYR	.A .5603N	806E	6. S(C)	51-	MO:DK1	H	H	6	.
SPOTTTRUP STRAND	.A .5556N	1016E	1. S(C)	74-	MO:DK1	H	H	3	.
DOVLING	.A .5555N	856E	30. S(C)	74-	MO:DK1	H	H	3	.
VAERLOSE	.A .5546N	1219E	18. S(C)	70-	MO:DK1	H	H	24	.
ROSNAES	.A .5545N	1052E	13. S(C)	60-	MO:DK1	H	H	6	.
RISU	.A .5542N	1205E	2. S(C)	65-	MO:DK1	H	H	24	.
TOLDBODEN/KOPENHAVN	.A .5541N	1236E	20. S(C)	87-	MO:DK1	H	H	3	.
LEDREBORG ALLE	.A .5537N	1203E	46. S(C)	69-	MO:DK1	H	H	3	.

DENMARK

	2	3.	4	5	6	7.	8.	9.
•	•	•	•	•	•	•	•	•
•VESTERVANG	•A	•5536N	836E	27. S(C) 70-	•MO:DK1	•H	•H	•3
•BRAKKER	•A	•5535N	924E	55. S(C) 69-	•MO:DK1	•H	•H	•3
•ASKOV	•A	•5528N	907E	64. S(C) 24-	•MO:DK1	•H	•H	•3
•DROSSELBJERG	•A	•5528N	1113E	15. S(C) 71-	•NO:DK1	•H	•H	•3
•AARUP	•A	•5523N	1002E	60. S(C) 71-	•MO:DK1	•H	•H	•3
•FLAKKEBJERG	•A	•5520N	1125E	33. S(C) 73-	•MO:DK1	•H	•H	•3
•CHRISTIANSO	•A	•5519N	1511E	13. S(C) 55-73	•MO:DK1	•H	•H	•8
•AARSLEV	•A	•5518N	1027E	48. S(C) 16-72	•MO:DK1	•H	•H	•3
•TYSTOFTE	•A	•5515N	1120E	13. S(C) 14-	•MO:DK1	•H	•H	•3
•TYSTOFTE HUSE	•A	•5515N	1120E	14. S(C) 74-	•MO:DK1	•H	•H	•3
•OSTERLARS	•A	•5509N	1456E	114. S(C) 75-	•MO:DK1	•H	•H	•3
•VEJRO	•A	•5502N	1122E	3. S(C) 58-	•MO:DK1	•H	•H	•3
•FELSTED	•A	•5458N	934E	68. S(C) 73-	•MO:DK1	•H	•H	•3
•HOJER H.M.	•	•	•	•S(C) 36-	•MO:DK1	•H	•H	•3
•JYNDDEVAD	•A	•5454N	908E	15. S(C) 60-	•MO:DK1	•H	•H	•3
•NAESGARD	•A	•5452N	1207E	17. S(C) 13-	•MO:DK1	•H	•H	•3
•ABED	•A	•5450N	1120E	8. S(C) 69-	•MO:DK1	•H	•H	•3
•MARBO	•A	•5446N	1129E	8. S(C) 27-	•MO:DK1	•H	•H	•3
•KELDSNR	•A	•5444N	1043E	9. S(C) 64-	•MO:DK1	•H	•H	•8

FINLAND

	2	3.	4	5	6	7.	8.	9.	10
UTSJOKI-KEVO	A	6945N	2702E	107. I(Y) 71*	.	*	.	.	.
				. G(K) 71-	D:SF1	H	.	.	.
				. D(K) 71-	.	H	.	.	.
				. S(C) 70-	D:SF1	H	.	.	.
SODANKYLA	A	6722N	2639E	178. I(A) 73*	I(SD) 5773	.	*	*	8
				. G(K) 52-	D:SF1-2-3-4-SU1.H	.	MO:SU2	.	.
				. D(K) 57-	D:SF2-3	H	.	.	.
				. R(K) 57-	D:SF2-3	H	.	.	.
				. Q*(SF)60-	H:SF2-SU1, SU2.H	.	.	.	.
KAJAANI	A	6417N	2741E	140. G(Y) 73-	.	.	H	.	.
				. S(C) 58*	.	*	.	.	.
JYVASKYLA-LUONETJARVI	A	6224N	2540E	141. I(M1) 60	.	*	.	24	.
				. I(Y) 75*	.	*	.	.	.
				. G(K) 52-	.	H	.	.	.
				. D(K) 58-	.	H	.	.	.
				. R(K) 58-	.	H	.	.	.
				. Q*(SF)71-	.	H	.	.	.
JOKIOINEN	A	6049N	2330E	103. I(A) 56	. S(C) 57-	.	H	.	.
				. G(R) 57-	.	*	.	8	.
				. G(K) 57-	D:SF1-2-SU1,SF3.H	.	MO:SU2	.	.
				. D(K) 57-	D:SF2,SF3	H	.	.	.
				. R(K) 57-	D:SF2,SF3	H	.	.	.
				. 2*(SF)58-	H:SF2-SU1, SU2	H	.	.	.
				. S(C) 51-	D:SF1-2,	H	.	.	MO:SU1-2
LOVISA	A	6025N	2620E	G(K) 71-79	.	.	X X	AUT-STATION	.
				. Q*(SF)71-	.	X	.	.	.
PERNAJA	A	6024N	2605E	S(SW) 71-	.	.	X	.	.
				. G(K) 73-	.	.	10K.	CUN AUT-STATION	.
				. G'(K) 80-	.	.	10K.	9CN,E,S,W	.
				. G'(K) 80-	.	.	10K.	SCS	.
				. D(K) 80-	.	.	10K.	.	.
				. R(K) 80-	.	.	10K.	GRASS	.
				. Q*(SF)80-	.	.	10K.	.	.
				. S(C) 73-	.	.	10K.	.	.
				. S(U'R) 73-	.	.	10K.	.	.
PITKKIÖ-YLTOINEN	A	6023N	2233E	28. I(Y) 73*	.	*	.	.	.
				. G(K) 67-	D:SF1-2	H	.	.	.
				. D(K) 71-	D:SF2	H	.	.	.
HELSINKI	A	6019N	2455E	55. G(K) 71-	S(C) 27-	D:SF1-2	.	.	.
				. D(K) 71-	D:SF1	H	.	24	.
				. R(K) 71-	.	H	.	.	.
				. Q*(SF)71-	.	H	.	.	.
HELSINKI-ILMALA	A	6012N	2455E	46. G(E) 57-69	S(C) 61-	D:SF1	H	.	.
				. G(K) 77-	D:SF1-2-SU1,SF3.H	.	MO:SU2	.	.
				. D(E) 57-69	D:SF2,SF3	H	.	.	.
				. D(K) 77-	.	H	.	.	.
				. Q*(SF)61-69	H:SF2-SU1,SU2	.	.	.	.
				. S(C) 11-	D:SF1-2,	H	.	.	MO:SU1-2
HELSINKI-SAATALU	A	6010N	2457E	26. I(A) 56	I(SD) 56*	.	*	.	.
				. G(K) 69-	D:SF1-2	H	.	.	.
				. G(E) 70-	D:SF2	H	.	.	.
				. D(K) 69-	D:SF2	H	.	.	.
				. S(C) 61-	D:SF1-2	H	.	.	.
IVALO	A	6236N	2725E	145. S(C) 57-	.	D:SF1-2	H	.	24
PELLO	A	6648N	2400E	84. S(C) 70-	.	D:SF1	H	.	8
ROVANIEMI	A	6634N	2550E	198. S(C) 61-	.	D:SF1-2	H	.	24
KUUSAMO	A	6558N	2911E	262. S(C) 64-	.	D:SF1-2	H	.	8
KEMI	A	6547N	2435E	18. S(C) 57-	.	D:SF2	H	.	24
OULO	A	6456N	2522E	14. S(C) 61-	.	D:SF1-2	H	.	24
VÄÄLÄ-PULSO	A	6431N	2628E	113. S(C) 60-	.	D:SF2	H	.	.
KAJAAANI	A	6417N	2741E	142. S(C) 58-	.	D:SF1-2	H	.	24
HAAPAJARVI	A	6345N	2520E	87. S(C) 66-	.	D:SF2	H	.	.
VALASSAARET	A	6326N	2104E	4. S(C) 70-	.	D:SF1-2	H	.	24
VAASA	A	6303N	2146E	4. S(C) 57-	.	D:SF1-2	H	.	24
KUOPIO-RISSALA	A	6301N	2748E	9. S(C) 61-	.	D:SF1-2	H	.	24
YLISTARO	A	6256N	2230E	26. S(C) 28-	.	D:SF1-2	H	.	.
JOOENSUU	A	6240N	2938E	119. S(C) 61-	.	D:SF1-2	H	.	24
KIHNIÖ	A	6212N	2319E	157. S(C) 61-	.	D:SF2	H	.	.
PERTUNMAA	A	6136N	2625E	137. S(C) 72-	.	.	H	.	.
TAMPERE	A	6128N	2344E	92. S(C) 67-	.	D:SF1-2	H	.	.
PORI	A	6128N	2148E	13. S(C) 66-	.	D:SF1-2	H	.	24
ROUKOLAHTI	A	6122N	2840E	95. S(C) 64-	.	D:SF2	H	.	.
LAPPEENRANTA	A	6103N	2803E	106. S(C) 62-	.	D:SF1-2	H	.	24
JUUTI	A	6054N	2656E	100. S(C) 68-	.	D:SF1-2	H	.	14
TURKU	A	6031N	2216E	49. S(C) 57-	.	D:SF1-2	H	.	48
VIHTI	A	6025N	2424E	35. S(C) 65-	.	D:SF2	H	.	.
KOTKA-RANKKI	A	6022N	2658E	5. S(C) 68-	.	D:SF1-2	H	.	.
SALO	A	6022N	2306E	2. S(C) 68-	.	D:SF2	H	.	8
TIKKURILA	A	6017N	2504E	20. S(C) 68-	.	D:SF1-2	H	.	.
VALLISAARI	A	6008N	2500E	10. S(C) *	.	D:SF1-2	H	.	.
MAARIANHAMINA	A	6007N	1954E	5. S(C) 65-	.	D:SF1-2	H	.	24
HELSINKI-KATAJALUOTO	A	6006N	2455E	4. S(C) 55-	.	D:SF2	H	.	8
UTO	A	5947N	2123E	4. S(C) 71-	.	.	H	.	.
RUSSARU	A	5946N	2257E	11. S(C) 70-	.	D:SF1	H	.	8

	2	3.	4	5	6	7.	8.	9.	10
SAINTE QUENTIN	A 4949N	321E	98.	G(K) 73-	D:SU1,MO:SU2	H	H	8	
REIMS	A 4918N	402E	95.	G(K) 74-	M:SU1-2	H	H	23	
CAEN	A 4911N	027W	78.	G(K) 74-	D:SU1	H	H	18	
PARIS MONTSAURIS	A 4849N	220E	75.	G(K) 65-	M:SU1	H	H		
TRAPPES	A 4846N	201E	168.	I(SD)		H	H		
				I(LF) 71-		H	H		RG8,TBA
				G(K) 61-	D:SU1,MO:SU2	H	H		
				G/(K) 73,74		H	H	495	
				G/(K) 75		H	H	90N	
				G/(K) 74		H	H	50SE	
				D(K) 67-		H	H		
				Q*(..) *		*	*		
				S(C) 62-	M:SU1-2	H	H		
NANCY	A 4842N	613E	204.	G(K) 65-	D:SU1,MO:SU2	H	H	24	
				D(..)		H	H		
				S(C) 63-	M:SU1-2	H	H		
STRASBOURG	A 4833N	738E	153.	G(K) 74-	D:SU1	H	H	48	
				S(C) 63-	M:SU1	H	H		
ROSTRENEN	A 4814N	320E	268.	I(..) 76*		H	H		TBA
				D(..)		H	H		
				S(C) 63-		H	H		
RENNES	A 4804N	143E	37.	G(K) 67-	D:SU1,MO:SU2	H	H	48	
				S(C) 63-	M:SU1-2	H	H		
AUXERRE	A 4748N	333E	207.	G(K) 76-	D:SU1	H	H	16	
				S(C) 63-	M:SU1	H	H		
TOURS ST. SYMPHORIEN	A 4727N	043E	102.	G(K) 76-	D:SU1	H	H	22	
				S(C) 50-	M:SU1	H	H		
DIJON	A 4716N	505E	222.	G(K) 76-	D:SU1	H	H	24	
				S(C) 50-	M:SU1	H	H		
MACON	A 4618N	448E	217.	G(K) 63-	D:SU1,MO:SU2	H	H	8	
				D(..)		H	H		
				S(C) 63-	M:SU1-2	H	H		
LA ROCHELLE	A 4609N	109W	4.	G(K) 70-	D:SU1,MO:SU2	H	H		
				D(..)		H	H		
				S(C) 50-	M:SU1-2	H	H		
LIMOGES	A 4549N	117E	284.	G(K) 63-	D:SU1,MO:SU2	H	H	24	
				D(..)		H	H		
				S(C) 63-	M:SU1-2	H	H		
CLERMONT-FERRAND	A 4547N	310E	332.	G(K) 77-		H	H	21	
				S(C) 50-		H	H		
BORDEAUX	A 4450N	042W	51.	G(K) 77-		H	H		
				S(C) 50-		H	H		
AGEN	A 4411N	036E	59.	G(K) 65-	D:SU1,MO:SU2	H	H	19	
				S(C) 50-	M:SU1-2	H	H		
CARPENTRAS	A 4405N	503E	100.	I(SD)		H	H	4	
				I(LF) 71-		H	H		RG2,TBA
				G(E2) 68-		H	H		
				G(K) 68-	D:SU1,MO:SU2	H	H		
				G/(K) 73		H	H	445	
				G/(K) 74-75		H	H	90S	
				D(K) 68-		H	H		
				Q*(..) 75-		H	H		
				S(C) 50-	M:SU1-2	H	H		
HILLAU	A 4404N	304E	408.	G(K) 64-	D:SU1,MO:SU2	H	H		
				D(..)		H	H		
				S(C) 64-	M:SU1-2	H	H		
NICE	A 4340N	713E	6.	G(K) 64-	D:SU1,MO:SU2	H	H	48	
				S(C) 62-	M:SU1-2	H	H		
MONTPELLIER	A 4335N	358E	5.	G(K) 75-	D:SU1,MO:SU2	H	H	24	
				S(C) 50-	M:SU1-2	H	H		
PAU	A 4323N	025W	185.	G(K) 77-		H	H		
				D(..)		H	H		
				S(C) 50-		H	H		
CARCASSONNE	A 4313N	219E	130.	G(K)		H	H		
				S(C) 50-		H	H		
ILE DU LEVANT	A 4302N	628E	133.	G(K) 77-	D:SU1	H	H		
				S(C) 77-	M:SU1	H	H		
AJACCIO	A 4155N	848E	5.	G(K) 65-66,70-	D:SU1,MO:SU2	H	H		
				S(C) 65-	M:SU1-2	H	H		

## F.R. GERMANY

	2	3.	4	5	6	7.	8.	9.	10
LIST	A 5501N	0825E	33.	G(K) 72-74,75-	H:D5,D:D2	H	H	22	
				S(C) 51-	D:D1,MO:D2	H	H		
WYK	A 5443N	0835E	7.	G(R) 53-66		D	D		
				G(K) 67-71		D	D		
HELGOLAND	MN.5411N	0754E	15.	G(R) 65-76	D:D1	D	D		
				D(K) 77-		D	D		
PLON	LP.5410N	1026E	29.	G(K) 62-65,		D	D		
				66-		D	D		
NORDERNEY	A 5343N	0709E	29.	G(K) 57-59,66-	H:D5,D:D2	H	H	16	
				D(K) 77-	H:D5	H	H		
				S(C) 51-	D:D1,MO:D2	H	H		
HAMBURG-SASEL	A 5339N	1007E	47.	G(K) 79-	H:D5,D:SU1,	H	H		
				D(K) 79-	M:SU2	H	H		
				R(K) 79-	H:D5	H	H		
				L+(SH)79-	H:D5	H	H		
				L-(SH)79-	H:D5	H	H		
				Q*(SH)79-	H:SU1-D2-D5,	H	H		
				UV(DU)79-	M:SU2	H	H		
				S(C) 79-	H:D5	H	H		
HAMBURG-FUHLSBUTTEL	A 5338N	1000E	14.	I(LF) 54+59		*	*	24	061,RG2-8,TBL
				G(K) 49-79	H:D2-D5,D:SU1,	H	H		
				G/(K) 52-55	M:SU2	H	H		
				D(K) 54-79	H:D2-D5	H	H		45S,90N,E,S,W
				DXC 167-75		H:D5,D:D2	H	H	
				R(K) 54-79		H:D2-D5	H	H	
				L+(SH)54-79		H:D2-D5	H	H	
				L-(SH)54-79		H:D2-D5	H	H	
				Q*(SH)54-79	H:D2-SU1-D5,	H	H		
				S(C) 46-	M:SU2	H	H		
BREMEN-FLUGHAFEN	A 5303N	0847E	24.	G(K) 77-	D:D1-D2,MO:SU1-H	H	H		
				S(C) 51-	H:D5	H	H	24	
				*	D:D7	H	H	*	



	2	3.	4	5	6	7.	8.	9.	10	
HANNOVER-HERRENHAUSEN	UH.5224N	0945E	55. G(K)	56-		.H	.	.	.	
	.	.	.	R(K)	65-75	.	.H	.	.	
	.	.	.	S(C)	51-75	.	.H	.	.	
HANNOVER-FLUGHAFEN	A.5228N	0942E	53. G(R)	49-51,52-		.D	.	.48	.	
	.	.	.	S(C)	51-	.	.H	.	.	
BERLIN	UB.5228N	1318E	51. G(K)	54-	.D:D1	.H	.	.	.	
	.	.	.	D(K)	65-	.H:D3	.H	.	.	
	.	.	.	E(C)	54-	.H:D3	.H	.	.	
	.	.	.	S(C)	52-	.H:D3	.H	.	.	
BRAUNSCHWEIG	A.5218N	1027E	83. G(X)	57,58-	.H:D5,D:D1-D2-SU	.H	.H	.22	.	
	.	.	.	D(K)	77-	.H:D5	.H	.	.	
	.	.	.	S(C)	51-	.D:D1,MO:D2-SU1	.H	.	.	
OSNABRUCK	A.5215N	0803E	104. G(K)	77-	.H:D5	.H	.H	.16	.	
	.	.	.	D(K)	79-	.H:D5	.H	.	.	
BOCHOLT	A.5150N	0637E	24. G(K)	73-74	.D:D1	.H	.	.	.	
	A.5150N	0632E	24. G(K)	74-	.H:D5	.H	.	.	.	
	.	.	.	D(K)	77	.H:D5	.H	.	.	
	.	.	.	S(C)	51-	.D:D1	.H	.	.	
BRAUNLAGE	A.5143N	1037E	615. G(K)	57-	.H:D5,D:D2	.H	.H	.16	.	
	.	.	.	S(C)	51-	.D:D1	.H	.	.	
GELSENKIRCHEN	A.5130N	0705E	63. G(K)	73-	.H:D5	.H	.H	.	.	
	.	.	.	D(K)	77-	.	.H	.	.	
KASSEL (TOWN)	A.5119N	0929E	158. G(R)	48-59	.	.	.D	.D	.24	
KASSEL (SUBURB)	A.5118N	0927E	237. G(K)	79-	.H:D5	.H	.H	.24	.	
	.	.	.	D(K)	79-	.H:D5	.H	.	.	
FRIESDORF	A.5042N	0709E	65. G(K)	76-	.H:D5	.H	.H	.	.	
	.	.	.	S(C)	51-	.D:D1	.H	.	.	
NAUHEIM,BAD	A.5022N	0845E	177. G(K)	73-76	.H:D5,D:D2	.H	.H	.	.	
	.	.	.	S(C)	51-76	.D:D1	.H	.	.	
KÖNIGSTEIN	A.5011N	0829E	405. G(K)	56,68-70	.	.	.H	.	.	
	.	.	.	S(C)	51-	.D:D1	.H	.	.	
GEISENHEIM	A.4959N	0758E	113. G(K)	76-	.H:D5	.H	.H	.	.	
	.	.	.	S(C)	51-	.	.H	.	.	
WURZBURG	A.4948N	0954E	263. G(R)	48-55*59-68	.	.	.H:D5,D:D1-D2-SU	.H	.22	
	.	.	.	G(K)	57-	.	.H	.	.	
	.	.	.	D(K)	78-	.H:D5	.H	.	.	
	.	.	.	S(C)	47-	.D:D1,MO:D2-SU1	.H	.	.	
TRIER	A.4945N	0640E	277. G(R)	36,38-39,56-57	.	.	.D	.	.24	
	.	.	.	S8-59,64-68	.	.	.	.	.	
	.	.	.	G(K)	57-	.H:D5,D:D2-SU1	.H	.	.	
	.	.	.	.	.	.MO:SU2	.	.	.	
MANNHEIM	A.4931N	0833E	105. G(K)	79-	.H:D5	.H	.H	.	.	
	.	.	.	S(C)	51-	.D:D1,MO:D2-SU1	.H	.	.	
NURNBERG	A.4930N	1105E	312. G(K)	76-78,79-	.H:D5	.H	.H	.24	.	
	.	.	.	S(C)	51-	.D:D1	.H	.	.	
KARLSRUHE	KK.4906N	0826E	110. G(D)	71-	.	.	.	.10M.144	WG295	
	.	.	.	R(D)	71-	.	.	.	.	
REGENSBURG	A.4903N	1206E	366. G(R)	40-43,51-57	.	.	.	.10M.	.	
	.	.	.	S(C)	51-	.	.	.	.	
STUTTGART-SCHNARRENBURG	A.4850N	0912E	319. G(K)	79-	.H:D5	.H	.H	.	.	
	.	.	.	D(K)	79-	.H:D5	.H	.	.	
	.	.	.	S(C)	51-	.D:D1	.H	.	.	
STUTTGART-HOHENHEIM	US.4843N	0912E	408. G(R)	49-	.	.	.D	.D	.	
	.	.	.	G(K)	71-77	.	.	.	.	
TUBINGEN	A.4831N	0903E	370. G(R)	62,63,65-70	.	.	.D	.D	.	
	.	.	.	G(K)	67-72,73-74	.	.	.	.	
PASSAU	A.4835N	1329E	412. G(K)	79-	.H:D5	.H	.H	.24	.	
	.	.	.	D(K)	79-	.H:D5	.H	.	.	
FREUDENSTADT	A.4827N	0825E	797. G(R)	55-59	.	.	.D	.	.13	
	.	.	.	S(C)	51-	.D:D1	.H	.	.	
WEIHNSTEPHAN	A.4824N	1144E	469. G(R)	57-59	.	.	.D	.	.	
	.	.	.	G(K)	61-	.H:D5,D:D2	.H	.	.	
	.	.	.	D(K)	71-	.H:D5	.H	.	.	
	.	.	.	S(C)	51-	.D:D1	.H	.	.	
MUNCHEN	UM.4816N	1141E	570. G(K)	60-	.	.	.H	.H	.CON	
FREIBURG	A.4801N	0752E	285. S7-58	.	.	.	.D	.H	.24	
	.	.	.	A.4800N	0751E	308. G(K)	73-	.H:D5,D:D2	.H	.
	.	.	.	D(K)	78-	.H:D5	.H	.	.	
HOLZKIRCHEN	SH.4752N	1145E	680. G(K)	53-	.	.	.D:D1,MO:D2	.H	.	
	.	.	.	G(K)	66-	.	.	.	.	
HOHENPEISSENBURG	A.4748N	1101E	990. I(M)	57-59	.	.	.	.CON	TEMP,WIND	
	.	.	.	G(R)	48-56,57-67	.	.	.	.90N,E,S,W,	
	.	.	.	G(K)	53-	.H:D5,D:D1-D2-SU	.H	.	.22 .0G1,PG2-8,TBA	
	.	.	.	.	.	.MO:SU2	.	.	.	
	.	.	.	Q(K)	53-62*63-72,73	.H:D5	.H	.	.	
	.	.	.	74-	.	.	.	.	.	
	.	.	.	R(K)	64-65	.	.	.	.	
	.	.	.	Q(SH)	64-65	.	.	.	.	
	.	.	.	S(C)	38-	.D:D1,MO:SU1-2	.H	.	.	
WANK	AG.4731N	1109E	1720. G(S)	64-	.	.	.	.H	.24	
	.	.	.	S(C)	64-72	.	.	.	.	
GARMISCH	AG.4729N	1104E	740. G(S)	64-	.	.	.H	.	.	
	.	.	.	S(C)	64-72	.	.	.	.	
ZUGSPITZE	AG.4725N	1059E	2960. G(S)	64-	.	.	.H	.	.24	
	.	.	.	S(C)	64-	.D:D1	.H	.	.	
OBERSDORF	A.4724N	1017E	810. G(R)	40-46,57-58	.	.	.D:D1	.D	.13	
	.	.	.	S(C)	51-	.	.	.	.	
FLENSBURG	A.5447N	0923E	41. S(C)	51-	.	.	.H	.	.	
WYK AUF FOUR	A.5443N	0835E	7. S(C)	51-	.	.	.H	.	.	
MARIELENLEUCHTE	A.5430N	1114E	10. S(C)	51-	.	.	.H	.	.	
HUSUM	A.5428N	0903E	3. S(C)	51-	.	.	.H	.	.	
NEULAND-WATERNEW.	A.5422N	1036E	4. S(C)	61-	.	.	.H	.	.	
KIEL-WIK	A.5421N	1008E	7. S(C)	51-	.	.	.H	.	.	
ST.PETER	A.5418N	0837E	8. S(C)	51-	.	.	.H	.	.	
ST.MICHAELSDORF	A.5401N	0907E	25. S(C)	51-	.	.	.H	.	.	
TRAVEMUNDE	A.5357N	1053E	3. S(C)	51-	.	.	.H	.	.	
LUEBECK	A.5353N	1042E	13. S(C)	51-	.	.	.H	.	.	
GLUCKSTADT	A.5347N	0927E	1. S(C)	51-	.	.	.H	.	.	
BORKUM	A.5335N	0640E	12. S(C)	51-	.	.	.H	.	.	
HAMBURG-ST.PAULI	A.5333N	0958E	22. S(C)	51-	.	.	.H	.	.	
BREMERHAVEN	A.5332N	0835E	7. S(C)	51-	.	.	.H	.	.	
AURICH	A.5327N	0728E	4. S(C)	61-	.	.	.H	.	.	
EDEWECHTERDAMM	A.5305N	0756E	8. S(C)	51-	.	.	.H	.	.	
BREMEN	A.5303N	0847E	4. S(C)	51-	.	.	.H	.	.	
SOLTAN	A.5300N	0950E	77. S(C)	51-	.	.	.H	.	.	
VISBEK	A.5250N	0819E	51. S(C)	61-	.	.	.H	.	.	
LINGEN	A.5231N	0719E	21. S(C)	51-	.	.	.H	.	.	
BERLIN-DAHLEM	A.5228N	1318E	51. S(C)	51-	.	.	.H	.	.	
LANNOVER	A.5228N	0942E	53. S(C)	51-	.	.	.H	.	.	

1	2	3	4	5	6	7	8	9	10
HERFORD		A .5208N	0841E	77.	S(C)	51-		H	
SALZUFLEN,BAD		A .5206N	0845E	98.	S(C)	51-		H	
MUNSTER		A .5158N	0736E	64.	S(C)	51-		H	
SACHSA,BAD		A .5135N	1033E	322.	S(C)	51-		H	
GOTTINGEN		A .5133N	0957E	176.	S(C)	51-		H	
ESSEN		A .5124N	0658E	154.	S(C)	51-		H	
LUDENSHEID		A .5113N	0738E	444.	S(C)	51-		H	
KAHLER ASTEN		A .5111N	0829E	635.	S(C)	61-		H	
LEVERKUSEN		A .5102N	0659L	44.	S(C)	51-		H	
NIEDERESSMAR		A .5101N	0735E	242.	S(C)	61-		H	
WAHM		A .5053N	0708E	73.	S(C)	61-		H	
AACHEN		A .5047N	0606E	202.	S(C)	51-		H	
NORDERNEY		*	*	*	S(C)	51-		H	
FRIESDORF		A .5024N	0708E	61.	S(C)	51-		H	
EUSKIRCHEN		A .5039N	0647C	176.	S(C)	61-		H	
GIESSEN		A .5034N	0842E	166.	S(C)	51-		H	
WASSERKUPPE		A .5030N	0957E	921.	S(C)	51-		H	
KOBLENZ-OBERLAHNSTEIN		A .5021N	0736E	70.	S(C)	51-		H	
HOF-HOHENSAAS		A .5019N	1153E	567.	S(C)	51-		H	
COBURG		A .5016N	1067L	337.	S(C)	51-		H	
KLEINER FELDBERG/TAUNUS		A .5013N	0827E	805.	S(C)	51-		H	
BAD KISSINGEN		A .5012N	1005E	224.	S(C)	51-		H	
FRANKFURT-FLUGH.		A .5003N	0835E	110.	S(C)	51-		H	
BAYREUTH		A .4957N	1133E	330.	S(C)	51-		H	
BERNKASTEL-KUES		A .4955N	0704L	120.	S(C)	51-		H	
BAMBERG		A .4953N	1055E	239.	S(C)	61-		H	
KREUZNACH,BAD		A .4951N	0751E	136.	S(C)	51-		H	
SELLIGENSTADT		A .4951N	1006E	281.	S(C)	51-		H	
ALZLY		A .4945N	0807E	166.	S(C)	51-		H	
BRANDHOF		A .4933N	1046E	403.	S(C)	51-		H	
MANNHEIM		A .4932N	0830E	97.	S(C)	51-		H	
BUCHEN		A .4931N	0920E	350.	S(C)	51-		H	
NURNBERG-KRAFTSHOF		A .4930N	1105E	310.	S(C)	51-		H	
HAID		A .4930N	1138E	479.	S(C)	51-		H	
NEUSTADT/WEINSTRASSE		A .4922N	0808E	163.	S(C)	51-70		H	
ANSDACH		A .4918N	1035E	411.	S(C)	51-76		H	
DERUS		A .4916N	0641E	363.	S(C)	51-70		H	
RAPPENAU,BAD		A .4915N	0905E	250.	S(C)	51-		H	
SAARBRUCKEN-ST.ARNUAL		A .4913N	0731E	191.	S(C)	51-		H	
JENSEIN		A .4913N	0707E	323.	S(C)	61-		H	
BOTTENWEILER		A .4913N	1013L	464.	S(C)	51-		H	
OHRNBRUNN		A .4912N	0931E	276.	S(C)	51-		H	
GROSSER FALKENSTEIN		A .4905N	1317C	1307.	S(C)	51-		H	
WEISSENBERG/BAYERN		A .4902N	1056L	422.	S(C)	51-		H	
KARLSRUHE		A .4901N	0823E	114.	S(C)	51-		H	
ZWSELBERG		A .4900N	1313E	615.	S(C)	51-		H	
DECKENDORF		A .4856N	1128L	510.	S(C)	51-		H	
PFORZHEIM		A .4854N	0844E	243.	S(C)	51-		H	
NORDLINGEN		A .4852N	1030E	425.	S(C)	51-		H	
STAUBLING		A .4852N	1235L	333.	S(C)	51-		H	
METTEN		*	*	*	S(C)	51-		H	
SCHOMBERG		A .4847N	0839E	620.	S(C)	51-		H	
STUTTGART(TOWN-VILLE)		A .4846N	0911E	286.	S(C)	51-		H	
KARLSHULD		A .4841N	1117E	374.	S(C)	51-		H	
STOTTIN		A .4840N	0952E	734.	S(C)	51-		H	
NURTINGEN		A .4838N	0920E	280.	S(C)	61-		H	
HULL		A .4836N	1141E	436.	S(C)	51-		H	
AIDENBACH		A .4834N	1305L	335.	S(C)	61-		H	
SLOPFLOCK		A .4832N	0932E	764.	S(C)	51-		H	
FREUDENSTADT		A .4827N	0826E	797.	S(C)	51-		H	
ULM		A .4823N	0958E	522.	S(C)	51-		H	
AUGSBURG-KREZIGSH.		A .4823N	1051E	477.	S(C)	51-		H	
MUHLDORF		A .4815N	1232E	401.	S(C)	51-		H	
PUCH		A .4811N	1113E	550.	S(C)	51-		H	
MUNCHEN-NYMphenburg		A .4810N	1130L	515.	S(C)	51-		H	
MITTBACH		A .4810N	1201E	623.	S(C)	61-		H	
MUNCHEN-RIEM		A .4809N	1143E	527.	S(C)	51-		H	
KLIPPENHECK		A .4806N	0846E	973.	S(C)	51-		H	
AULENDORF		A .4758N	0939E	571.	S(C)	51-		H	
ROSENHEIM		A .4752N	1207E	446.	S(C)	51-		H	
TOLZ,BAD		A .4746N	1134L	654.	S(C)	51-		H	
REICHENHALL,BAD		A .4745N	1254E	455.	S(C)	51-		H	
HOCHERSCHWAND		A .4744N	0810E	1001.	S(C)	51-		H	
WENDELSTEIN		A .4742N	1201E	1832.	S(C)	51-		H	
REIT IM WINKEL		A .4741N	1229E	695.	S(C)	51-		H	
KONSTANZ		A .4740N	0909E	398.	S(C)	51-		H	
KOHLGRUG,BAD		A .4740N	1103E	260.	S(C)	51-		H	
FRIEDRICHSHAFEN		A .4739N	0929E	401.	S(C)	51-		H	
BERCHTESGADEN		A .4738N	1301L	542.	S(C)	51-		H	
HORN		A .4734N	1042E	796.	S(C)	51-		H	
GARMISCH-PARTENKIRCHEN		A .4729N	1104E	719.	S(C)	51-		H	

GERMAN DEM. REP.

	2	3.	4	5	6	7.	8.	9.	10
HEILIGENDAMM	A	5409N	1151E	21. G(PS) 61- D(PS) 61- S(C) 60-	D:SU1,MO:SU2	H			
POTSDAM (MHO)	A	52223N	1301E	110. I(MG) 51+68 G(PS) 51-68 D(PS) 51-68 RC--> 51-68 Q*(SH)51-68	MO:SU1-2 D:DDR1-SU1, MO:SU2 D:DDR1	H		8	
POTSDAM-SCHLAATZ	A	5223N	1306E	33. I(MG) 69- G(PS) 69- G/(..)73- D(PS) 69- RC--> 69- Q*(SH)69- S(C) 86-	D:DDR1-SU1	H		8	OZONE
LINDENBERG	A	5213N	1407E	98. G(K) S(C)		H			90N,E,S,W
DRESDEN-WAHNSDORF	A	5107N	1341E	271. G(PS) 67- D(PS) 246. S(C) 16- G(..,)	D:SU1,MO:SU2	D			OZONE
WEIMAR	A	5059N	1119E	264. G(..,) S(C)	MO:SU1-2	H			
FICHTELBERG	A	5026N	1257E	1217. G(.., 61- D(.., 61- S(C) 46-	D:SU1,MO:SU2 MO:SU1-2	H		8	OZONE

	2	3.	4	5	6	7.	8.	9.	10
KOMOTINI	A 4157N 2524E	30.	G(R) 7-		D		S		
			. S(C)		H				
THESSALONIKI	A 4037N 2257E	31.	I(LF) 60-						
			. G(E) 60-						
			. G(K) 60-						
			. G(R) 60-						
			. G(BS) 60-						
			. Q*(GD)						
			. S(C) 30-						
AGIALOS	A 3913N 2248E		. G(R) 77-		H				
ARTA	A 3910N 2100E	10.	G(R) 77-		D		24		
			. S(C)		H		6		
ALIARTOS	A 3823N 2306E	110.	G(R) 70-		D		5		
			. S(C)		H				
ATHINAI-FILADELFIA	A 3803N 2340E	136.	G(E.) 57-						
			. G(R) 57-		D		6		
			. S(C)		H				
ATHINAI-NAT. OBS.	C 3758N 2343E	107.	I(LF) 62*		*GR1		24		
			. IX(LF) 62*		*GR1				
			. G(E) 60-		H:GR1,D:SU1,				
			. MO:SU2						
			. G(R) 67-						
			. S(C) 96-		D:GR1,MO:SU1-2				
ANDRAVIDA	A 3755N 2127E	10.	G(R) 77-		H				
			. S(C)		D		24		
HELLENIKON	A 3754N 2344E		. G(R) 77-		H				
			. S(C)		D		24		
MAGOUЛИANA	C 3742N 2206E	1350.	G(K) 65-						
			. G(R) 65-						
MEGALOCHORIOU	C 3625N 2524E	70.	G(K) 67-						
			. G(R) 67-						
TYMPLAKI-CRETE	A 3500N 2445E	8.	G(R) 77-		D		5		
			. S(C)		H				

## GREENLAND

	2	3.	4	5	6	7.	8.	9.	10
NORD	A 8136N 1640W	35.	S(C) 59-72						
THULE DUNDAS	. 7634N 6848W	21.	S(C) 70-						
GODHAVN	. 6915N 5331W	8.	S(C) 59-						
SDR. STROMFJORD	. 6700N 5046W	53.	S(C) 73-						
TINGMIARMIUT	. 6232N 4208W	10.	S(C) 57-						
FREDRIKSHAB	. 6200N 4943W	16.	S(C) 56-						
NARSSARSSUAQ	. 6111N 4525W	26.	S(C) 61-						

## HUNGARY

	2	3.	4	5	6	7.	8.	9.	10
KISVARDA	A 4814N 2207E	114.	G(R) 53-70						
			. S(C) 51-		H				
KEKESTETC	A 4752N 2001E	989.	I(MI) 56*70						
			. G(R) 58-72		D				
			. S(C) 32-44,52-		H				
KOMPOLT	A 4744N 2014L	127.	G(R) 59-64						
			. S(C) 30-44,50-		D				
SOPRON	A 4741N 1636E	241.	G(R) 58-		D:SU1,MO:SU2		23		
			. S(C) 30-		MO:SU1-2				
DEBRECEN	A 4729N 2138E	111.	G(R) 58-		D:SU1,MO:SU2		23		
			. S(C) 57-		MO:SU1-2				
BUDAPEST MET. INST.	A 4731N 1902E	120.	G(R) 36-		D				
			. S(C) 07-		H				
BUDAPEST ASTR. OBS.	A 4730N 1858L	473.	G(R) 37-65,66-						
			. S(C) 28-						
TISZAORS	A 4727N 2049E	91.	G(R) 40-72		D				
			. S(C) 39-45,52-		H				
BUDAPEST KLF	A 4716N 1911L	130.	I(MI)						
			. I(LF)						
			. G(R) 54-60						
			. G(K) 60-		D:SU1,MO:SU2				
			. G(A) 69-76		H				
			. D(K) 58-62,67		H				
			. R(K) 65-		H				
			. Q(SH) 65-		H:SU1,MO:SU2				
MARTONVASAR	A 4721N 1849E	150.	S(C) 54-		MO:SU1-2				
			. S(C) 50-		D				
SZENTGOTTHARD	A 4657N 1617E	221.	G(R) 60-66		H				
			. S(C) 50-		D		23		
SZOFOR	A 4654N 1803E	107.	I(MI) 58*72		H				
			. G(R) 58-72		H				
			. S(C) 29-44,57-		D				
KECSKEMET	A 4654N 1946E	113.	I(MI)		H				
			. G(R) 58-77		D:SU1,MO:SU2				
			. G(K) 77-		D:SU1				
			. Q(SH) 64-68		H				
			. S(C) 10-44,48-		MO:SU1-2				
KESZTHELY	A 4646N 1714E	128.	G(R) 58-		D		23		
			. S(C) 33-		H				
BEKESCABA	A 4641N 2110E	87.	G(R) 58-72		D		23		
			. S(C) 35-44,45-		H				
SZEGED	A 4615N 2009E	79.	G(R) 58-		D		23		
			. S(C) 27-44,46-		H				
PECS	A 4603N 1814E	135.	G(R) 57-72		D		23		
			. S(C) 26-		H				

## ICELAND

	2	3.	4	5	6	7.	8.	9.	10
REYKJAVIK	A 6408N 2154W	54.	G(C) 57-61		D:IS2		8	OZONE	
			. G(E) 62-		D:IS2-SU1,MO:SU1				
HOSKULDARNES	A 6629N 1555W	10.	S(C) 57-		D:IS1,MO:SU1-2				
AKUREYRI	A 6540N 1806W	70.	S(C) 27-		D:IS1		8		
REYKHOLAR	A 6527N 2212W	27.	S(C) 57-		D:IS1		8		
HALLORMSSTADUR	A 6506N 1443W	60.	S(C) 53-		D:IS1				
HVERARELLIR	A 6452N 1934W	663.	S(C) 66-		D:IS1				
HOLAR I HORNAFIROI	A 6418N 1512W	17.	S(C) 57-		D:IS1				
REYKIR I BLFUSI	A 6400N 2111W	51.	S(C) 71-0		D:IS1				
SAMSSTADIR	A 6340N 2010W		. S(C) 62-		D:IS1				

## IRELAND

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
BELMULLET	A	5414N	1000W	13. G(K) 76-	.	.	.	.	.
	.	.	.	. S(C)	.	.	.	.	.
GLENAMOY	D	5414N	943W	24. G( ) 71-	D:IRL2	.	.	.	.
	.	.	.	. S(C)	.	.	.	.	.
BALLINAMORE	B	5404N	747W	81. G( ) 71-	D:IRL2	.	.	.	.
	.	.	.	. D(K) 75-	.	.	.	.	.
DUBLIN AIRPORT	A	5326N	614W	81. G(K) 75-	H:IRL1,D:SU1	.	.	24	.
	.	.	.	. S(C) 40-	.	.	.	.	.
KINSEALY	B	5325N	610W	18. G( ) 70-73	D:IRL2	.	.	.	.
	.	.	.	. S(C)	.	.	.	.	.
DUBLIN	C	5320N	615W	14. I(MG) 48-51,51-55	.	.	.	.	.
	.	.	.	. G(BS) 56-	.	.	.	.	.
	.	.	.	. S(C) 46-	.	.	.	.	.
BIRR	A	5305N	754W	72. G(K) 71-	H:IRL1,D:SU1,	.	.	24	.
	.	.	.	.	MOSU2	.	.	.	.
	.	.	.	.	H:IRL1,MOSU1-2-H	.	.	.	.
KILKENNY	A	5240N	716W	64. G(K) 69-	H:IRL1,D:SU1,	.	.	24	.
	.	.	.	.	MOSU2	.	.	.	.
	.	.	.	. S(C) 57-	H:IRL1,MOSU1-2-H	.	.	.	.
VALENTIA	A	5156N	1015W	20. I(A)	.	.	.	24	.
	.	.	.	. I(LF) 54*	.	.	.	.	.
	.	.	.	. G(K) 54-	H:IRL1,D:SU1,	H	H	.	.
	.	.	.	.	MOSU2	.	.	.	.
	.	.	.	.	H:IRL1,MOSU1-2-H	.	.	.	.
	.	.	.	.	OG1,RG2-8,TBA	.	.	.	.
	.	.	.	.	.	.	.	.	.
	.	.	.	.	.	.	.	90S	.
	.	.	.	.	H:IRL1	H	H	.	.
	.	.	.	.	H:SU1,MOSU2	.	.	.	.
	.	.	.	.	H:IRL1,MOSU1-2-H	H	.	.	.

## ISRAEL

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
HAIFA	A	3249N	3500E	85. G(E1) 64-68,71	.	.	.	.	.
BET DREN	B	3244N	3500E	370. G(K)	.	.	.	.	.
	.	.	.	. Q( ,)	.	.	.	.	.
	.	.	.	. R(K)	.	.	.	.	.
LOD/BEN GURION INT'L A.	A	3200N	3454E	40. G( ) 56-62	D:IL1	D	.	8	.
BET DAGAN	A	3200N	3449E	30. I(A)	.	.	.	3	.
	.	.	.	. I(E0) 66-	H:IL3	H	.	.	.
	.	.	.	. G(E1) 62-	H:IL2-3,D:SU1	H	.	.	.
	.	.	.	.	MOSU2	.	.	.	.
	.	.	.	.	H:IL2-3	H	.	.	.
	.	.	.	.	G(R)	.	.	.	.
	.	.	.	.	Q(GD) 65-	H:IL2-3	H	.	.
	.	.	.	.	Q(GD) 67-	H:IL3	.	.	.
	.	.	.	.	S(C) 62-	H:IL2-3	H	.	.
JERUSALEM	C	3146N	3513E	810. I(SD)	.	.	.	8	.
	.	.	.	. I( - )	.	.	.	.	.
	.	.	.	. G(E1) 64-	H:IL4	.	.	.	.
	.	.	.	. G( )	H:IL4	.	.	90N,E,S,W	.
	.	.	.	. D( )	H:IL4	.	.	.	.
	.	.	.	. D( ,)	H:IL4	.	.	90S	.
	.	.	.	.	Q(GD)	.	.	.	.
	.	.	.	.	D(GD)	.	.	.	.
	.	.	.	.	G(BS)	.	.	.	.
GILAT	D	3120N	3440E	150. G(K)	.	.	.	.	.
	.	.	.	.	G(E)	.	.	.	.
	.	.	.	.	G(R)	.	.	.	.
	.	.	.	.	G(BS)	.	.	.	.
	.	.	.	.	D(K)	.	.	.	.
	.	.	.	.	Q( ,)	.	.	.	.
BCER SHEVA	E	3115N	3448E	280. G(R)	.	.	.	6	.
	.	.	.	.	S(C)	.	.	.	.
HAZLIM	A	3114N	3438E	200. G(E1) 74-	.	.	.	.	.
SEDUM	A	3102N	3523E-390	390. G(E1) 73-	.	.	.	3	.
	.	.	.	.	S(C)	.	.	.	.
EILAT	A	2933N	3457E	12. G(R)	.	.	.	8	.
	.	.	.	.	S(C)	.	.	.	.

## ITALY

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
BOLZANO	A	4652N	1120E	935. G(R) 65-	D:SU1,MOSU2	D	.	24	.
	.	.	.	. S(C) 57-	MOSU1-2	H	.	.	.
UDINE	A	4602N	1311E	92. G(R) 57-	D:SU1,MOSU2	D	.	16	.
	.	.	.	. S(C) 57-	MOSU1-2	H	.	.	.
PIAN ROSA	A	4556N	742E	3486. G(R) 60-	D:SU1,MOSU2	D	.	24	.
ISPRA	D	4542N	0838E	249. G(R) 59-	.	.	.	X	.
TRIESTE	A	4539N	1345E	20. G(R) 61-	D:SU1,MOSU2	D	.	24	.
	.	.	.	. S(C) 57-	MOSU1-2	H	.	.	.
VENEZIA	A	4530N	1220E	6. G(R) 63-	D:SU1,MOSU2	D	.	48	.
	.	.	.	. S(C) 61-	MOSU1-2	H	.	.	.
MILANO	A	4526N	917E	103. G(R) 66-	D:SU1,MOSU2	D	.	48	.
	.	.	.	. S(C) 50-	MOSU1-2	H	.	.	.
TORINO/CASELLE	A	4511N	739E	282. G(R) 66-	D:SU1,MOSU2	D	.	48	.
	.	.	.	. S(C) 57-	MOSU1-2	H	.	.	.
MONTE CAPELLINA	B	4433N	857E	648. G(K)	H:13,D:SU1,	.	.	.	.
	.	.	.	.	MOSU2	.	.	.	.
BOLOGNA	A	4432N	1118E	49. G(R) 60-	D:SU1,MOSU2	D	.	24	.
	.	.	.	. S(C) 57-	MOSU1-2	H	.	.	.
GENOVA UNIVERSITY	B	4425N	856E	55. G(K)	H:13,D:SU1,	.	.	.	.
	.	.	.	.	MOSU2	.	.	.	.
GENOVA/SESTRI	A	4425N	851E	3. G(R) 65-	D:SU1,MOSU2	D	.	48	.
	.	.	.	. S(C) 57-	MOSU1-2	H	.	.	.
MONTE CIMONE	A	4412N	1042E	2137. G(R) 62-	D:SU1,MOSU2	D	.	24	.
	.	.	.	. S(C) 57-	MOSU1-2	H	.	.	.
CAPO MELE	A	4357N	810E	221. G(R) 63-	D:SU1,MOSU2	D	.	24	.
	.	.	.	. S(C) 63-	MOSU1-2	H	.	.	.
PISA	A	4340N	1023E	1. G(R) 64-	D:SU1,MOSU2	D	.	48	.
	.	.	.	. S(C) 64-	MOSU1-2	H	.	.	.
ANCONA	A	4337N	1331E	105. G(R) 62-	D:SU1,MOSU2	D	.	24	.
	.	.	.	. S(C) 66-	MOSU1-2	H	.	.	.
MACERATA	C	4318N	1327E	334. G( )	10D:12	.	.	.	.
	.	.	.	. D( )	10D:12	.	.	.	.
	.	.	.	. G(K)	10D:12	.	.	.	.
	.	.	.	. S(C)	10D:12	.	.	.	.
PIANOSA	A	4235N	1006E	27. G(R) 62-	D:SU1,MOSU2	D	.	8	.
	.	.	.	. S(C) 57-	MOSU1-2	H	.	.	.
MONTE TERMINILLO	A	4228N	1259E	1875. G(R) 66-	D:SU1,MOSU2	D	.	24	.
	.	.	.	. S(C) 57-	MOSU1-2	H	.	.	.

/WAVELENGTHS

	2	3.	4	5	6	7.	8.	9.	10
PESCARA	.	.	.	.	.	.	.	.	.
PESCARA	A	4226N	1412E	16. G(R) 65-	D:SU1,MO:SU2	D	.	.24	.
VIGNA DI VALLE	A	4205N	1213E	270. G(R) 65-	M:SU1-2	H	.	.	.
ROMA/CIAMPINO	A	4148N	1235E	131. G(R) 61-	D:SU1,MO:SU2	D	.	.15	.
				G(BS)	M:SU1-2	H	.	.	.
				E(LH)	D:I1	D	.	.	.
AMENDOLA/FOGGIA	A	4131N	1543E	56. G(R) 57-	M:SU1-2	H	.	.	.
OLBIA	A	4056N	930E	2. G(R) 63-	D:I1-SU1,MO:SU2-D	D	.	.24	.
NAPOLI/CAPODICHINO	A	4051N	1418E	72. G(R) 66-	M:SU1-2	H	.	.	.
BRINDISI	A	4039N	1757E	10. G(R) 57-	D:SU1,MO:SU2	D	.	.48	.
CAPO PALINURO	A	4001N	1517E	185. G(R) 57-	M:SU1-2	H	.	.	.
CAGLIARI	A	3915N	903E	18. G(R) 61-	D:SU1,MO:SU2	D	.	.	.
CROTONE	A	3904N	1704	158. G(R) 65-	M:SU1-2	H	.	.	.
USTICA	A	3842N	1311E	251. G(R) 65-	D:SU1,MO:SU2	D	.	.18	.
MESSINA	A	3812N	1533E	59. G(R) 64-	M:SU1-2	H	.	.	.
TRAPANI	A	3755N	1230E	14. G(R) 59-	D:SU1,MO:SU2	D	.	.24	.
GELA	A	3705N	1413E	33. G(R) 66-	M:SU1-2	H	.	.	.
PANTELLERIA	A	3649N	1158E	170. G(R) 66-	D:SU1,MO:SU2	D	.	.18	.
				S(C)	M:SU1-2	H	.	.	.

## JORDAN

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
BAQURA	A	3237N	3537E-170.	G(R) 72-	.	D	.	.	.
IRBID	A	3233N	3551E 616.	G(R) 75-	.	H	.	.	.
WADI ELYABIS	A	3224N	3535E-200.	G(R) 76-	.	D,H	.	.	.
DEIR ALLA	A	3212N	3537L-224.	G(R) 73-	.	D	.	.	.
WADI DHULIEL	A	3209N	3617L 580.	G(R) 71-	.	D,H	.	.	.
AMMAN AIRPORT	A	3157N	3557E 766.	G(.) 76-	.	H	.	.	.
RABDAH	A	3116N	3554L 920.	G(R) 76-	.	D,H	.	.	.
GHOR-SAFI	A	3100N	3530L-387.	G(R) 76-	.	D	.	.	.
SHAUBAK	A	3032N	3532E1365.	G(R) 75-	.	D	.	.	.
AGABA AIRPORT	A	2933N	3500E 51.	G(.) 76-	.	30M	.	.17	.
				S(C)	D,H	H	.	.	.

## LEBANON

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
BEYROUTH	A	3349N	3529E	24. G(K) 64-	D:SU1,MO:SU2	D	.	.48	.
KSARA	A	3349N	3553E	922. G(.)	M:SU2	H	.	.	.
				S(C)	.	.	.	.	.

## MALTA

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
ORENDI	GB	3555N	1426E	135. G(K) 57-72,74-78	D:SU1,MO:SU2	H	.	.	.
				D(K) 57-72,74-78	D:NLT1	H	.	.	.
				O(.).	D:NLT1-2	H	.	.	.
				S(C) 57-	M:SU2	H	.	.	.
LUQA	A	3551N	1429E	91. S(C)	D:NLT1-2	H	.	.	.
					.	H	.	.24	.

## THE NETHERLANDS

	2	3.	4	5	6	7.	8.	9.	10
	.	.	.	.	.	.	.	.	.
EELDE	A	5308N	0635E	4. G(K) 65-	D:NLT1-2	H	.	.24	.
				S(C) 52-	D:NLT1-2	H	.	.	.
				S(C) 05-52	D:NLT1	H	.	.	.
DEN HELDER	A	5258N	0445E	15. G(K) 64-72	D:NLT1-2	H	.	.24	.
				S(C) 08-72	D:NLT1-2	H	.	.	.
DE KOUY	A	5255N	0447E	1. G(K) 72-	D:NLT1-2	H	.	.24	.
				S(C) 72-	D:NLT1-2	H	.	.	.
DE BILT	A	5206N	0511E	43. I(CA)	D:NLT1-2	H	.	.	.
				I(LF) 71-	.	H	.	.24	.
				G(K) 54-	D:NLT1-2-SU1, M:SU2	H	.	.	.
				S(C) 57-	D:NLT1-2	H	.	.	.
				G(XE2) 71-	.	H	.	.	.
				UV(EU) 71-	.	H	.	.	.
				S(C) 1899-	D:NLT1-2	H	.	.	.
				S(J) 00-44	D:NLT1	H	.	.	.
MAALDIJK	A	5159N	0412E	6. G(K) 71-	.	H	.	.	.
OOSTVOORNE	A	5155N	0405E	6. G(K) 71-	.	H	.	.	.
HELLEVOUTSLUIS	A	5149N	0408E	8. G(K) 71-75	.	H	.	.	.
				S(C) 43-77	.	H	.	.	.
VLISSINGEN	A	5127N	0336E	8. G(K) 63-	D:NLT1-2	H	.	.24	.
				S(C) 07-44,45-	D:NLT1-2	H	.	.	.
BEEK,ZUID-LIMBURG	A	5055N	0546E	115. G(K) 64-	D:NLT1-2	H	.	.24	.
				S(C) 46-	D:NLT1-2	H	.	.	.
				S(C) 06-46	D:NLT1-2	H	.	.	.

	2	3.	4	5	6	7.	8.	9.	10
SCHIERMONNIKOOG	A .5329N	0610E	. S(C)	73-		H	H		
ULTHUIZERNEEDEN	A .5324N	0642E	. S(C)	54-56		H			
TERSCHELLING	A .5322N	0513E	55. S(C)	48-50,51-		H	H		
TEN BOER	A .5316N	0643E	2. S(C)	49-72		H			
LEEUWARDEN	A .5313N	0546E	3. S(C)	55-		H	H		
BERGUMERDAM	A .5310N	0559E	. S(C)	52-57		H			
KORNWERDERZAND	A .5304N	0520E	4. S(C)	44-45,45-50,52-		H	H		
STAVOREN	A .5253N	0521E	5. S(C)	44-50,52-		H	H		
WIERINGERWERF	A .5248N	0503E	3. S(C)	59-		H	H		
HEM/VENHUIZEN	A .5240N	0512E	. S(C)	52-53		H			
URK	A .5239N	0536E	9. S(C)	44-45,45-50,52		H	H		
DEDEMVAART	A .5236N	0629E	9. S(C)	49-		H	H		
CASTRICUM	A .5235N	0438E	6. S(C)	45-71		H			
LELYSTAD	A .5230N	0525E	6. S(C)	53-		H			
IJMUIDEN	A .5228N	0434E	12. S(C)	72-		H	H		
AMSTERDAM	A .5222N	0454E	15. S(C)	45-		H	H		
HARDERWIJK	A .5222N	0536E	14. S(C)	52-		H	H		
SCHIPHOL	A .5213N	0446E	32. S(C)	63-		H	H		
TWENTE	A .5217N	0654E	58. S(C)	63-		H	H		
NORDWIJK AAN ZEE	A .5215N	0426E	. S(C)	51-57		H			
VALKENBURG	A .5211N	0425E	6. S(C)	51-		H	H		
KOOTWIK RADIO	A .5210N	0551E	42. S(C)	51-		H	H		
SCHEVENINGEN	A .5206N	0416E	51. S(C)	51-		H	H		
DCELEN	A .5204N	0553E	52. S(C)	63-		H	H		
HINTERSWIJK	A .5155N	0643E	70. S(C)	51-		H	H		
STELLEDAM	A .5150N	0403E	. S(C)	77-		H	H		
ODDENDORP	A .5148N	0352E	66. S(C)	46-50,51-		H	H		
BERN	A .5145N	0511E	9. S(C)	48-50,51-52,53-		H	H		
NUMANSDORP	A .5143N	0427E	6. S(C)	48-50,51-53,53-		H	H		
ZILERIKZEE	A .5139N	0356E	2. S(C)	60-		H	H		
GILZE-RIJEN	A .5134N	0456E	12. S(C)	51-		H	H		
GEMERT	A .5133N	0541E	18. S(C)	49-		H	H		
BERGEN OP ZOOM	A .5130N	0416E	. S(C)	69-		H	H		
WOENSDRACHT	A .5126N	0421E	10. S(C)	56-68		H	H		
LINNE	A .5109N	0556E	32. S(C)	53-		H	H		

## NORWAY

	2	3.	4	5	6	7.	8.	9.	10
ISFJORD RADIO	A .7804N	1358E	6. G(R)	50-68		D		8	
	.	.	. S(C)	52-59		H			
	.	.	. S(C)	59-74		H			
BJORNOYA	A .7431N	1901L	15. G(R)	69-70	MO:N1	D		8	
	.	.	. G(K)	70-	MO:N1	D			
	.	.	. S(C)	59-	MO:N1	H			
TROMSO	A .6939N	1857E	102. I(A)	54-		D		3	
	.	.	. G(R)	45-54		D			
	.	.	. G(K)	54-	MO:N1	D			
	.	.	. S(C)	42-	MO:N1	H			
KARASJOK	A .6921N	2531L	129. G(R)	50-68		D		5	
	.	.	. G(K)	77-		H			
	.	.	. R(K)	77-		H			
	.	.	. Q-( )	377-		H			
	.	.	. Q-( )	377-		H			
	.	.	. S(C)	54-		H			
BODD VI	A .6776N	1422E	10. G(R)	53-68		D		46	
	.	.	. S(C)	53-		H			
TRONDHEIM	A .6325N	1027C	127. G(R)	59-65	MO:N1	D		3	
	.	.	. S(C)	53-66	MO:N1	H			
	.	.	. G(K)	65-	MO:N1	D			
	.	.	. S(C)	65-	MO:N1	H			
SOR-NESSET	A .6153N	1009E	738. G(R)	60-66		D		4	
	.	.	. S(C)	55-	MO:N1	H			
LOSSET	A .6122N	1123E	262. G(K)	68-74		H			
	.	.	. R(K)	66-74		H			
	.	.	. Q+( )	68-74		H			
	.	.	. Q-( )	68-74		H			
	.	.	. S(C)	67-74		H			
VARDEN-FILEFJELL	A .6111N	0809E1012	. G(K)	68-74		H			
	.	.	. R(K)	68-74		H			
	.	.	. Q+( )	68-74		H			
	.	.	. Q-( )	68-74		H			
	.	.	. S(C)	68-74		H			
LAERDAL	A .6104N	0731E	36. G(R)	61-68		D		3	
KISE PR HEDMARK	A .6046N	1049L	126. G(K)	64-	MO:N1	D		6	
	.	.	. S(C)	59-	MO:N1	H			
BERGEN	A .6024N	0519E	45. I(A)			D		8	
	.	.	. I(M1)			H			
	.	.	. I(LF)			H			
	.	.	. G(R)			H			
	.	.	. G(K)	53-		H			
	.	.	. G(E2)	65-		H			
	.	.	. D(K)		HN2, D:SU1,	H			
	.	.	. L+(SH)		MO:SU2	H			
	.	.	. UV(EU)		HN2	H			290-390NM
	.	.	. E( )		HN2	H			
	.	.	. S(C)	45-	HN2, MO:N1-	H			
	.	.			SU1-2	H			
FURUSMO	A .6010N	1107E	200. G(K)	68-74		H			
	.	.	. R(K)	68-74		H			
	.	.	. Q+( )	68-74		H			
	.	.	. Q-( )	68-74		H			
	.	.	. S(C)	68-74		H			
VORMSUND	A .6009N	1127E	152. G(R)	58-68		D		3	
OSLO BLINDERN	A .5956N	1044E	94. I(A)			D			
	.	.	. G(R)	59-65		H			
	.	.	. G(K)	65-	MO:N1	D			
	.	.	. S(C)	53-	MO:N1	H			
AS	A .5940N	1047E	95. G(R)	59-69		D			
	.	.	. S(C)	59-	MO:N1	H			
KJEVREN	A .5812N	0805E	16. G(R)	59-61		D		40	
	.	.	. G(K)	61-	MO:N1	D			
	.	.	. S(C)	53-	MO:N1	H			
BRONNOYSUND	A .6528N	1213E	5. S(C)	55-72		H			
GJERMUNDNES	A .6237N	0710E	51. S(C)	63-72		H			
HILDRE	A .6236N	0619E	20. S(C)	69-74		H			
SKODJE	A .6230N	0641E	30. S(C)	61-	MO:N1	H			
STRANDA HELSEM	A .6218N	0657E	94. S(C)	64-74		H			
VALLDAL	A .6215N	0714E	50. S(C)	62-74		H			
HAREIDE	A .6222N	0559E	25. S(C)	63-72		H			
ORSTAVIK	A .6212N	0608E	35. S(C)	68-71		H			
FISKABYGD	A .6206N	0535E	41. S(C)	69-		H			
HORNSET	A .6148N	1108E	276. S(C)	67-74		H			

	2	3	4	5	6	7	8	9	10
•OTTASSEN	•A .6144N 1109E 459.	S(C)	67-72						
•BJØRKEHAUG	•A .6139N 0716E 324.	S(C)	63-						
•HØNDSETER	•A .6137N 0858E 896.	S(C)	71-73						
•LILLEHAMMER	•A .6105N 1029E 226.	S(C)	53-58						
•SONSTERUD	•A .6039N 1203E 186.	S(C)	60-66						
•HAUGASTØL	•A .6031N 0752E 988.	S(C)	53-76	•MO:N1					
•BERGEN-FLORIDA	•A .6023N 0520E 39.	S(C)	45-						
•ULLSVANG FORSGOKSGARD	•A .6019N 0639E 12.	S(C)	53-58	•MO:N1					
•SØLDAL-MØ	•A .5928N 0625E 58.	S(C)	74-						
•UTSIRA FYR	•A .5918N 0453E 55.	S(C)	53-58						
•SOLA	•A .5653N 0538E 9.	S(C)	53-	•MO:N1					
•LYNGØR FYR	•A .5638N 0909E 4.	S(C)	73-	•MO:N1					

## POLAND

	2	3	4	5	6	7	8	9	10
•GDYNIA	•A .5431N 1833E 20.	I(LF)	53*						
			•IX(LF)57*						
			•G( ) 56-						
			•G(K) 64-	•D:SU1,MO:SU2					
			•S(C) 48-	•D:PL1,MO:SU1-2					
•KOŁOBRZEG	•A .5411N 1535E 10.	I(MG)	53*						
			•IX(MG)57*						
			•G( ) 57-59						
			•G(K) 64-	•D:SU1,MO:SU2					
			•S(C) 54-	•D:PL1,MO:SU1-2					
•SUWALKI	•A .5406N 2257E 172.	I(MG)	53*						
			•IX(MG)57*						
			•G( ) 57-60						
			•G(K) 64-	•D:SU1,MO:SU2					
			•D(K)						
			•S(C) 53-	•D:PL1,MO:SU1-2					
•MIKOLAJKI	•A .5347N 2135E 127.	I(LF)	60*						
			•IX(LF)60*						
			•G( ) 60-						
			•G(K) 66-	•D:SU1,MO:SU2					
			•D( ) 60-						
			•D(X) 66-						
			•S(C) 59-	•D:PL1,MO:SU1-2					
•BIAŁOWIEZA	•A .5242N 2351E 188.	G(K)							
			•S(C)						
•WARSZAWA BIELANY	•A .5216N 2059E 130.	I(A)							
			•I(LF) 57*						
			•IX(LF)57*						
			•G(R) 57-						
			•G(K) 60-	•D:SU1,MO:SU2					
			•D(K) 62-						
			•J*(SH)						
			•S(C) 57-	•D:PL1,MO:SU1-2					
•BRWINOW	•A .5203N 2043E 110.	I(MG)	53*						
			•IX(MG)57*						
			•G( ) 52-						
			•G(K) 64-	•D:SU1,MO:SU2					
			•D(K)						
			•Q*(FU)						
			•S(C) 49-	•D:PL1,MO:SU1-2					
•BĘLSK	•A .5150N 2047E 188.	I(LF)	*						
			•IX(LF)						
			•G(K)						
			•UV(RB)75-	•D:SU1,MO:SU2					TBL
			•S(C)	•D:SU1-2					-315NM
•PULawy	•A .5125N 2157E 147.	I(MG)	55*						
			•IX(MG)57*						
			•G(R) 64-	•D:SU1,MO:SU2					
			•G(K)						
			•D(K)						
			•S(C) 48-	•D:PL1,MO:SU1-2					
•WROCŁAW	•A .5107N 1705E 131.	I(A)							
			•I(LF)						
			•IX(LF)						
			•G(R)						
			•G(K)						
			•D(K)						
			•R(K)						
			•Q*( )						
•SZRENNICA	•A .5046N 1531E1364.	I(MG)							
			•G(K)						
			•D(K)						
			•S(C)						
•CHORZÓW	•A .5017N 1900E 316.	I(MG)							
			•G(K)						
			•D(K)						
			•R(K)						
			•S(C)						
•RABKA	•A .4936N 1959E 500.	I(MG)	55*						
			•IX(MG)57*						
			•S(C) 49-	•D:PL1					
•ZAKOPANE	•A .4918N 1957E 854.	I(MG)	53*						
			•IX(MG)57*						
			•G( ) 57-						
			•G(K) 64-	•D:SU1,MO:SU2					
			•D(K)						
			•Q*(FU)						
•KASPRZEWY-WIERCH	•A .4914N 1959E1991.	I(LF)	53*						
			•IX(LF)57*						
			•G( ) 57-						
			•G(K) 64-	•D:SU1,MO:SU2					
			•D(K)						
			•S(C) 46-	•D:PL1,MO:SU1-2					

	2	3.	4	5	6	7.	8.	9.	10	
BRAGANCA	A	4149N	666W	691. G(R) 54- S(C) 32-	D:P1-SU1,MD:SU2,D MO:P1-SU1-2		8			
PORTO	A	4108N	836W	106. I(A) I(SD) 35* I(MG) 39* 112. G(K) G(E1) 39- D(K) 57- S(C) 03-20+22-35*39-	*P1-3-6 D:P1-6,M:P3 H:P3,D:SU1, MO:SU2 D:P3 MO:P1-SU1-2, D:P6			667,061-2,RG2		
PENHAS DOURADAS	A	4025N	733W	1380. G(R) 54-63 G(K) 63- S(C) 39- I(MG) 57* G(K) 55- G(BS) D(K) 58- R( ) 57- W(SH)57- S(C)1894-	D:P1 D:P1-SU1,MD:SU2,D MO:P1-SU1-2 *P1-4 D:P1-4-SU1, MO:SU2 D:P4 D:P4 D:P4 D:P1 MO:P1-SU1-2, D:P4 D:P1 MO:P1		4			
COIMBRA	A	4012N	825W	141. I(SD) I(MG) 57* G(K) 55- G(BS) D(K) 58- R( ) 57- W(SH)57- S(C)1894-	*P1-4 D:P1-4-SU1, MO:SU2 D:P4 D:P4 D:P4 D:P1 MO:P1-SU1-2, D:P4 D:P1 MO:P1		8		0G1,RG2,TBL	
CORVO	A	3940N	3107W	28. G(R) 55- S(C) 51- I(LF) 55* I(E) 55* I( ) 57-68 G(E1) 39- G/( -)57-66 D(K) 55- W(SH)61- S(C)1891-	D:P1 MO:P1 *P1 *P1 D D:P1-SU1,H:P5, MO:SU2 D H D 90N,S		24			
LISBOA	A	3843N	909W	77. I(A) I(LF) 55* I(E) 55* I( ) 57-68 G(E1) 39- G/( -)57-66 D(K) 55- W(SH)61- S(C)1891-	*P1 *P1 D D:P1-SU1-2, MO:SU2 D:P1 MO:P1-SU1-2, D:P5 D:P1 D MO:P1 D H D D 90N,S			0G1,RG2-8 0G1,RG2		
ANGRA DO HEROISMO	A	3839N	2714W	92. G(R) 57- S(C) 35- G(R) 54- G(C) 39- G(R) 55- S(C) 33- G(R) 54- S(C) 39- G(R) 54- S(C) 39- G(R) 56- S(C)	D:P1 MO:P1 D:P1-SU1,MD:SU2,D MO:P1-SU1-2 D:P1 MO:P1 D:P1 MO:P1-SU1-2 D:P1-SU1,MD:SU2,D MO:P1-SU1-2 D:P1 MO:P1 D:P1 MO:P1					
EVORA	A	3834N	754W	309. G(R) 54- G(C) 39- G(R) 55- S(C) 33- G(R) 54- S(C) 39- G(R) 56- S(C)	D:P1-SU1,MD:SU2,D MO:P1-SU1-2 D:P1 MO:P1 D:P1-SU1,MD:SU2,D MO:P1-SU1-2 D:P1 MO:P1 D:P1 MO:P1		4			
PONTA DELGADA	A	3745N	2540W	36. G(R) 55- S(C) 33- G(R) 54- S(C) 39- G(R) 54- S(C) 39- G(R) 56- S(C)	D:P1 MO:P1 D:P1 MO:P1 D:P1-SU1,MD:SU2,D MO:P1-SU1-2 D:P1 MO:P1		24			
FARO	A	3701N	758W	8. I(MG) 57* G(R) 54- S(C) 39- G(R) 54- S(C) 39- G(R) 54- S(C) 39- G(R) 56- S(C)	D:P1 MO:P1 D:P1 MO:P1 D:P1-SU1,MD:SU2,D MO:P1-SU1-2 D:P1 MO:P1		48	0G1,RG2		
PORTO SANTO	A	3304N	1621W	78. G(R) 56- S(C)	D:P1 MO:P1 D:P1 MO:P1		24			
FUNCHAL	A	3238N	1654W	58. G(K) 54-70 S(C)	D:P1 MO:P1 D:P1 MO:P1		24			

ROMANIA

	2	3.	4	5	6	7.	8.	9.	10
JASI		A .4710N	2735E 104.	I(Y) I(M1) 64+ G(Y) 64+ G(R) 64- Q(Y) 64+ E(BL) 64+ S(C) 49-				24	OG1, RG2, TBL
CLUJ-NAPOCA		A .4647N	2334E 410.	I(Y) I(M1) 57+ G(Y) 57+ G(R) 57- Q(Y) 57+ E(BL) 57+ S(C) 57-				24	OG1, RG2, TBL
TIMISOARA		A .4547N	2117E 90.	I(Y) I(M1) 57+ G(Y) 57+ G(R) 57- Q(Y) 57+ E(BL) 57+ S(C) 57-				24	OG1, RG2, TBL
BUKARESTI AFUMATI		A .4430N	2613E 91.	I(A) I(LF) 68- I(M1) I(Y) G(Y) 50- G(R) G(K) D(K) D(Y) R( ) 66- Q(Y) Q(SH) 68- E(BL) S(C) 50-					OG1, RG2-8, TBL OG1, RG2, QUA
GALATI		A .4530N	2801E 71.	G(R) S(C) 50-	D:R1, MO:SU1-2 D:R1-SU1, MO:SU2. D:R1, MO:SU1-2			24	
CRAIOVA		A .4414N	2352E 190.	G(R) S(C) 56-	D:R1-SU1, MO:SU2. D:R1-MO:SU1-2				
CONSTANTA		A .4413N	2838E 31.	I(Y) G(Y) G(R) Q(Y) S(C) 58- I(Y)	D:R1-SU1, MO:SU2. D:R1, MO:SU1-2			24	
MANGALIA		A .4349N	2835E 6.	I(M1) * G(Y) * G(R) 61- Q(Y) * E(BL) * S(C) 63-	D:R1-SU1, MO:SU2. D:R1, MO:SU1-2			24	RG2, OG1, TBL

	2	3.	4	5	6	7.	8.	9.	10
SANTANDER	A 4328N 0349W 79.	G(R)	73-	.	.	.	.	10	
OVIEDO	A 4321N 0552W 348.	G(R)	72-	.	.	D	.	11	
LUGO	A 4315N 0722W 424.	G(R)	76-	.	.	H	.		
SANTIAGO DE COMPOSTELA	A 4254N 0826W 370.	G(K)	75-	.	.	H	.	16	
LEON	A 4235N 0539W 914.	G(R)	75-	.	.	H	.	16	
LOGRONO	A 4227N 0220W 358.	G(R)	71-	.	.	D,H	.		
BURGOS	A 4221N 0338W 890.	G(R)	75-	.	.	D,H	.	16	
VALLADOLID	A 4143N 0451W 850.	G(K)	75-	.	.	D,H	.	16	
BARCELONA UNIV.	A 4132N 0207W 105.	I(LF)	74*	.	*	*	48	0GT,R62-8, QUA,,TB	
BARCELONA PUTXET	A 4125N 0209W 180.	G(R)	75-75	.	.	D	.	48	
SALAMANCA	A 4057N 0530W 803.	G(R)	66-72,76-	.	.	D,H	.	16	
MOLINA DE ARAGON	A 4051N 0153W 1056.	G(R)	76-	.	.	D,H	.	7	
TORTOSA/EBRO	C 4049N 0020E 50.	G(K)	72-	.	.	D,H	.	3	
MADRID	A 4027N 0343W 669.	I(C)	77*	.	.	D,H	.		
CUENCA	A 3957N 0415W 83.	G(R)	58-	.	.	D	.	48	
MAHON/MENORCA	A 3953N 0415W 83.	G(R)	76-	.	.	H	.		
PALMA DE MALLORCA	A 3934N 0229E 32.	G(K)	75-	.	.	H	.		
CIUDAD REAL	A 3859N 0355W 628.	G(R)	76-	.	.	H	.		
ALBACETE	A 3857N 0150W 702.	G(R)	76-	.	.	D,H	.		
BADJOI	A 3853N 0649W 192.	G(R)	58-67	.	.	D	.	10	
ALICANTE	A 3822N 0050W 91.	G(R)	76-	.	.	D	.	11	
MURCIA	A 3757N 0234W 62.	G(R)	72-74	.	.	H	.		
CORDOBA	A 3751N 0450W 91.	G(R)	76-	.	.	D	.	3	
SEVILLA	A 3725N 0554W 31.	G(R)	76-	.	.	D	.	10	
HUELVA	A 3706N 0644W 45.	G(R)	76-	.	.	D	.	5	
ALMERIA	A 3551N 0223W 35.	G(R)	76-	.	.	D	.		
MALAGA	A 3640N 0130W 7.	G(K)	75-	.	.	D	.		
CEUTA	A 3555N 0518W 200.	G(R)	76-	.	.	D	.		
MELILLA	A 3517N 0257W 55.	G(R)	76-	.	.	D	.	7	
LA PALMA	A 2837N 1745W 30.	G(R)	76-	.	.	D	.	10	
		S(C)	69-	.	.	D	.		

## SWEDEN

	2	3.	4	5	6	7.	8.	9.	10
KIRUNA	A 6751N 2014E 505.	G(K)	56-	.	.	.	.	.	
	.	E(C)	62-76	.	.	D:S2-SU1,M0:SU2,H	.	24	H:S2:59-60,
HARADS	A 6605N 2057E 35.	G(K)	58-	.	.	H	.		.62-64,70-71
LULEA-KALLAX	A 6533N 2208E 16.	G(K)	59-60	.	.	M0:SU1-2,D:S1,	H	.	.12H:S2
	.	S(C)	61-	.	.	D:S2	H	.	
UMEH-TEG	A 6349N 2004E 10.	G(K)	57-	.	.	M0:SU1-2,D:S1,	H	.	.12H:S2
OSTERSUND-FROSÖN	A 6318N 1429E 364.	G(K)	57-	.	.	D:S2,12H:S2	H	.	
	.	S(C)	57-	.	.	H	H	.	24
SILJANSFORS	A 6053N 1423E 260.	G(K)	73-	.	.	D:S1,12H:S2	H	.	H:S2:57-60
JADRARS	A 6050N 1630E 200.	G(K)	73-	.	.	D	H	.	
	.	Q(KNE)	.	.	.	D	.	.	
SANDVIKEN	A 6037N 1648E 110.	G(K)	57-59	.	.	D:S2	H	.	
OREGRUND	C 6020N 1850E	G(K)	75-76	.	.	D	.	.	
ERKEN	A 5950N 1831E 15.	G(K)	57-	.	.	12H:S2	H	.	ON TAPE ZC-
	.	S(C)	57-65,67-	.	.	H	H	.	ON TAPE 67-
ULTUNA	E 5949N 1740E 25.	G(K)	57-58,63-	.	.	D:S2	D	.	
	.	S(C)	63-	.	.	12H:S2	H	.	
KARLSTAD	A 5922N 1328E 47.	G(K)	57-	.	.	12H:S2	H	.	24
	.	S(C)	49-	.	.	D:S1,12H:S2	H	.	H:S2:57-60
STOCKHOLM-BROMMA	A 5921N 1757E 12.	G(K)	75-	.	.	D:S1-SU1,M0:SU2,H	H	.	
	.	E(C)	75-76	.	.	H	H	.	
STOCKHOLM-SMH1	A 5920N 1802E 43.	I(C)	21-75	.	.	M0:SU1-2,D:S1	H	.	
	.	G(C)	21-45	.	.	M0:S1	D	.	
	.	G(C)	45-51	.	.	M0:S1	H	.	
	.	G(K)	52-56	.	.	M0:S1	H	.	
	.	G(K)	57-75	.	.	H:S2,D:S1-SU1,	H	.	M0:S2
	.	D(K)	57-75	.	.	12H:S2	H	.	.D:S2:57-60
	.	E(C)	61-75	.	.	H	H	.	
	.	S(J)	08-39	.	.	M0:S1	H	.	
	.	S(C)	35-75	.	.	M0:SU1-2,D:S1	H	.	ON TAPE 55-75
STUDSVIK	A 5846N 1723E 75.	G(K)	61-66	.	.	12H:S2	H	.	

	2	3.	4	5	6	7.	8.	9.	10
NORRKOPING-SMHI	A	5835N	1609E	43. I(A) 78-		H	M	.24	
	.	.	.	. IX(A) 76*		*	.	.	
	.	.	.	. G(K) 75-		H	M	.	
	.	.	.	. G(K) 76-		H	M	.	
	.	.	.	. GX(K) 76-79		H	M	.	
	.	.	.	. GX(L) 78		H	M	.	
	.	.	.	. D(K) 76-		H	M	.	
	.	.	.	. Q-(NE) 78-		H	M	.	
	.	.	.	. S(H) 78-		H	M	.	
	.	.	.	. S(C) 78-		H	M	.	
GOTEBORG-TORSLANDA	A	5742N	1147E	6. I(A) 58-75		*	.	.24	
	.	.	.	. G(K) 58-77	12H52,	H	H	.	H=S2:58-60
	.	.	.	. S(C) 50-77	0:51,12H:S2	H	H	.	ON TAPE 61-77
GOTEBORG-LANDVETTER	A	5740N	1218E	154. I(A) 78-		*	.	.24	
	.	.	.	. G(K) 78-	0:51	H	M	.	
FISKEBÄCK	D	5740N	1150E	. S(C) 73-		*	.	.10M.	
VISUY	A	5739N	1820E	47. I(A) 57*		*	.	.10M.	
	.	.	.	. G(K) 57-	12H:52*	H	H	.	
	.	.	.	. S(C) 52-	12H:52	H	H	.	
HERRVIK	C	5725N	1915E	. G(K) 74-76		D	.	.	
HÖRVIK	C	5504N	1445E	. G(K) 74-76		D	.	.	
SVALÖV	A	5555N	1337E	72. G(K) 58-		H	H	.	H=S2:58-60
	.	.	.	. S(C) 53-	0:51,12H:S2	H	H	.	
MALMÖ-BULLTOFTA	A	5536N	1803E	8. G(K) 63-73		H	H	.	
	.	.	.	. E(C) 65-73	12H:S2	H	H	.	
STURUP	A	5533N	1322E	72. G(K) 73-		H	H	.	
	.	.	.	. E(C) 73-76		H	H	.	
KATTERJÄKA	A	6625N	1810E	515. S(C) 72-		H	H	.	
RIKSGRÄNSEN	A	6625N	1808E	508. S(C) 30-42		D	.	.	
ADISKO	A	6620N	1550E	386. S(C) 33-37,39-50,52-		H	H	.	
PAJALA	A	6712N	2325E	176. S(C) 52-		D	.	.	
HEMavan	A	6549N	1506E	475. S(C) 65-		H	H	.	
NORRA SUNDERBYN	A	6542N	2151E	20. S(C) 53-68		H	H	.	
LAXBACKEN	A	6438N	1625E	345. S(C) 44-47		H	H	.	
UMER	A	6348N	2017E	14. S(C) 69-		H	H	.	
GISSLERS	A	6342N	1522E	320. S(C) 30-65		H	H	.	
STÖRLIEN-VITSJÖVALLEN	A	6312N	1208E	640. S(C) 53-		H	H	.	ON TAPE 62-
ÖSTERÅSEN	.	.	.	. S(C) 25-49		H	H	.	
OFFERFJÖDRÖM	A	6309N	1746E	27. S(C) 36-68		H	H	.	
SUNDSVALL	A	6231N	1726L	4. S(C) 55-		H	H	.	
SVEC	A	6202N	1425E	358. S(C) 50-		D	.	.	ON TAPE 61-
ÅLVDALEN	A	6115N	1432E	250. S(C) 73-		H	H	.	ON TAPE 52-
ROMMEHED	A	6043N	1520E	.		H	H	.	
MARSTA	A	5956N	1736E	18. S(C) 53-		H	H	.	
ULTUNA	A	5949N	1739E	15. S(C) 57-		H	H	.	
ÄRVÅKA	A	5940N	1237L	70. S(C) 26-43		H	H	.	
HYCKELBY/ÅKERÖ	A	5918N	1743E	25. S(C) 59-72		H	H	.	ON TAPE
	.	.	.	.	.	*	.	.	66-67,72
GRÖNSKÄR	A	5917N	1902E	. S(C) 51-61		H	H	.	
SALT SJÖDÄDEN	A	5916N	1819E	36. S(C) 51-64		H	H	.	
NYNÄSHAMN	A	5856N	1756E	10. S(C) 52-62		H	H	.	
NORKKUPING-SÖRBY	A	5838N	1813E	10. S(C) 55-		D	.	.	
ÅSABORG	A	5825N	1346E	290. S(C) 40-74		H	H	.	ON TAPE 61-
LÄNRA	A	5821N	1308L	60. S(C) 50-		H	H	.	ON TAPE 61-74
SVENHÖGEN	A	5804N	1501E	100. S(C) 23-20		H	H	.	
ROMAHÅS	A	5804N	1501L	155. S(C) 31-47,52-61		H	H	.	
FLÄHULT	A	5742N	1408L	224. S(C) 15-23,26-63		H	H	.	
JÖNKÖPING	A	5746N	1405E	226. S(C) 64-		D	.	.	
KÄLLTORP	A	5743N	1233E	60. S(C) 23-49		H	H	.	
VÄNGLA	A	5738N	1137E	19. S(C) 31-		D	.	.	ON TAPE 61-
STYRSÖ	A	5736N	1146E	19. S(C) 23-49		H	H	.	
ÄMUNDÖN	A	5736N	1135L	10. S(C) 22-40		H	H	.	
MÖSSER	A	5717N	1700L	10. S(C) 58-		D	.	.	ON TAPE 61-
ÅKERUM	A	5647N	1635E	40. S(C) 58-72		H	H	.	ON TAPE
	.	.	.	.	.	*	.	.	66-67,72
KALMAR	A	5641N	1616E	8. S(C) 53-63		H	H	.	
ÖLVINGS TORP	A	5657N	1607E	15. S(C) 63-67		H	H	.	
URSHULT	A	5632N	1447L	. S(C) 55-60-67		H	H	.	
TVINGELSHED	A	5611N	1536E	. S(C) 65-73		H	H	.	ON TAPE
	.	.	.	.	.	*	.	.	66-67,72
ÖLANDS SÖDRA UDDE	A	5612N	1624L	4. S(C) 37-		D	.	.	ON TAPE 61-
EKEÖ	A	5557N	1308L	36. S(C) 39-64		H	H	.	
HILLESHÖG	A	5555N	1251E	60. S(C) 59-60		H	H	.	
LUND	A	5543N	1312E	73. S(C) 59-73		H	H	.	
ALNARP	A	5539N	1305E	10. S(C) 46-69		H	H	.	
TRELLEBORG	A	5523N	1309E	5. S(C) 66-		D	.	.	

## SWITZERLAND

	2	3.	4	5	6	7.	8.	9.	10
GUTTINGEN	A	4736N	0917E	438. G(K) 77-		*	.	.	
	.	.	.	. S(H) 77-		.	.10M.	.	
BASEL-BINNINGEN	A	4732N	0735E	317. I(A) 56*60,76*78		*	.	.10M.	
	.	.	.	. I(M) 56*60,76*78		*	.	.10M.	
	.	.	.	. G(D) 56-60,76-78		*	.	.10M.	
	.	.	.	. G(K) 77-		*	.	.10M.	
	.	.	.	. G(BS) 54-		*	.	.10M.	
	.	.	.	. S(C) 1886-		*	.	.10M.	
	.	.	.	. S(H) 77-		*	.	.10M.	
TANZIKON	A	4729N	0854E	536. G(K) 77-		*	.	.10M.	
	.	.	.	. G(BS) 75-		*	.	.10M.	
	.	.	.	. S(C) 71-		*	.	.10M.	
	.	.	.	. S(H) 77-		*	.	.10M.	
ZURICH-KLOTEN	A	4727N	0834E	431. G(K) 63-72,76-		*	.	.10M.	
	.	.	.	. D(K) 63-72,76-		*	.	.10M.	
RECKENHOLZ	A	4726N	0831E	443. G(K) 76-		*	.	.10M.	
	.	.	.	. S(H) 75-		*	.	.10M.	
ZURICH-M2A	A	4723N	0834E	569. G(R) 38-42		*	.	.	
	.	.	.	. G(K) 77-		*	.	.10M.	
	.	.	.	. G(BS) 64-		*	.	.10M.	
	.	.	.	. S(C) 1884-		*	.	.10M.	
	.	.	.	. S(H) 77-		*	.	.10M.	
WYNNAU	A	4715N	0747E	410. G(K) 77-		*	.	.10M.	
	.	.	.	. S(H) 77-		*	.	.10M.	
SANTIS	A	4715N	0921E	2500. G(K) 76-		*	.	.10M.	
	.	.	.	. S(H) 76-		*	.	.10M.	
	.	.	.	. S(C) 1888-		*	.	.10M.	
VADUZ	A	4708N	0932E	457. G(K) 78-		*	.	.10M.	
	.	.	.	. S(H) 78-		*	.	.10M.	
	.	.	.	. 455. S(C) 72-73,74		*	.	.10M.	
LUZERN	A	4702N	0818E	456. G(K) 77-		*	.	.10M.	
	.	.	.	. S(H) 77-		*	.	.10M.	
	.	.	.	. 4704N 0819E 498. S(C) 11-		*	.	.10M.	
NEUCHATEL	A	4700N	0657E	485. G(K) 77-		*	.	.10M.	
	.	.	.	. S(H) 77-		*	.	.10M.	
	.	.	.	. S(C) 02-		*	.	.10M.	
	.	.	.	. D:CHT		*	.	.10M.	

LAWN  
IM:1960-1974

	2	3.	4	5	6	7.	8.	9.	10
•NAPF	A 4700N 0756E1408. G(K) 77-						10M.		
•BERN-LIEFELD	A 4656N 0725E 570. G(K) 77-						10M.		
•				S(H) 77-			10M.3		
•				S(H) 76-			10M.		
•ALTDORF	A 4652N 0838E 449. G(K) 78-						10M.3		
•				S(H) 76-			10M.		
•LA FRETAS	A 4650N 0637E1202. G(K) 77-				D:CH1	H	H		
•				S(H) 77-			10M.		
•WEISSFLUHJOCH	A 4650N 0948E2670. I(MI) 57-58						10M.		
•			I(LF) 58-59				10M.3		
•			G(R) 46-70		D:CH5				
•			G(BS) 55-76		D:CH3-CH5		D		
•			G(D) 70-		D:CH5		D,H.		
•			S(C) 56-				H:1000-1400		
•PAYERNE	A 4649N 0657E 489. G(K) 77-				M:CH1	D	D		
•			S(H) 77-				10M.		
•DAVOS	A 4649N 0951E1590. G(K) 77-				M:CH1	D	D		
•			S(H) 77-				10M.3		
•			4648N 0949E1590. I(A)				10M.		
•			I(MI) 09*10,12*29,31*						
•			I(MI) 20*29,31*						
•			I(D) 21*9						
•			G(R) 35-57,58-59						
•			G(K) 43-50,58-65						
•			G(E) 63-68						
•			G(D) 66-		D:SU1, SU2	H	H		
•			G(BS) 44-70,75-		D:CH3		D		
•			G(K) 44-50,56-67			H	H		
•			D(D) 68-			H	H		
•			R(D) 52-63						
•			G(D) 58-59		H:IGY				
•			R(D) 58-59		H:IGY				
•			O*(D) 58-59		H:IGY				
•			O*(D) 58-59		H:IGY				
•			UV(RB) * ,73-						
•			S(C)1885-		D:CH1,M:SU1-2	H	H		
•PULLY	A 4631N 0640E 461. G(K) 77-						10M.		
•INTLRLAKEN	A 4641N 0752E 754. S(C) 65-67,68-						10M.		
•			4640N 0753E 580. G(K) 77-				10M.		
•			S(H) 77-				10M.		
•CHANGINS	A 4624N 0614E 435. G(BS) 64-76				D:CH1	D	D	3	LAWN
•			G(K) 76-77-				10M.		
•			S(C) 65-		M:CH1				
•			S(H) 76-77-						
•ROBBIA	A 4621N 1004E1075. G(K) 76-						10M.		
•			S(H) 78-				10M.		
•SION	A 4614N 0722E 542. G(K) 77-						10M.3		
•			S(H) 77-				10M.		
•LOCARNO-MONTI	A 4610N 0847E 380. I(A) 44*				D:CH1	D	D		
•			I(V) 35-44				3		
•			I(LF) 45-						
•			I(MG) 35-36,44*45						
•			I(SD) 44*55						
•			G(R) 3C-59*						
•			G(K) 57-71						
•			G(D) 72-		D:SU1,M:SU2	H	H		
•			G(X) 76-77-				10M.		
•			G(DS) 53-						
•			G(DS) 60-						
•			G(ZK) 50-65						
•			G(ZK) 61-71						
•			G(ZD) 72-						
•			D(K) 57-71						
•			D(D) 72-						
•			D(BS) 60-						
•			O*(D) 58-71						
•			S(CA) 35-58						
•			S(C) 38-		D:CH1,M:SU1-2	H	H		
•			S(H) 76-77-				10M.		
•LUGANO	A 4600N 0858E 275. G(K) 77-						10M.3		
•			S(H) 77-				10M.		
•			S(C)1886-		D:CH1	H	H		
•ZURICH (GASOMETERSTR.)	A 4655N 0855E 405. G(K) 79-								
•			G(Z) 76-77						
•			D(K) 79-						
•ZURICH (TRIENLISK)	A 4631N 0837E1440. G(K) 70*						30M.		
•NANTE/AIROL	A 4631N 0837E1440. G(K) 70*						H H		ONLY SUMMER
•ESCHKEN-LINDAU	A 4727N 0841E 565. G(K) 73-76,77						15M.15M.		
•			555. G(XL) 78*				15M.15M.		
•							15M.15M.		
•TUFFENWIES ZH	F G(K) 70-								
•TIUN	F 55. G(K) 74-74								
•BERN	G 502. G(K) 74-74								
•DUBENDORF	G 450. G(C) 77-								
•			G(XL) 77-						
•MAGADINO	G 195. G(XL) 77-								
•KASTARIENBAUM	G 450.								
•			G(XL) 77-						
•DUBENDORF	G 430. G(K) 77-								
•GANNIGE	G 435. I(C) 69-71								
•BERN	I 540. G(S) 77*78								
•			R(S) 77*78						
•MOHLIN	G(S) 77*77								
•			R(S) 77*77						
•TRAVERS LES ROTTS	J 1090. G(R) 73-74								
•SAVIRT/LUKY	K G(K) 79-								
•			G/(K) 79-						
•ECBLENS	K I(C) 79-								
•			G(K) 79-						
•			G/(K) 79-						
•EPELINGS	K G(K) 79-								
•			G/(K) 79-						
•GENEVE	L 4612N 0609E 370. G(K) 78-								
•FINDELEN	M 4600N 0748E2500. G(D) 70*								
•SION	M 4614N 0721E 500. G(D) 73-								
•BRIEOLA	M 4603N 0734E2400. G(D) 69*								
•STAIFEL	M 4600N 0740E2200. G(D) 67*								

500DEGREES

90S

FOLLOW SUN

20M.20M.

33DEGREES

20S.30M.

ROOF

20S.30M.

ONLY SUMMER

ROOF

ONLY SUMMER

ONLY SUMMER

ONLY SUMMER

## SWITZERLAND

	2	3.	4	5	6	7.	8.	9.	10
PAYERNE	N	4647N	0656E 491	G(K) 77- R(K) 77- G+(LR)77- G+(LR)77- G-(LR)77-		10M.10M. 10M.10M. 10M.10M. 10M.10M. 10M.10M.	.	.	.
ZURICH (8032)	O	4722N	0834E 450	G(K) 78-79		30M.30M. 30M.30M.	90DEG. SUN FOLLOW	.	.
ECUBLENS	P	4631N	0635E 400	G(K) 78- G/(K) 76,77- D(K) 78-		30M.30M. 30M.30M.	.	.	190S
ROTTENSCHWIE	O	4719N	0822E 384	G(D) 77-78		30M.30M.	.	.	.
MURENLINGEN	R	4732N	0814E 339	G(K) 77- G(K) 75-76,77- G/(K) 75-76,77- D(K) 77-		6M .6M 6M .6M 6M .6M	40S,SUMMER 70S,WINTER	.	.
MOOSFLUH/FESCH	S	4624N	0803E 2180	G(K) 72*		H .H	.	.	.
EWIGSCHNEEFELD	S	4635N	0803E 3366	G(D) 73-73 R(D) 73-73 G+(D) 73-73 G-(D) 73-73		M .M M .M M .M M .M	.	.	.
DREIEN/RIET	S	4722N	0901E 720	G(K) 75-77,77 R(K) 75-77,77		5M .5M 5M .5M	.	.	.
GAHUST/BRIEL	S	4723N	0900E 750	G(K) 75-78 G(D) 78- D(K) 78- R(D) 78- G+(D) 78- G-(D) 78-		5M .5M 5M .5M 5M .5M 5M .5M 5M .5M	.	.	.
GROSSERAETSCHGLETSCHER	S	4625N	0804E 2185	G(D) 65-65 R(D) 65-65 G+(D) 65-65 G-(D) 65-65		M .M M .M M .M M .M	.	.	GLACIER
BIRNMENDORF	S		550	G(S) 69- G(L) 69- G(ES) 61- Gx(L) 69-		H .H	.	.	.
STILLCERG/DAVUS	S		2094	G(S) 74- G(L) 74- Gx(L) 74- G(S) 74- R(S) 74-		H .H	.	.	PAR.
NEUHAUSEN	A	4741N	0837E 425	G(BS) 76- S(C) 63-		H .H	.	.	40NE
UNTERBÖZBERG	A	4729N	0809E 514	G(BS) 76- G(BS) 77-	MO:CH1	D .D	.	.	.
STEIN (AR)	A	4723N	0921E 780	G(BS) 77- S(C) 56-	MO:CH1	D .D	.	.	.
AARAU-UNTERENTFELDEN	A	4722N	0803E 409	G(BS) 71- G(BS) 72-	MO:CH1	D .D	.	.	LAWN
DELEMONT	A	4722N	0721E 416	G(BS) 72- S(C) 72-	MO:CH1	D .D	.	.	LAWN
EINSIEDELN	A	4708N	0845E 910	G(BS) 75- S(C) 75-	MO:CH1	D .D	.	.	LAWN
OESCHBERG	A	4708N	0737E 482	G(BS) 73- S(C) 60-	MO:CH1	D .D	.	.	LAWN
MENZBERG	A	4702N	0800E 1035	G(BS) 74- S(C) 74-	MO:CH1	D .D	.	.	LAWN
PLANTAHOF (G.LANDQUART)	A	4658N	0934E 530	G(BS) 74- S(C) 59-	MO:CH1	D .D	.	.	.
FRIEGOURG-POSIUX	A	4646N	0707E 634	G(BS) 71- S(C) 71-	MO:CH1	D .D	.	.	LAWN
LE BRASSUS	A	4633N	0610E 1075	G(BS) 74- S(C) 74-	MO:CH1	D .D	.	.	LAWN
BEVER	A	4633N	0956E 1710	G(BS) 75- S(C) 59-	MO:CH1	D .D	.	.	LAWN
ADELBODEN	A	4630N	0733E 1355	G(BS) 66- S(C) 66-	MO:CH1	D .D	.	.	LAWN
MONTANA SIERRA	A	4619N	0729E 1506	G(BS) 71- S(C) 26-	MO:CH1	D .D	.	.	.
TURTSMANN	A	4618N	0741E 622	G(BS) 70- S(C) 70-	MO:CH1	D .D	.	.	LAWN
VISP	A	4617N	0753E 656	G(BS) 59-70 S(C) 59-70	MO:CH1	D .D	.	.	LAWN
RIDDES	A	4611N	0713E 470	G(BS) 59-63 S(C) 59-	MO:CH1	D .D	.	.	LAWN
FEY-MENDAZ	A	4611N	0716E 780	G(BS) 59-70,73 S(C) 71-	MO:CH1	D .D	.	.	GARDEN
VERNAYAZ	A	4605N	0702E 453	G(BS) 70- S(C) 69-	MO:CH1	D .D	.	.	LAWN
MARTIGNY	A	4607N	0704E 455	G(BS) 59-69 S(C) 59-69	MO:CH1	D .D	.	.	GARDEN
COTTERG	A	4605N	0713E 880	G(BS) 59-63 S(C) 59-63	MO:CH1	D .D	.	.	LAWN
HALLAU (SCHAFFHAUSEN)	A	4742N	0828E 450	S(C) 1887-	MO:CH1	D .D	.	.	.
HAUENHAUS	A	4739N	0901E 694	S(C) 1893-23	MO:CH1	D .D	.	.	.
ZURZACH	A	4735N	0818E 338	S(C) 69-	MO:CH1	D .D	.	.	.
DUUS-WINTERSINGEN	A	4730N	0752E 444	S(C) 1893-13,14-26	MO:CH1	D .D	.	.	.
BREITENHOF	A	4730N	0749E 555	S(C) 61- S(C) 01-18	MO:CH1	D .D	.	.	.
LIELSTAL	A	4729N	0744E 325	S(C) 01-18	MO:CH1	D .D	.	.	.
WINTERTHUR-SEEN	A	4729N	0846E 495	S(C) 71-	MO:CH1	D .D	.	.	.
ST.GALLEN	A	4726N	0925E 664	S(C) 56-	MO:CH1	D .D	.	.	.
GARMEWEID	A	4725N	0758E 770	S(C) 43-	MO:CH1	D .D	.	.	.
ZURICH-PILAUSSTR.	A	4723N	0832E 535	S(C) 71-	MO:CH1	D .D	.	.	.
ALLERHEILIGENBERG	A	4721N	0749E 890	S(C) 13-24,26-68,	MO:CH1	D .D	.	.	.
OLTLN	A	4721N	0754E 412	S(C) 69-	MO:CH1	D .D	.	.	.
SEEGEN	A	4720N	0812E 468	S(C) 64-78	MO:CH1	D .D	.	.	.
WALD	A	4717N	0857E 908	S(C) 1899-12,40-	MO:CH1	D .D	.	.	.
WADENSWIL	A	4713N	0841E 470	S(C) 24-	MO:CH1	D .D	.	.	.
MONT SOLEIL	A	4710N	0750E 1183	S(C) 13-	MO:CH1	D .D	.	.	.
UNTERGEREREI	A	4709N	0236E 850	S(C) 15-	MO:CH1	D .D	.	.	.
WALCINSTADTBORG	A	4708N	0917E 982	S(C) 26-67	MO:CH1	D .D	.	.	.
HUTTWIL	A	4707N	0751E 638	S(C) 71-	MO:CH1	D .D	.	.	.
LA CHAUX-DE-FONDS	A	4706N	0650E 990	S(C) 01-	MO:CH1	D .D	.	.	.
GLARUS	A	4703N	0904E 470	S(C) 74-	MO:CH1	D .D	.	.	.
RIGI-KALTBAD	A	4703N	0828E 1493	S(C) 54-	MO:CH1	D .D	.	.	.
ÖBERIBERG	A	4702N	0847E 1187	S(C) 54-66	MO:CH1	D .D	.	.	.
BAD RAGAZ	A	4700N	0930E 510	S(C) 56-	MO:CH1	D .D	.	.	.
PLANTAHOF BEI LANDQUART	A	4658N	0934E 530	S(C) 09-	MO:CH1	D .D	.	.	.
BRUNNALD	A	4656N	0900E 1190	S(C) 35-	MO:CH1	D .D	.	.	.
CHASSERON	A	4651N	0632E 1601	S(C) 55-67	MO:CH1	D .D	.	.	.
CHABLES	A	4650N	0648E 565	S(C) 65-75	MO:CH1	D .D	.	.	.
NIEDERMUHLERN	A	4649N	0728E 955	S(C) 70-	MO:CH1	D .D	.	.	.
ENGLIÜRG	A	4649N	0825E 1015	S(C) 69-	MO:CH1	D .D	.	.	.
SCHULS	A	4648N	1018E 1253	S(C) 29-	MO:CH1	D .D	.	.	.
AROSA	A	4647N	0941E 1818	S(C) 1890-	MO:CH1	D .D	.	.	.
METTIGEN SCHWENDI	A	4645N	0742E 1126	S(C) 1899-71	MO:CH1	D .D	.	.	.
BEATENBERG	A	4642N	0747E 1230	S(C) 30-50,56-70	MO:CH1	D .D	.	.	.
DISENTIS	A	4642N	0851E 1173	S(C) 54-	MO:CH1	D .D	.	.	.
GUTSCH	A	4639N	0837E 2288	S(C) 58-	MO:CH1	D .D	.	.	.
MURREN	A	4633N	0753E 1639	S(C) 66-	MO:CH1	D .D	.	.	.

	2	3.	4	5	6	7.	8.	9.	10
JUNGFRAUJOCH(FORSCH-INS)	A .4633N	0759E3460.	S(C)	32-47	.	D	.	.	.
JUNGFRAUJOCH(SPHINX)	A .4633N	0759E3576.	S(C)	38-	MO:CH1	H	H	3	
LAUSANNE	A .4632N	0639E 618.	S(C)	1886-	D:CH1	H	H	3	
AIROLI	A .4632N	0836E1139.	S(C)	69-	MO:CH1	D	D	3	
OLIVONE	A .4632N	0857E 905.	S(C)	76-	MO:CH1	D	.	3	
ST.MORITZ	A .4630N	0950E1833.	S(C)	00-	MO:CH1	D	H	3	
SIGNAL DE BOUGY	A .4629N	0621E 695.	S(C)	71-76	MO:CH1	D	D	3	
CHATEAU D'OEX	A .4629N	0708E 994.	S(C)	48-	MO:CH1	.	D	.	
RECKINGEN	A .4628N	0815E1331.	S(C)	66-	MO:CH1	D	.	3	
S.BERNARDINO	A .4628N	0911E1628.	S(C)	69-	MO:CH1	D	.	3	
BIVIO	A .4628N	0839E1770.	S(C)	53-	MO:CH1	H	.	3	
MONTRÉUX-CLARENS	A .4627N	0654E 408.	S(C)	1893-	MO:CH1	D	D	3	
LA DOLE	A .4626N	0606E1685.	S(C)	67-	MO:CH1	D	.	3	
ROCHERS DE NAYE	A .4626N	0659E1982.	S(C)	1898-11.30-39.42	MO:CH1	D	.	.	
PIZ CORVATSCH	A .4625N	0949E3313.	S(C)	68-	.	.	.	.	
LE SEPEY	A .4622N	0704E1267.	S(C)	77-	MO:CH1	D	.	3	
LEYSIN	A .4621N	0701E1356.	S(C)	1899-76	MO:CH1	D	D	3	
SIERRE	A .4618N	0732E 573.	S(C)	06-24+27-39	.	H	H	.	
CHIPPIS	A .4617N	0732E 529.	S(C)	53-62,63-70	.	D	D	.	
MONTHEY	A .4615N	0658E 405.	S(C)	54-	MO:CH1	D	.	3	
GENEVE-AEROPORT	A .4614N	0606E 430.	S(C)	52-	MO:CH1	D	D	24	
GENEVE-OBS.	A .4612N	0609E 405.	S(C)	1897-66	MO:CH1	D	D	3	
SAAS-ALMAGELL	A .4606N	0757E1667.	S(C)	72-	.	D	.	3	
ZERMATT	A .4601N	0745E1632.	S(C)	59-71	.	D	D	.	
MONTE-BRE	A .4601N	0859E 910.	S(C)	13-20+21-22,23	MO:CH1	D	.	3	
AGRA	A .4558N	0854E 565.	S(C)	16-17,19-34	.	D	.	.	

## SYRIA

	2	3.	4	5	6	7.	8.	9.	10
MESSELMIYEH-ALEPOO	A .3620N	3713E 425.	I(E)	70+	.	*	.	.	.
			G(E1)	70-	D:SU1, MO:SYR1	H	.	.	.
			D(E1)	70-	-SU2	.	.	.	.
RAQQA	A .3527N	3900E 251.	I(E)	72+	MO:SU1-2	H	.	.	.
			G(E1)	72-	-SU2	.	.	.	.
			D(E1)	72-	.	H	.	.	.
DAMASCUS-DOUMA	A .3334N	3623E 679.	G(K)	63-67	MO:SU1-2	H	.	.	.
			D(K)	64-	D:SU1, SU2	.	.	.	.
			S(C)	63-	.	H	.	.	.
KHARABO-DAMASCUS	A .3330N	3628E 620.	I(E)	71+	MO:SU1-2	H	.	.	.
			G(E1)	71-	-SU2	.	.	.	.
			D(E1)	71-	.	H	.	.	.
			S(C)	71-	MO:SU1-2	H	.	.	.

## TURKEY

	2	3.	4	5	6	7.	8.	9.	10
EDIRNE	A .4140N	2634E 48.	G(R)	63-	.	D	.	24	
KASTAMONU	A .4122N	3346E 799.	S(C)	63-	.	H	.	6	
KARADINIZ/EREGLI	A .4117N	3125E 2.	G(C)	63-	.	H	.	.	
SAMSUN	A .4117N	3620E 44.	G(R)	64-	.	D	.	24	
RIZE	A .4102N	4030E 4.	G(R)	65-	.	H	.	.	
TRAZON	A .4100N	3943E 35.	G(R)	63-	.	H	.	.	
FLORYA	A .4059N	2844E 34.	G(R)	65-	.	H	.	.	
GIRESUN	A .4055N	3824E 35.	G(R)	67-	.	H	.	24	
GOLUK/DUMLUPINAR	A .4043N	2949E 18.	G(R)	.	.	D	.	24	
CANKIRI	A .4036N	3337E 754.	G(R)	63-	.	H	.	.	
KAR	A .4036N	4305E1775.	G(R)	64-	.	D	.	6	
BURSA	A .4011N	2904E 101.	G(R)	63-	.	H	.	24	
CANAKKALA	A .4006N	2624E 8.	G(R)	64-	.	H	.	.	
ANKARA/CENTRAL	A .3957N	3253E 902.	G(R)	65-	.	H	.	.	
IGDIR	A .3956N	4402E 858.	G(R)	66-	.	H	.	6	
ERZURUM	A .3955N	4116E1869.	G(R)	62-	.	D	.	.	
ESKISEHIR	A .3946N	3031E 785.	G(R)	64-	.	H	.	.	
SIVAS	A .3945N	3701E1285.	G(R)	63-	.	D	.	.	
ERZINCAN	A .3944N	3930E1156.	G(R)	66-	.	H	.	.	
BALIKESIR	A .3939N	2752E 147.	G(R)	64-	.	H	.	.	
SIVRIHISAR	A .3927N	3133E1000.	G(R)	66-	.	H	.	.	
KIRSEHER	A .3906N	3410E 985.	G(R)	66-	.	H	.	.	
DIKLIL	A .3903N	2652E 3.	G(R)	66-	.	D	.	24	
USA	A .3840N	2925E 919.	G(R)	66-	.	H	.	.	
ELAZIG	A .3836N	3917E 892.	G(R)	64-	.	D	.	24	
VAN	A .3827N	4319E1667.	G(R)	68-	.	H	.	24	
AKSARAY	A .3823N	3403E 980.	G(R)	65-	.	H	.	.	
MALATYA	A .3821N	3818E 998.	G(R)	63-	.	H	.	.	
AYDIN	A .3751N	2750E 57.	G(R)	63-	.	H	.	.	
ADIAMAN	A .3745N	3817E 750.	G(R)	64-	.	D	.	.	

	2	3.	4	.	5	.	6	.	7.	8.	9.	10
ISPARTA		A	3745N	3033E	997.	G(R)	64-		.	.	.	24
SİVERLİK		A	3745N	3919E	850.	G(R)	67-		.	H	.	
HAKKARI		A	3734N	4346E	1620.	G(R)	65-		.	D	.	
MUGLA		A	3712N	2821E	640.	G(R)	63-		.	D	.	
URFA		A	3708N	3846E	547.	G(R)	63-		.	H	.	
BİREÇİK		A	3702N	3758E	459.	G(R)	65-		.	D	.	
GAZİANTEP		A	3705N	3722E		G(R)	64-		.	H	.	
ADANA/INCIRLIK		A	3700N	3525E	73.	G(R)	62-		.	H	.	24
ANTALYA		A	3642N	3044E	50.	G(R)	63-		.	D	.	24
						G(R)	63-		.	H	.	

U.S.S.R.

	2	3	4	5	6	7	8	9	10
BORISPOL	A 5020N	3058E	119	G(Y)	H:SU3				
				D(Y)	H:SU3				
				Q*(Y)	H:SU3				
				S(C)					
NOVAYA OUCHIZA	A 4651N	2716E	227	G( )					
				S(C)					
ZNAMENKA	A 4643N	3240E	200	G( )					
				S(C)					
KICHINEV	A 4701N	2852E	95	G(Y)					
				D(Y)					
				Q*(Y)					
				S(C)					
BOTEVO	A 4641N	3551E	25	G( )					
				S(C)					
MERSON	A 4640N	3237E	48	G( )					
				S(C)					
ODESSA	A 4629N	3038E	42	I(A)					
				I(Y) 30*41,47*	H				
				G(Y) 30-41,47-	H:SU3,D:SU1				
				D(Y) 30-41,47-	H:SU3				
				R(Y) 59-	H:SU3				
				Q*(Y) 58-	H:SU3-SU1				
				S(C) 47-	H:SU2				
ASKANIJA NOVA	A 4627N	3353E	28	G( )	H:SU1-2				
				S(C)					
ASTRAHAN	A 4616N	4802E	18	G( )					
				S(C)					
BOLGRAD	A 4540N	2837E	81	G( )					
				S(C)					
SOCI	A 4335N	3943E	0	G( )					
				S(C)					
SUHUMI	A 4301N	4101E	37	G( )					
				S(C)					
MAHAKALA	A 4301N	4726E	-14	G( )					
				S(C)					
ANASEULI	A 4155N	4159E	174	G( )					
				S(C)					
TELAVI	A 4156N	4523E	562	G(Y)					
				S(C)					
TBILISI	A 4141N	4457E	427	I(A)					
				I(Y) 28*	H:SU3				
				I(Y) -	H:SU3				
				G(Y) 37-	H:SU3,D:SU1				
				D(Y) 37-	H:SU2				
				R(Y) 58-	H:SU3				
				Q*(Y) 57-	SU3				
				S(C) 1891-	H:SU1-3,MO:SU2				
					MO:SU1-2				
LENINAKAN	A 4047N	4350E	1529	G( )					
				S(C)					
KIRUVABAD	A 4043N	4625E	303	G( )					
				S(C)					
SEVAN	A 4033N	4456E	1937	G(Y)					
				D(Y)					
EREVAN	A 4008N	4428E	907	G( )					
				S(C)					
NAHICEVAN	A 3912N	4525E	875	G( )					
				S(C)					

## UNITED KINGDOM

	2	3	4	5	6	7	8	9	10
LERWICK	A 6008N	111W	82	G(K)	S2-				
				D(K)	S2-	MO:GB1-SU2,	H	H	24
				E(MO)	56-77	D:SU1			
				2*(KE)64-		MO:GB1	H	H	
				S(C)	21-	H:SU1,MO:SU2	H		
STORNOWAY	A 5613N	619W	9	G(K)	81-	MO:SU1-2	H	H	
				D(K)	80-		H	H	24
				S(C)	62-		H	H	
ABERDEEN	A 5710N	205W	35	G(K)	66-		H	H	24
DUNSTAFFNAGE	C 5626N	526W	3	G(K)	71-		H	H	
HYLNEFIELD (DUNDEE)	D 5627N	304W	30	G(K)	67-73		D	D	1
				G(K)	73-		H		
				Q*(KE)73-			H		
				S(C)	67-		H		
SHANWELL	A 5626N	252W	4	G(K)	81-		H	H	
				D(K)	81-		H	H	
				S(C)	80-		R	H	
EDINBURGH (ROYAL OBS.)	A 5555N	311W	134	G(K)	70-71		D		
AUCHINCRUIVE	E 5529N	434W	45	G(K)	75-		D	D	1
ESKDALEMUIR	A 5519N	312W	242	G(K)	52-		MO:GB1-SU2,	H	H
				D(K)	52-	D:SU1			24
				Q*(KE)64-		MO:GB1	H	H	
				E(MO)	56-77	H:SU1,MO:SU2	H	H	
				S(C)	10-	MO:GB1	H	H	
				D(K)	10-	MO:SU1-2	H	H	
MOOR HOUSE	F 5441N	223W	560	G(K)	71-		H	D	1
				S(C)	53-71		H	K	
ALDERGROVE	A 5469N	613W	68	G(K)	68-	MO:GB1-SU2,D:SU1	H	H	24
				D(K)	68-	MO:GB1	H	H	
				Q*(KE)66-		H:SU1,MO:SU2	H	H	
				E(MO)	72-77	MO:GB1	H	H	
				S(C)	26-	MO:SU1-2	H	H	
CAWOOD	G 5350N	108W	6	G(K)	56-63*66-		D	D	1
				S(C)	56-		H	H	
FAIRFIELD/KIRKHAM	H 5348N	253W	24	G(K)	58-		D	D	1
				S(C)	58-		O	D	
AUGHTON	A 5333N	255W	55	G(K)	81-		H	H	
				D(K)	81-		H	H	
				S(C)	90-		H	H	
SUTTON BONINGTON	I 5250N	115W	48	G(K)	58-63*66-		D	D	1
				S(C)	58-		H	H	
HEMSBY	A 5241N	141E	13	G(K)	81-		H	H	
				D(K)	81-		H	H	
				S(C)	80-		H	H	
EAST HARLING	J 5227N	055E	21	G(K)	64-74		D	D	
				S(C)	69-		H	H	
GRAHAM WATER	J 5217N	019W	2	G(K)	70-75		D		

	2	3.	4	5	6	7.	8.	9.	10
CAMBRIDGE	A .5213N	006E	23.	G(K) 57-71	D:SU1,MO:SU2	H	H	1	
	.	.	.	D(K) 57-71	.	H	H	.	
	.	.	.	S(C) 57-71	MO:SU1-2	H	H	.	
ABERPORTH	A .5208N	434W	133.	G(K) 53-55+59-	MO:GB1-SU2,D:SU2,H	H	H	24	
	.	.	.	D(K) 53-55+59-	MO:GB1	H	H	.	
	.	.	.	S(C) 46-	MO:SU1-2	H	H	.	
CARDINGTON	A .5206N	025W	29.	G(K) 72-	MO:GB1,D:SU1	H	H	24	
	.	.	.	D(K) 72-	MO:GB1	H	H	.	
	.	.	.	S(C) 51-	.	H	H	.	
SILSOE	L .5201N	025W	59.	G(K) 58-	.	D	D	1	
	.	.	.	D(K) 71-	.	D	D	.	
	.	.	.	S(C) 58-	.	H	H	.	
GRENDON UNDERWOOD	M .5154N	105W	70.	G(K) 64-	.	D	D	1	
	.	.	.	S(C) 64-	.	H	H	.	
ROTHAMSTED	N .5148N	021W	128.	G(K) 55-	.	D	D	1	
	.	.	.	S(C) 55-	.	H	H	.	
GARSTON	O .5142N	023W	77.	G(K) 57-	.	D	D	1	
	.	.	.	S(C) 57	.	H	H	.	
WALLINGFORD	M .5136N	110W	49.	G(K) 64-	.	D	D	1	
	.	.	.	S(C) 64-	.	H	H	.	
HURLEY	O .5132N	049W	43.	G(K) 70-73	.	H	H	.	
	.	.	.	S(C) 70-73	.	H	H	.	
LONDON WEATHER CENTRE	A .5131N	007W	77.	G(K) 56-	MO:GB1-SU2,D:SU2,H	H	H	24	
	.	.	.	D(K) 57-	MO:GB1	H	H	.	
	.	.	.	E(MO) 67-77	MO:GB1	H	H	.	
	.	.	.	S(C) 50-	MO:SU1-2	H	H	.	
KEW	A .5128N	019W	5.	I(A)	.	.	.	24	
	.	.	.	I(MG) 32-	.	H	H	.	
	.	.	.	G(K) 50-	MO:GB1-SU2,D:SU2,H	H	H	.	
	.	.	.	D(K) 50-	MO:GB1	H	H	.	
	.	.	.	Q*(K) 53	HSU1,MO:SU2	H	H	.	
	.	.	.	E(MO) 50-77	MO:GB1	H	H	.	
	.	.	.	E(MO) 64-74	MO:GB1	H	H	.	
	.	.	.	S(C) 5881-	MO:SU1-2	H	H	.	DIFFUSE
SHINFIELD	. .5125N	0057W	61.	G(K) 57-61	.	D	.	.	
BRACKNELL	A .5123N	047W	73.	I(A)	.	.	S	RG2,TBA	
	.	.	.	I(MG) 74-	.	H	H	.	
	.	.	.	G(K) 65-	MO:GB1-SU2,D:SU2,H	H	H	.	
	.	.	.	G(K) 67-	.	H	H	.	90N,E,S,W
	.	.	.	D(K) 65-	MO:GB1	H	H	.	
	.	.	.	E(MO) 65-77	MO:GB1	H	H	.	
	.	.	.	E(MO) 65-77	MO:SU1-2	H	H	.	DIFFUSE
EAST MALLING	P .5117N	027E	37.	G(K) 63-	.	D	D	1	
CRAWLEY	A .5105N	000W	143.	G(K) 80-	.	H	H	.	
	.	.	.	D(K) 80-	.	H	H	.	
WYE	. .5104N	057E	59.	G(K) 68-	.	H	H	.	
RUSTINGTON	G .5049N	031W	8.	G(K) 64-68,72-	.	D	D	1	
	.	.	.	S(D) 60-	.	H	H	.	
EFFORD	H .5044N	134W	16.	G(K) 57-	.	D	D	1	
WARHAM	R .5041N	211W	10.	G(K) 66-	.	H	H	.	
CAMDORNE	A .5013N	519W	87.	G(K) 31-	.	H	H	.	
	.	.	.	D(K) 31-	.	H	H	.	
	.	.	.	S(C) 80-	.	H	H	.	
JERSEY AIRPORT	A .4913N	212W	83.	G(K) 68-	MO:GB1-SU2,D:SU2,H	H	H	.	
	.	.	.	D(K) 68-	MO:GB1	H	H	.	
	.	.	.	Q*(KE) 69-	HSU1,MO:SU2	H	H	.	
	.	.	.	E(MO) 69-	MO:GB1	H	H	.	
	.	.	.	S(C) 35-	MO:SU1-2	H	H	.	
DALIASOUND	A .6046N	0053W	26.	S(C)	.	D	.	.	
WEYLAND	A .5859N	0257N	.	S(C)	.	D	.	.	
KIRKWALL	A .5357N	0254W	29.	S(C)	.	D	.	.	
CAPL WRATH	A .5037N	0500W	117.	S(C)	.	D	.	.	
DOUNREAY	A .5035N	0344W	22.	S(C)	.	D	.	.	
TORRIDALE	A .5331N	0417W	37.	S(C)	.	D	.	.	
WICK	A .5827N	0305W	36.	S(C)	.	H	.	.	
INVERPOLLY	A .5804N	0516W	56.	S(C)	.	D	.	.	
LARG	A .5802N	0425W	98.	S(C)	.	D	.	.	
SCALPAY	A .5752N	0842W	31.	S(C)	.	D	.	.	
POOLEWE	A .5747N	0536W	11.	S(C)	.	D	.	.	
FRASERBURGH	A .5742N	0200W	32.	S(C)	.	D	.	.	
BANFF	A .5740N	0231W	29.	S(C)	.	D	.	.	
KINLOSS	A .5729N	0234W	6.	S(C)	.	D	.	.	
ELGIN	A .5738N	0318W	30.	S(C)	.	D	.	.	
KINLOCHWE	A .5737N	0518W	24.	S(C)	.	D	.	.	
FOOES	A .5737N	0336W	53.	S(C)	.	D	.	.	
DIARAG	A .5735N	0541W	.	S(C)	.	D	.	.	
FORTRUSE	A .5735N	0408W	6.	.	.	D	.	.	
NAIRN	A .5735N	0352W	S.	.	.	D	.	.	
INVERNESS	A .5729N	0413W	14.	S(C)	.	D	.	.	
BENDECULA	A .5728N	0722W	13.	S(C)	.	H	.	.	
PRAHOST	A .5726N	0619W	108.	S(C)	.	D	.	.	
CUMMOCK	A .5727N	0416W	113.	S(C)	.	D	.	.	
GLENLIVET	A .5721N	3021W	226.	S(C)	.	D	.	.	
GRANTTOWN-ON-SPEY	A .5720N	0320W	286.	S(C)	.	D	.	.	
INVERURIE	A .5716N	0222W	64.	S(C)	.	D	.	.	
DYCE	A .5712N	0212W	59.	S(C)	.	H	.	.	
CRAIBSTONE	A .5711N	0212W	93.	S(C)	.	D	.	.	
GLENMURC	A .5710N	0340W	343.	S(C)	.	D	.	.	
FORT AUGUSTUS	A .5708N	0440W	42.	S(C)	.	D	.	.	
ABERDEEN	A .5708N	0208W	54.	S(C)	.	D	.	.	
DINNET	A .5707N	0255W	184.	S(C)	.	D	.	.	
BRAEMAR	A .5700N	0324W	357.	S(C)	.	D	.	.	
STONEHAVEN	A .5658N	0212W	7.	S(C)	.	D	.	.	
ONICH	A .5643N	0513W	16.	.	.	D	.	.	
ARBROATH	A .5633N	0235W	31.	.	.	D	.	.	
TIREE	A .5630N	0653W	17.	S(C)	.	D	.	.	
DUNDEE	A .5628N	0256W	102.	.	.	D	.	.	
PERTH	A .5624N	0327W	27.	S(C)	.	D	.	.	
LEUCHARS	A .5623N	0253W	11.	S(C)	.	H	.	.	
ST ANDREWS	A .5620N	0247W	34.	S(C)	.	D	.	.	
CUPAR	A .5619N	0302W	45.	S(C)	.	D	.	.	
KINROSS	A .5613N	0325W	117.	S(C)	.	D	.	.	
KIRCALDY	A .5608N	0310W	32.	S(C)	.	D	.	.	
STIRLING	A .5607N	0356W	42.	S(C)	.	D	.	.	
EARLS HILL	A .5604N	0403W	340.	S(C)	.	D	.	.	
HELENSBURGH	A .5601N	0443W	91.	S(C)	.	D	.	.	
FALKERK	A .5600N	0346W	5.	S(C)	.	D	.	.	
DUNBAR	A .5600N	0231W	24.	S(C)	.	D	.	.	
EDINBURGH (ROYAL BOT GDS)	A .5558N	0312W	39.	S(C)	.	D	.	.	
EDINBURGH (TURNHOUSE APT)	A .5557N	0321W	47.	S(C)	.	H	.	.	
EDINBURGH (EAST-CRAIGS)	A .5557N	0319W	63.	S(C)	.	D	.	.	
HADDINGTON	A .5557N	0247W	52.	S(C)	.	D	.	.	
GREENOCK	A .5556N	0446W	145.	S(C)	.	D	.	.	
GLASGOW	A .5553N	0414W	131.	S(C)	.	D	.	.	
ABBOTSINCH	A .5552N	0426W	9.	S(C)	.	H	.	.	

	2	3	4	5	6	7	8	9	10
•PAISLEY	•A .5551N	0426W	46.	S(C)					
•BUSH HOUSE	•A .5551N	0312W	165.	S(C)					
•ROTHESAY	•A .5550N	0504W	58.	S(C)					
•PENCUIK	•A .5550N	0313W	236.	S(C)					
•EAST KILBRIDE	•A .5545N	0410W	185.	S(C)					
•BLYTHE	•A .5545N	0240W	.	S(C)					
•MARCHMONT	•A .5544N	0225W	153.	S(C)					
•BLYTH BRIDGE	•A .5542N	0322W	255.	S(C)					
•LANARK	•A .5540N	0347W	185.	S(C)					
•GALASHIELS	•A .5537N	0249W	210.	S(C)					
•GRAWFORD JOHN	•A .5530N	0335W	16.	S(C)					
•PRESTWICK AIRPORT	•A .5529N	0335W	329.	S(C)					
•CAMP RESERVOIR	•A .5526N	0524W	12.	S(C)					
•MACHRIHANISH	•A .5526N	0506W	.	S(C)					
•KILDONAN	•A .5525N	0136W	.	S(C)					
•BOULMER	•A .5515N	0415W	17.	S(C)					
•GIRVAN	•A .5515N	0216W	.	S(C)					
•RESDALE	•A .5513N	0141W	100.	S(C)					
•COCKLE PARK	•A .5505N	0416W	180.	S(C)					
•CLATTERSHAWNS	•A .5504N	0336W	45.	S(C)					
•DUMFRIES	•A .5501N	0125W	37.	S(C)					
•TYNEMOUTH	•A .5459N	0456W	155.	S(C)					
•PENHORN	•A .5458N	0137W	.	S(C)					
•NEWCASTLE WEATHER CENTRE	•A .5456N	0257W	42.	S(C)					
•CARLISLE	•A .5454N	0129W	.	S(C)					
•WASHINGTON	•A .5448N	0357W	99.	S(C)					
•GIRGSTINGWOOD	•A .5446N	0135W	113.	S(C)					
•DURHAM	•A .5441N	0112W	25.	S(C)					
•HARTLEPOL	•A .5440N	0217W	.						
•WIDDYBANK FELL	•A .5434N	0122W	.	S(C)					
•HARTBURN GRANGE	•A .5429N	0036W	44.	S(C)					
•WHITBY	•A .5425N	0422W	11.	S(C)					
•POINT OF AYRE	•A .5425N	0330W	15.	S(C)					
•SELLAFIELD	•A .5420N	0031W	205.	S(C)					
•SILPHU MOOR	•A .5418N	0132W	.	S(C)					
•LEEMING	•A .5418N	0024W	33.	S(C)					
•SCARBOROUGH	•A .5416N	0215W	.						
•SNAIZEHOLME	•A .5410N	0429W	.	S(C)					
•DOUGLAS	•A .5410N	0247W	173.	S(C)					
•NLYTON RIGG	•A .5406N	0058W	176.						
•HIGH MORTHORPE	•A .5406N	0012W	49.	S(C)					
•BRIDLINGTON	•A .5405N	0438W	21.	S(C)					
•RONALDSWAY	•A .5404N	0252W	12.	S(C)					
•MORECAMBE	•A .5401N	0247W	.	S(C)					
•HAZELRIGG	•A .5401N	0133W	63.	S(C)					
•HARROGATE	•A .5359N	0226W	202.	S(C)					
•SLAIDURN	•A .5357N	0145W	29.	S(C)					
•ASKHAM BRYAN	•A .5357N	0122W	.	S(C)					
•YORK (HILLSENDTON)	•A .5356N	0150W	79.	S(C)					
•JLKLEY	•A .5352N	0120W	56.	S(C)					
•DRAHAM	•A .5351N	0288W	120.	S(C)					
•STONYHURST	•A .5351N	0127W	136.	S(C)					
•BRADFORD	•A .5349N	0146W	136.	S(C)					
•SQUIRLS GATE	•A .5346N	0302W	.	S(C)					
•HULL	•A .5345N	0016W	13.	S(C)					
•HELMNSHORE	•A .5341N	0220W	262.	S(C)					
•SOUTHPORT	•A .5340N	0258W	15.	S(C)					
•HUDDERSFIELD (OAKES)	•A .5337N	0150W	232.	S(C)					
•BOLTON	•A .5335N	.	S(C)						
•CLEETHORPES	•A .5333N	0001W	12.	S(C)					
•MANCHESTER	•A .5329N	0215W	73.	S(C)					
•FINNINGLEY	•A .5329N	0100W	19.	S(C)					
•ST. HELENS	•A .5326N	0246W	.	S(C)					
•BISTON	•A .5324N	0344W	73.	S(C)					
•SHEFFIELD	•A .5323N	0129W	143.	S(C)					
•AIGBURTH	•A .5322N	0255W	.	S(C)					
•PRESTATYN	•A .5321N	0324W	11.	S(C)					
•RINGWAY	•A .5321N	0216W	70.	S(C)					
•LLYN ALAW	•A .5320N	0427W	.	S(C)					
•RHYL	•A .5319N	0330W	13.	S(C)					
•COLWYN BAY	•A .5317N	0343W	14.	S(C)					
•NESS GARDENS	•A .5316N	030W	.	S(C)					
•VALLEY	•A .5315N	0432W	18.	S(C)					
•DUXTON	•A .5315N	0155W	308.	S(C)					
•ABER	•A .5314N	0401W	2.	S(C)					
•LINCOLN	•A .5314N	0030W	9.	S(C)					
•PEN-Y-FRIDD	•A .5313N	0409W	.	S(C)					
•WARSOP	•A .5313N	0167W	.	S(C)					
•WINGERWORTH	•A .5312N	0127W	.	S(C)					
•WADDINGTON	•A .5310N	0031W	79.	S(C)					
•LOGGERHEADS	•A .5309N	0312W	.	S(C)					
•ASHOVER	•A .5309N	0128W	.	S(C)					
•SKEGGNESS	•A .5309N	0021W	23.	S(C)					
•RUTHIN	•A .5307N	0318W	78.	S(C)					
•CRANWELL	•A .5302N	030W	.	S(C)					
•WATKALL	•A .5301N	0115W	123.	S(C)					
•KEELE	•A .5300N	0216W	180.	S(C)					
•CWMSYSTRADLLYN	•A .5259N	0409W	.	S(C)					
•NOTTINGHAM CASTLE	•A .5257N	0139W	84.	S(C)					
•DERBY	•A .5256N	0126W	50.	S(C)					
•CROMER	•A .5256N	0111L	50.	S(C)					
•BALA	•A .5254N	0335W	.	S(C)					
•KIRTON	•A .5254N	0000W	.	S(C)					
•STONE	•A .5253N	0211L	107.	S(C)					
•BOTWNNOG	•A .5251N	0434L	36.	S(C)					
•OSWELSTRY	•A .5251N	0304W	175.	S(C)					
•SHAWBURY	•A .5248N	0240W	32.	S(C)					
•NEWPORT	•A .5246N	0252W	67.	S(C)					
•TERRINGTON	•A .5245N	0018E	5.	S(C)					
•SHREWSBURY	•A .5243N	0243W	61.	S(C)					
•PENKRIE	•A .5242N	0206W	.						
•NEWTON LINFORD	•A .5241N	0113W	123.	S(C)					
•WITTERING	•A .5237N	0027W	71.	S(C)					
•GORLESTON	•A .5235N	0143E	5.	S(C)					
•COVENTRY	•A .5232N	0131W	94.	S(C)					
•CALDECOTT	•A .5231N	0044W	56.	S(C)					
•HAMPTON LOADE	•A .5229N	0222W	.	S(C)					
•SANTON DOWNHAM	•A .5228N	0041E	26.	S(C)					
•BRIMINGHAM (ELMDON)	•A .5227N	0144W	.	S(C)					
•GOGERDON	•A .5226N	0401W	31.	S(C)					
•MEPAL	•A .5226N	0005E	.	S(C)					
•ABERYSTWYTH	•A .5225N	0404W	23.	S(C)					
•LOWESTOFT	•A .5225N	0145L	28.	S(C)					
•MONKS WOOD	•A .5224N	0014W	.	S(C)					
•SCOLE	•A .5222N	0111E	.	S(C)					
•TRANSCOED	•A .5220N	0356W	63.	S(C)					
•HONINGTON	•A .5220N	0046E	.	S(C)					
•RAUNDS	•A .5220N	0031W	59.						
•BROOMS	•A .5216N	0034E	76.	S(C)					
•TREGARON	•A .5215N	0358W	.	S(C)					
•MORETON MORRELL	•A .5212N	0133W	87.	S(C)					
•STRATFORD-UPON-AVON	•A .5211N	0144W	55.	S(C)					

	2	3.	4	5	6	7.	8.	9.	10
•CWMYSTYMYTH	A	5210N	0342W	301. S(C)		D			
•LUDDEINGTON	A	5210N	0146W	45. S(C)		D			
•WATTSHAM	A	5207N	0058W	. S(C)		H			
•PERSHORE (INST.OF HORT.)	A	5205N	0203W	41. S(C)		D			
•SHIPSTON-ON-STOUR	A	5204N	0142W	112. S(C)		D			
•PRESTON WYNNE	A	5201N	0230W	85. S(C)		D			
•MALVERN	A	5201N	0219W	63. S(C)		D			
•WOBURN	A	5201N	0035W	91. S(C)		H			
•CHELTENHAM	A	5154N	0203W	84. S(C)		D			
•BRADY	A	5153N	0507W	112. S(C)		D			
•INNSWORTH	A	5153N	0212W	. S(C)		D			
•LUTON	A	5153N	0022W	. S(C)		D			
•CARMARTHEN	A	5152N	0417W	17. S(C)		D			
•AYLESURY	A	5148N	0047W	99. S(C)		D			
•LLWYNON	A	5147N	0326W	340. S(C)		D			
•CLACTON-ON-SEA	A	5147N	0109E	28. S(C)		D			
•OXFORD	A	5146N	0116W	94. S(C)		D			
•ST.ALBANS	A	5146N	0018W	99. S(C)		D			
•HODDESON	A	5146N	0010W	45. S(C)		D			
•HARLOW	A	5146N	0008E	. S(C)		D			
•CRUBLAND PLANTION	A	5143N	0246W	247. S(C)		D			
•DALE FORT	A	5142N	0509W	35. S(C)		D			
•USK	A	5142N	0256W	23. S(C)		D			
•TEMBY	A	5140N	0442W	. S(C)		D			
•SOUTHGATE	A	5138N	0007W	69. S(C)		D			
•ENFIELD	A	5138N	0033W	19. S(C)		D			
•SWANSEA	A	5137N	0355W	15. S(C)		D			
•BENSON	A	5137N	0105W	. S(C)		H			
•HARROW WEALD	A	5137N	0020W	. S(C)		D			
•WEALDSTCNE	A	5136N	0020W	66. S(C)		D			
•PENMARCH	A	5135N	0407W	. S(C)		D			
•HAMPTED	A	5134N	0011W	139. S(C)		D			
•NEWPORT	A	5133N	0302W	25. S(C)		D			
•SHOEBURNESS	A	5132N	0049E	15. S(C)		D			
•BRISTOL (FILTON)	A	5131N	0235W	66. S(C)		D			
•LYNCHAM	A	5130N	0159W	140. S(C)		D			
•STANFORD-LE-HOPL	A	5130N	0026E	. S(C)		D			
•PORTHCAWL	A	5129N	0342W	6. S(C)		D			
•CARDIFF (BUTE PARK)	A	5129N	0319W	. S(C)		D			
•LONDON (HEATHROW) ALRPORT	A	5129N	0027W	30. S(C)		H			
•GREENWICH	A	5129N	0000W	21. S(C)		D			
•READING UNIVERSITY	A	5127N	0057W	48. S(C)		D			
•LONG ASHTON	A	5126N	0240W	69. S(C)		D			
•MARLBOROUGH	A	5125N	0144W	149. S(C)		D			
•HAMTON	A	5125N	0022W	34. S(C)		D			
•RHOUSE	A	5124N	0321W	70. S(C)		D			
•HARGATE	A	5124N	0124E	17. S(C)		D			
•HERNE BAY	A	5121N	0107E	9. S(C)		D			
•FAVERSHAM	A	5117N	0051E	51. S(C)		D			
•WISLEY	A	5117N	0026W	36. S(C)		D			
•HAOLLOW COLLEGE	A	5113N	0020E	. S(C)		D			
•LONG SUTTON	A	5112N	0056W	160. S(C)		D			
•ILFRACOMBE	A	5112N	0408W	51. S(C)		D			
•EDENBRIDGE	A	5112N	0008E	. S(C)		D			
•ALICE HOLT LODGL	A	5111N	0051W	126. S(C)		D			
•ULCOMBE	A	5111N	0038E	. S(C)		D			
•BOScombe DOWN	A	5110N	0145W	126. S(C)		D			
•LONDON (GATWICK AIRPORT)	A	5109N	0011J	60. S(C)		H			
•PORTON DOWN	A	5107N	0142W	112. S(C)		D			
•LECKFORD	A	5107N	0127W	119. S(C)		D			
•MARTYR WORTHY	A	5106N	0116W	86. S(C)		D			
•HAWKRIDE	A	5105N	0336W	315. S(C)		D			
•FOLKESTONE	A	5105N	0111E	49. S(C)		D			
•FERIJIURST	A	5102N	0042W	59. S(C)		D			
•HARTLAND POINT	A	5101N	0432W	91. S(C)		D			
•ROGATE	A	5100N	0051W	. S(C)		D			
•NORTH HEATH	A	5059N	0029W	. S(C)		D			
•HURSTPIERPOINT	A	5057N	0010W	. S(C)		D			
•SOUTHAMPTON	A	5055N	0124W	38. S(C)		D			
•EAST HOATHLY	A	5055N	0009L	41. S(C)		D			
•CHELDON GARTON	A	5054N	0348W	. S(C)		D			
•PLUMPTON	A	5054N	0005W	. S(C)		D			
•HASTINGS	A	5051N	0034E	51. S(C)		D			
•BUOE	A	5050N	0433W	16. S(C)		D			
•WORTHING	A	5049N	0022W	34. S(C)		D			
•BRIGHTON	A	5049N	0008W	35. S(C)		D			
•SOUTHSEA	A	5048N	0106W	. S(C)		D			
•HURN	A	5047N	0150W	. S(C)		H			
•HAYLING ISLAND	A	5047N	0059W	9. S(C)		D			
•BOGNOR REGIS	A	5047N	0041W	46. S(C)		D			
•EASTBOURNE	A	5046N	0017E	35. S(C)		D			
•POOLE	A	5045N	0159W	12. S(C)		D			
•EXETER	A	5044N	0325W	41. S(C)		D			
•CHRISTCHURCH	A	5044N	0147W	. S(C)		D			
•RYDE	A	5044N	0110W	46. S(C)		D			
•BOURNEMOUTH	A	5043N	0156W	56. S(C)		D			
•SIDMOUTH	A	5041N	0314W	16. S(C)		D			
•SANDOWN	A	5039N	0109W	22. S(C)		D			
•ST.JOHNS	A	5037N	0422W	. S(C)		D			
•STARCROSS	A	5037N	0327W	10. S(C)		D			
•SWANAGE	A	5037N	0157L	22. S(C)		D			
•SHAWKLIN	A	5037N	0111L	74. S(C)		D			
•EXMOUTH	A	5036N	0324W	63. S(C)		D			
•MEYNOUTH	A	5036N	0227W	23. S(C)		D			
•VENTOR	A	5036N	0113W	135. S(C)		D			
•BASTREET	A	5033N	0429W	. S(C)		D			
•TEIGNMOUTH	A	5033N	0329W	26. S(C)		D			
•PORTLAND BILL	A	5031N	0227W	. S(C)		D			
•TORBAY (TORQUAY)	A	5028N	0331W	74. S(C)		D			
•TOTNES	A	5027N	0343W	30. S(C)		D			
•ST.MAWGAN	A	5026N	0500W	112. S(C)		H			
•NEWQUAY	A	5025N	0505W	66. S(C)		D			
•PLYMOUTH (THE HOE)	A	5022N	0408W	41. S(C)		D			
•PLYMOUTH (MT.BATTEN)	A	5021N	0407W	34. S(C)		H			
•ST.AUSTELL	A	5020N	0474W	. S(C)		D			
•ROSLWARNE	A	5013N	0518W	76. S(C)		D			
•PRAWLE POINT	A	5012N	0343W	. S(C)		D			
•FALMOUTH	A	5009N	0505W	53. S(C)		D			
•GULVAL	A	5008N	0534W	19. S(C)		D			
•PENZANCE	A	5007N	0532W	33. S(C)		D			
•CULDRose	A	5005N	0514W	133. S(C)		D			
•THE LIZARD	A	4957N	0512W	75. S(C)		D			
•SCILLY ST.MAR'S	A	4956N	0618W	63. S(C)		D			

	2	3	4	5	6	7.	8.	9.	10
BALLYPATRICK FOREST	A .5510N	0609W	154. S(C)				D		
COLERAINE UNIVERSITY	A .5509N	0641W	. S(C)			D			
ALTNAHINCH FILTERS	A .5503N	0615W	. S(C)		D				
GARVAGH FOREST	A .5458N	0641W	. S(C)		D				
BANAGHER (CAUGH HILL.)	A .5453N	0658W	. S(C)		D				
LISNAFILLAN	A .5451N	0619W	46. S(C)		D				
LONTOWN	A .5450N	0601W	273. S(C)		D				
STRABANE CONVENT.	A .5449N	0727W	. S(C)		D				
TRAAD POINT	A .5443N	0631W	. S(C)		D				
HELEN'S BAY.	A .5440N	0545W	. S(C)		D				
ALDERGROVE	A .5439N	0613W	77. S(C)		D				
NEWTOWNHABBEY	A .5439N	0555W	37. S(C)		D				
LOUGH BRADAN	A .5436N	0736W	187. S(C)		D				
COOKSTOWN	A .5436N	0645W	79. S(C)		D				
STORMOUNT CASTLE	A .5435N	0548W	81. S(C)		D				
BALLYWATTICOCK	A .5434N	0541W	. S(C)		D				
BALLYWALTER PARK	A .5432N	0530W	. S(C)		D				
CASTLE ARCHDALE FOREST	A .5428N	0142W	70. S(C)		D				
LURGAN CEMETERY	A .5427N	0620W	60. S(C)		D				
HILLSBOROUGH	A .5427N	0604W	117. S(C)		D				
LOUGHALL	A .5424N	0636W	63. S(C)		D				
ARMAGH	A .5421N	0639W	66. S(C)		D				
MURLOUGH	A .5415N	0515W	. S(C)		D				
KILKEEL	A .5403N	0559W	20. S(C)		D				
ALDERNEY	A .4942N	0213W	89. S(C)		D				
GUERNSEY (L'ANCRESSE.)	A .5929N	0232W	. S(C)		D				
GUERNSEY	A .4926N	0236W	103. S(C)		D				
JERSEY (GOREY CASTLE)	A .4912N	0201W	38. S(C)		D				
JERSEY (ST.HELIER)	A .4911N	0206W	58. S(C)		D				

## YUGOSLAVIA

	2	3	4	5	6	7.	8.	9.	10
PALIC	A .4606N	1946E	102. G(BS)	D:YU1			24		
LJUBLJANA-BEZIGRAD	A .4604N	1431E	299. G(R) 57-63	D:YU1			24		
			G(K) 63-	H:YU1,D:SU1,					
				MO:SU2					
KRIZEVCI	A .4602N	1633E	155. G(R) 60-	D:YU1,MO:SU1-2					
			S(C) 55-	D:YU1-SU1,MO:SU-					
SLJEME-PUNTIJARKA	A .4554N	1558E	988. G(R) 57-XX	D:YU1,MO:SU1-2					
			G(S) XX-	D:YU1-SU1,MO:SU-					
ZAGREB-MAKSIMIR	A .4549N	1602E	123. G(K) 46-	D:YU1,MO:SU1-2					
			S(C) 46-	H:YU3			24		
ZAGREB-GRIC	A .4549N	1559E	159. I(LF) *	*YU2					
			G(K) 58-	H:YU1-2,D:SU1,					RG1,RG2-8
			S(C) 58-	H:YU2,D:YU1,					MO:SU2
PARG	A .4536N	1438E	063. G(R) 57-	D:YU1-SU1,MO:SU-					MO:SU1-2
			S(C) 50-	D:YU1,MO:SU1-2					
KOPLR-SEMEDELA	A .4533N	1343E	33. G(R) 62-74	D:YU1-SU1,MO:SU-					
			S(C) 54-74	D:YU1,MO:SU1-2					
PORTOROZ	A .4532N	1334E	95. G(R) 74-	D:YU1-SU1					
			S(C) 74-	D:YU1,MO:SU1					
NOVI SAD-RIMSKI SANCEVI	A .4520N	1951E	84. G(K) 64-XX	H:YU1,D:SU1,					
			S(C) 57-	MO:SU2					
BANJA LUKA	A .4447N	1713E	153. G(R) 56-72,76-	D:YU1,MO:SU1-2					
			G(K) 73-	D:YU1-SU1,			24		
			S(C) 51-	H:YU1,D:SU1					
BEOGRAD-ZELENO GRDO	A .4447N	2032E	243. I(CA) 57-58	D:YU1,MO:SU1-2					
			I(LF) 55*	*YU1					RG2-8
			G(K) 57-	H:YU1,D:SU1,					
				MO:SU2					
			G(BS) 61-75	D:YU1					
			D(K) 58-	H:YU1					
			R(K) 61-	H:YU1					
			D*(SH) 64-	H:YU1-SU1,MO:SU,H					
			S(C) 57-	H:YU1,MO:SU1-2					
NEGOTIN	A .4414N	2233E	42. G(R) 57-67	D:YU1,MO:SU1-2					
			G(K) 67-	H:YU1,D:SUT,					
				MO:SU2					
			G(BS) 66-75	D:YU1					
			S(C) 48-	D:YU1,MO:SU2					
CUPRIJA	A .4356N	2123E	123. G(BS) 69-	D:YU1			18		
			S(C) 69-	D:YU1					
SARAJEVO-BUTMIR	A .4350N	1820E	503. G(K) 63-	H:YU1,DSU1,			24		
				MO:SU2					
			G(BS) 63-72	D:YU1					
			S(C) 61-	D:YU1,MO:SU1-2					
ZLATIBOR	A .4344N	1943E	1029. G(R) 57-66	D:YU1-SU1,MO:SU-			24		
			G(K) 66-	H:YU1,D:SU1,					
				MO:SU2					
SPLIT-MARJAN	A .4331N	1626E	122. G(R) 57-64	D:YU1,MO:SU1-2					
			G(K) 64-	H:YU1,D:SU1,					
				MO:SU2					
			S(C) 54-	D:YU1,MO:SU1-2					
SJENICA	A .4316N	2001E	1015. G(K) 64-	D:YU1,MO:SU1-2					
			G(K) 64-	H:YU1,DSU1,			24		
				MO:SU2					
			G(BS) 67-	D:YU1					
			D(K) 64-	H:YU1					
			R(K) 66-	H:YU1					
			D*(SH) 64-65	H:SU1,MO:SU2					
			S(C) 54-	D:YU1,MO:SU1-2					
PRISTINA	A .4239N	2109E	573. G(R) 68-68,74	D:YU1-SU,MO:SU2					
			G(K) 68-73+74-	H:YU1,D:SU1,					
				MO:SU2					
			G(BS)	D:YU1					
			S(C)	D:YU1,MO:SU1-2					
BAR	A .4206N	1906E	6. G(K) 64-	H:YU1,D:SU1,			16		
			D(K) 67-	MO:SU2					
			S(C) 54-	H:YU1					
SKOPJE-PETROVEC	A .4157N	2138E	232. G(R) 57-	D:YU1-SU1,MO:SU-			24		
			S(C) 48-	D:YU1,MO:SU1-2					
BITOLA	A .4103N	2122E	586. G(R) 60-64	D:YU1			24		
			G(K) 64-	H:YU1,D:SU1,					
				MO:SU2					
			S(C) 52-	D:YU1,MO:SU1-2					

# ANTARCTICA



## ARGENTINA

	2	3.	4	5	6	7+	8+	9.	10
ISLAS ORCADAS D.N.	.6044S 4444W	4.	G(C)					.8	
PETREL D. N.	.6328S 5617W	.	S(C)					.8	
GENERAL BELGRANO B. E.	.7758S 3848W	.	G(C)					.8	
	.	.	S(C)					.	

## AUSTRALIA

	2	3.	4	5	6	7+	8+	9.	10
CASEY	.6615S 11032E	11.	G(E)	74-77				3CM	30M.8
	.	.	D(E)	74-77				3CM	30M.
	.	.	O+(FU)74-77						
	.	.	S(C)	55-64					
MAWSON	.6736S 6253E	8.	G(C)	56-62			D	.	8
	.	.	G(E)	65-75			D	.	
	.	.	G(E)	75-77			30M	30M	
	.	.	D(E)	65-75			D	.	
	.	.	D(E)	75-77			3CM	30M	
	.	.	O+(FU)65-75						
	.	.	O+(FU)75-77						
	.	.	S(C)	55-					

## CHILE

	2	3.	4	5	6	7+	8+	9.	10
C.M.A.P. EDUARDO FREI	.6215S 5856W	.	G(C)					.5	
	.	.	S(C)					.	

## FRANCE

	2	3.	4	5	6	7+	8+	9.	10
KERGUELEN	.64920S 7013E	18.	G(K)			D:SU1, MO:SU2			
	.	.	S(C)			MO:SU1-2			
DUMONT D'URVILLE	.6640S 1400E	41.	G(K)			D:SU1, MO:SU2		12	
	.	.	S(C)			MO:SU1-2		.	

## JAPAN

	2	3.	4	5	6	7+	8+	9.	10
SYOWA	.6900S 3935E	21.	G(C)						
	.	.	S(C)					OZONE, CO2, NOX	

## NEW ZEALAND

	2	3.	4	5	6	7+	8+	9.	10
LAKE VANDA	.7732S 16138E	95.	G(C)						
SCOTT BASE	.7751S 16645E	16.	G(E1)	57-		H:NZ1	H	10	
	.	.	S(C)					.	

## SOUTH AFRICA

	2	3.	4	5	6	7+	8+	9.	10
S.A.N.A.E	.7019S 221W	61.	G(K)			A:ZA1		.8	
	.	.	D(X)			A:ZA1		.	
	.	.	S(C)			A:ZA1		.	

## UNITED KINGDOM

	2	3.	4	5	6	7+	8+	9.	10
ARGENTINE ISLAND	.6515S 6416W	10.	O*(GD)					.8	OZONE
	.	.	S(C)					.	
HALLEY BAY	.7530S 2639W	25.	G(X)			D:SU1, SU2		.8	OZONE
	.	.	O*(GD)			H:SU1, SU2		.	
	.	.	S(C)			SU1-2		.	

## U.S.A.

	2	3.	4	5	6	7+	8+	9.	10
BYRD STATION	.8001S 11932W	.	G(C)						
	.	.	S(C)						
AMUNDSEN-SCOTT	.9000S ----	2300.	I(CEN)	74-			x		
	.	.	G(E2)	74-			x		OZONE, CO2
	.	.	G(X2)74-				x		GLA
	.	.	S(C)				x		GG22, OG1, R68

## U.S.S.R.

	2	3.	4	5	6	7+	8+	9.	10
BELLINGSHAUSEN	.6212S 5856W	16.	G(C)					.	
MIRNYI	.6633S 9301E	.	G(Y)			D:SU1, SU2		.8	
	.	.	O*(Y)			H:SU1, SU2		.	
	.	.	S(C)			MO:SU1-2		.	
MOLODEZHNAJA	.6740S 4551E	.	G(C)					.	
LENINGRADSKAJA	.6930S 1523E	.	G(C)					.	
NOVOLAZAREVSKAJA	.7046S 1150E	.	G(Y)			D:SU1, SU2		.4	
	.	.	O*(Y)			H:SU1, SU2		.	
	.	.	S(C)			MO:SU1-2		.	
VOSTOK	.7827S 10652E	.	G(Y)			D:SU1, SU2		.4	
	.	.	O*(Y)			H:SU1, SU2		.	
	.	.	S(C)			MO:SU1-2		.	



# OCEAN WEATHER STATIONS



	2	3.	4	5	6	7.	8.	9.	10
ICE ISLAND T3	A	8525N-8425N	.	G(E2) 69-71	H:CDN1	*	*	*	*
	.	12600W-8900W	3.	R(E2) 69-70	H:CDN1	*	*	*	*
	.	.	Q*(SF) 69-71	H:CDN1	*	*	*	*	*
OCEAN STATION P/PAPA	A	5000N 14500W	6.	G(E1) 59-62	H:CDN1	*	*	*	*
	.	.	.	G(R) 62-67	D:CDN1-SU1	*	*	*	*
	.	.	.	G(K) 67-	H:CDN1,D:SU1	*	*	*	*
	.	.	.	Q*(FU) 67-	H:CDN1-SU1	*	*	*	*

## UNITED KINGDOM

## OCEAN WEATHER STATIONS

	2	3.	4	5	6	7.	8.	9.	10
OCEAN WEATHER STATION A	.	6200N 3300W	6.	G(X) 57+74	*	*	*	*	*
	.	.	.	I*(GD) 57*	*	*	*	*	*
OCEAN WEATHER STATION I	.	5900N 1900W	6.	Q*(GD) 57+75	*	*	*	*	*
OCEAN WEATHER STATION L	.	5700N 2000	3.	G(X) 75+77	*	*	*	*	*
OCEAN WEATHER STATION J	.	5230N 2000W	6.	G(X) 53+75	*	*	*	*	*
	.	.	.	Q*(GD) 58*	*	*	*	*	*
OCEAN WEATHER STATION K	.	4500N 1600W	8.	G(X) 56+70	*	*	*	*	*
	.	.	.	Q*(GD) 58*	*	*	*	*	*



# TURBIDITY NETWORK



## TURBIDITY

REGION: I 3-75

	2	3	4	5	6	7	8	9	10
	.	.	.	.	.	.	.	.	.
*SOUTH AFRICA*	.	.	.	.	.	.	.	.	.
*KEETMANSHOOP	.A	2634S	1807E1066	TB	.	.	.	.	.
*MARION ISLAND	.A	4653S	3752E 22	TB	.	.	.	.	.
	.	.	.	.	.	.	.	.	.

## TURBIDITY

REGION: II

	2	3	4	5	6	7	8	9	10
	.	.	.	.	.	.	.	.	.
*	.	.	.	.	.	.	.	.	.
*INDIA*	.	.	.	.	.	.	.	.	.
*MOHANDARI	.A	2729N	9501E 111	TB	.	.	.	.	.
*JODHPUR	.A	2618N	7301E 220	TB	.	.	.	.	.
*POONA	.A	1332N	7351E 555	TB	.	.	.	.	.
*PORT BLAIR	.A	1140N	9243E 79	TB	.	.	.	.	.
*JAPAN*	.	.	.	.	.	.	.	.	.
*YOKOTA AB	.US	3544N	13920E 142	TB	71-	.	.	.	.
*OKINAWA	.US	2621N	12745E 46	TB	71-	.	.	.	.
*KOREA*	.	.	.	.	.	.	.	.	.
*YONGSAN AB	.US	3732N	12659E 54	TB	71-	.	.	.	.
*TAIWAN*	.	.	.	.	.	.	.	.	.
*CHING CHUAN KANG AB	.US	2502N	12131E 9	TB	71-	.	.	.	.
*	.	.	.	.	.	.	.	.	.

## TURBIDITY

REGION: IV

	2	3	4	5	6	7	8	9	10
	.	.	.	.	.	.	.	.	.
*	.	.	.	.	.	.	.	.	.
*CANADA*	.	.	.	.	.	.	.	.	.
*ALBERTA*	.	.	.	.	.	.	.	.	.
*EDSON A	.A	5335N	11627W 924	TB(E) 74-	.	.	.	.	.
*BRITISH COLUMBIA*	.	.	.	.	.	.	.	.	.
*PUNTOI MOUNTAIN	.A	5207N	12405W 911	TB(E) 75-77	.	.	.	.	.
*KELOWNA A	.A	4958N	11223W 417	TB(E) 77-	.	.	.	.	.
*NORTHWEST TERRITORIES*	.	.	.	.	.	.	.	.	.
*FORT SIMPSON A	.A	6145N	12114W 170	TB(E) 74-	.	.	.	.	.
*NOVA SCOTIA*	.	.	.	.	.	.	.	.	.
*SABLE ISLAND	.A	4356N	6001W 4	TB(E) 75-	.	.	.	.	.
*ONTARIO*	.	.	.	.	.	.	.	.	.
*PICKLE LAKE	.A	5128N	9012W 369	TB(E) 77-	.	.	.	.	.
*ARMSTRONG A	.A	5017N	8854W 322	TB(E) 74-77	.	.	.	.	.
*MOUNT FOREST	.A	4359N	8045W 415	TB(E) 73-	.	.	.	.	.
*QUEBEC*	.	.	.	.	.	.	.	.	.
*MANIHIKI	.A	4623N	7558W 170	TB(E) 75-	.	.	.	.	.
*SASKATCHEWAN*	.	.	.	.	.	.	.	.	.
*WYNARD	.A	5146N	10412W 561	TB(E) 74-	.	.	.	.	.
*PAHANA**	.	.	.	.	.	.	.	.	.
CANAL ZONE-HOWARD AB	.B	0255N	7936W 10	TB	71-	.	.	.	.
*U.S.A.**	.	.	.	.	.	.	.	.	.
*	.	.	.	.	.	.	.	.	.
*ALASKA**	.	.	.	.	.	.	.	.	.
*TIN CITY/NOME	.A	6534N	16755W 85	TB	72-75	.	.	.	.
*ARIZONA*	.	.	.	.	.	.	.	.	.
*TUCSON	.A	3213N	11058W 726	TB	60-65	.	.	.	.
*MOUNT HOPKINS	.A	3741N	11353W2377	TB	69-72	.	.	.	.
*CALIFORNIA*	.	.	.	.	.	.	.	.	.
*LITTLE ROCK	.A	3444N	9214W 84	TB	64-	.	.	.	.
*PITTSBURG	.A	3601N	12154W 15	TB	68-73	.	.	.	.
*PORT CHICAGO	.A	3607N	12201W 15	TB	68-68	.	.	.	.
*SAN RAFAEL	.A	3758N	12232W 16	TB	68-71	.	.	.	.
*SICHIMND	.A	3756N	12221W 17	TB	59-72	.	.	.	.
*ALBANY HILL	.A	3754N	12218W 0	TB	68-69	.	.	.	.
*BERSELEY	.A	3752N	12216W	TB	64-65	.	.	.	.
*SAN FRANCISCO	.A	3747N	12225W 16	TB	69-72	.	.	.	.
*REDWOOD CITY	.A	3729N	12214W 9	TB	68-72	.	.	.	.
*DISHOP	.A	3722N	11322W1252	TB	71-	.	.	.	.
*SAN JOSE	.A	3720N	12153W 29	TB	65-72	.	.	.	.
*EDWARDS	.A	3455N	11754W 705	TB	71-	.	.	.	.
*GOLDETA	.A	3427N	11950W 2	TB	51-67	.	.	.	.
*PASADENA	.A	3409N	11809W 31	TB	71-71	.	.	.	.
*SAN BERNADINO	.A	3407N	11718W 333	TB	65-72	.	.	.	.
*LOS ANGELES	.A	3403N	11615W 96	TB	62-68	.	.	.	.
*SANTA MONICA	.A	3401N	11829W 16	TB	63-65	.	.	.	.
*COLORADO*	.	.	.	.	.	.	.	.	.
*BOULDER	.T	3956N	10516W1890	TB	61-	.	.	.	.
*ALAMOSA	.A	3727N	10552W2297	TB	71-	.	.	.	.
*FLORIDA*	.	.	.	.	.	.	.	.	.
*TALLAHASSE	.A	3023N	8422W 21	TB	73-	.	.	.	.
*GAINEVILLE	.A	2942N	8216W 42	TB	73-	.	.	.	.
*MIAMI	.A	2944N	8010W 17	TB	72-	.	.	.	.
*HAWAII*	.	.	.	.	.	.	.	.	.
*MAUIA LOA	.A	1932N	15535W3397	TB	65-	.	.	.	.
*IDAHO*	.	.	.	.	.	.	.	.	.
*IDAHO FALLS	.A	4332N	11257W1504	TB	60-	.	.	.	.
*ILLINOIS*	.	.	.	.	.	.	.	.	.
*CHICAGO	.A	4153N	8738W 181	TB	63-68	.	.	.	.
*SALEM	.A	3339N	8858W 177	TB	71-	.	.	.	.
*KANSAS*	.	.	.	.	.	.	.	.	.
*TOPEKA	.A	3904N	9558W 268	TB	60-XX	.	.	.	.
*MACHNE*	.	.	.	.	.	.	.	.	.
*CARIBOU	.A	4552N	6801W 191	TB	71-	.	.	.	.
*MARYLAND*	.	.	.	.	.	.	.	.	.
*BALTIMORE	.A	3917N	7637W 4	TB	64-	.	.	.	.
*BELTIVILLE	.A	3902N	7653W 37	TB	67-	.	.	.	.
*COLLEGE PARK	.A	3358N	7656W 23	TB	69-	.	.	.	.
*MASSACHUSETTS*	.	.	.	.	.	.	.	.	.
*BLUE HILL	.A	4213N	7107W 192	TB	60-	.	.	.	.
*MICHIGAN*	.	.	.	.	.	.	.	.	.
*ANN ARBOR	.AC	4217N	8345W 220	TB	62-67	.	.	.	.
*MINNESOTA*	.	.	.	.	.	.	.	.	.
*SAINT LLOUD	.A	4535N	9411W 316	TB	61-	.	.	.	.

TURBIDITY

REGION: IV

3-76

	2	3.	4	5	6	7.	8.	9
*MISSISSIPPI*								
MERIDIAN		A .3220N	8845W	94. TB	64-			
*MISSOURI*		AH .3838N	9014W	176. TB	54-74			
SAINT LOUIS								
*MONTANA*								
MISSOULA		A .4655N	11405W	980. TB	64-74			
*NEW JERSEY*		A .3927N	7434W	20. TB	71-			
ATLANTIC CITY								
*NEW MEXICO*		A .3552N	10618W	2259. TB	69-			
LOS ALAMOS		A .3503N	10637W	1620. TB	67-72			
ALBUQUERQUE								
*NEW YORK*								
ALBANY		A .4245N	7348W	88. TB	62-			
UPTON		A .4052N	7253W	23. TB	63-			
*NEW YORK/ROCKEF.PLAZA		A .4046N	7359W	21. TB	63-74			
*NORTH CAROLINA*								
GREENSBORO		A .3605N	7957W	272. TB	65-			
RALEIGH-RTP		A .3554N	7852W	95. TU	65-			
RALEIGH-AIRPORT		A .3552N	7847W	134. TU	71-			
ASHEVILLE-N.C.		A .3536N	8233W	674. TB	73-			
*NORTH DAKOTA*								
BISMARCK		A .4640N	10045W	506. TD	73-			
*OHIO*								
TOLEDO		A .4139N	8322W	181. TB	67-			
YOUNGSTOWN		A .4110N	8040W	365. TB	63-			
COLUMBUS		A .4200N	8253W	253. TB	66-68			
CINCINNATI		A .3908N	8438W	180. TU	61-63			
CINCINNATI		A .3906N	8433W	194. TU	60-69			
*OREGON*								
PENDLETON		A .4541N	11851W	456. TB	71-			
*PENNSYLVANIA*								
PHILADELPHIA		AH .3953N	7515W	19. TB	62-71			
*SOUTH DAKOTA*								
HURON		A .4423N	9813W	395. TD	60-			
*TENNESSEE*								
OAK RIDGE		A .3601N	3414W	276. TU	51-			
MEMPHIS		A .3503N	8959W	86. TB	65-			
*TEXAS*								
GRAND PRAIRIE		A .3242N	9701W	160. TB	71-			
COLLEGE STATION		A .3037N	9621W	97. TU	63-67			
HOUSTON		A .2946N	9522W	15. TU				
VICTORIA		A .2511N	9655W	36. TD	71-			
*WASHINGTON*								
SEATTLE		A .4727N	12215W	116. TB	63-73			
REDMOND		A .4727N	12218W	103. TB	70-71			
*WASHINGTON D.C.*								
WASHINGTON D.C.		A .3554N	7703W	22. TD	62-71			
*WEST VIRGINIA*								
ELKINS		A .3553N	7951W	600. TB	54-			
*WISCONSIN*								
GREEN BAY		A .4429N	8808W	210. TB	62-			

## TURBIDITY

REGION: V

	2	3	4	5	6	7	8	9
*AUSTRALIA*	.	.	.	.	.	.	.	.
ASPENDALE	A	3302S 14506E	5.	TD	.	.	.	.
*GUAM*	.	.	.	.	.	.	.	.
ANDERSEN A.B.	A	1334N 14455E	162.	TD	71-	.	.	.
*PHILIPPINES*	.	.	.	.	.	.	.	.
CLARK A.B.	US	1510N 12034E	196.	TD	71-	.	.	.
*SAMOA*	.	.	.	.	.	.	.	.
PAGO PAGO	US	1420S 17043W	3.	TD	72-	.	.	.

## TURBIDITY

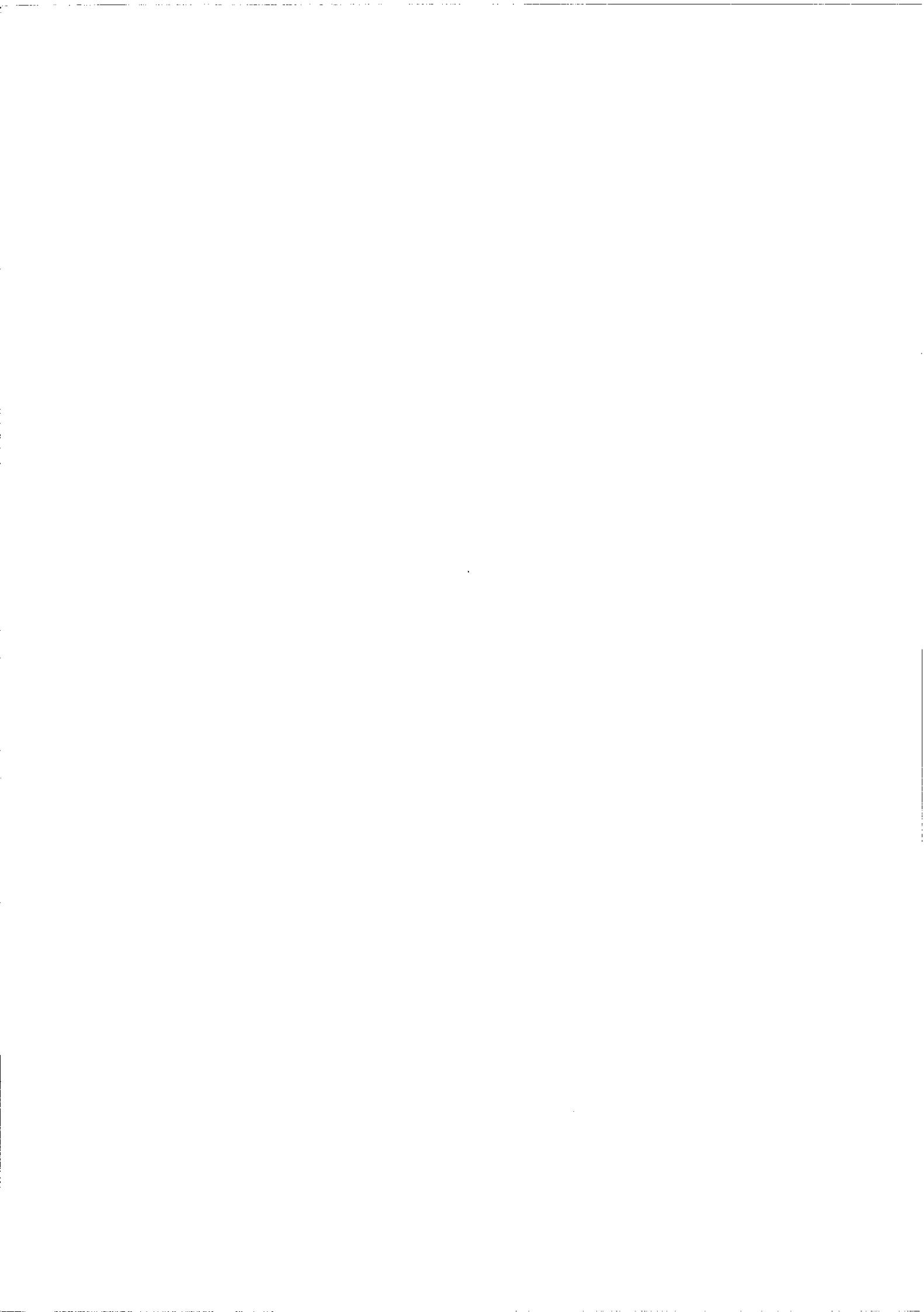
REGION: VI

	2	3	4	5	6	7	8	9
*FINLAND*	.	.	.	.	.	.	.	.
*SODANHYLA	A	6722N	2639E	173.	TB	.	.	.
*GERMAN FED.REP.*	.	.	.	.	.	.	.	.
*HAMBURG	A	5203N	1000E	14.	TB	.	.	.
*LANGENRODGE (WALDHOF)	A	5243N	1346E	72.	TB	.	.	.
*WIESBADEN	A	5003N	3320E	148.	TB	71-	.	.
*DEUSELDACH	A	4945N	0703E	493.	TB	.	.	.
*BROTJACKLRIEGEL	A	4954N	1313L1030.	TB	.	.	.	.
*SCHAUNISLAND	A	4755N	0755E1206.	TB	.	.	.	.
*GREENLAND*	.	.	.	.	.	.	.	.
*THULE A-B*	US	7632N	6848W	77.	TB	72-73	.	.
*HUNGARY*	.	.	.	.	.	.	.	.
*KOMLOGI	.	4658N	1935E	125.	TB	.	.	.
*IRELAND*	.	.	.	.	.	.	.	.
*VALENTIA	A	5156N	1015W	9.	TB	.	.	.
*ADRIGOLE	A	5124N	0927W	62.	TB	.	.	.
*ISRAEL*	.	.	.	.	.	.	.	.
*HAIFA	A	3249N	3500E	15.	TB	.	.	.
*ITALY*	.	.	.	.	.	.	.	.
*AVIONO A-B*	US	4802N	1236E	129.	TB	71-	.	.
*PORTUGAL*	.	.	.	.	.	.	.	.
*LAJES A-B*,AZORES	US	3345N	2705W	54.	TB	71-	.	.
*SPAIN*	.	.	.	.	.	.	.	.
*BARCELONA	A	4132N	0207W	105.	TB	.	.	.
*TORREJON A-B*	US	4025N	0334W	606.	TB	71-	.	.
*SWEDEN*	.	.	.	.	.	.	.	.
*VELEN	A	5846N	1418E	127.	TB	.	.	.
*TURKEY*	.	.	.	.	.	.	.	.
*ANKARA	A	3957N	3253E	902.	TB	.	.	.
*UNITED KINGDOM*	.	.	.	.	.	.	.	.
*UPPER HEYFORD A-B*	US	5156N	0115W	128.	TB	71-	.	.
*OWERCHALKE	A	5100N	0200W	125.	TB	.	.	.
*LERWICK	A	6008N	0111W	82.	TB	.	.	.

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ADMINISTRATORS  
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\*\*\*\*\* REGION I - AFRICA \*\*\*\*\*  
 \*\*\* ADMINISTRATORS & PUBLICATIONS \*\*\*

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 ADMINISTRATOR

A METEOROLOGIE NATIONALE, MINISTERE DES TRANSPORTS  
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KN1 THE HUTCHINSON SOLAR UNITS  
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RN1 RADIATION IN MALAWI

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\*\*\*\*\* REPUBLIC OF DJIBOUTI \*\*\*\*\*  
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A WEATHER BUREAU  
 P.R. X193  
 ZA-0001 PRETORIA

PUBLICATIONS

ZA1 ANNUAL RADIATION REPORT  
 WEATHER BUREAU

ZA2 SOLAR WATER HEATING IN SOUTH AFRICA  
 NATIONAL BUILDING RESEARCH INSTITUTE  
 CSIR, P.O.BOX 395,  
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 PUNE-S, LODI ROAD, NEW DELHI - 110 003.

PUBLICATIONS

IND1 AEROLOGICAL DATA OF INDIA CONTROLLER OF PUBLICATIONS  
 CIVIL LINES, NEW DELHI-110 008 (MONTHLY 1968- )

IND2

MONTHLY RADIATION BULLETINS & SOLAR RADIATION BULLETINS  
 1957-1967  
 INDIAN METEOROLOGICAL DEPARTMENT

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A IRANIAN METEOROLOGICAL ORGANIZATION  
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 TOKYO, 100

PUBLICATIONS

J1 MONTHLY REPORT OF THE JAPAN METEOROLOGICAL AGENCY

J2 ANNUAL REPORT OF THE JAPAN METEOROLOGICAL AGENCY

J3 REPORT OF RADIATION OBSERVATIONS  
 JAPAN METEOROLOGICAL AGENCY  
 1959-

PYRHELIOMETRIC BULLETIN & ACTINOMETRIC BULLETIN  
 -1959

\*\*\*\*\*KOREA, DEMOCRATIC PEOPLES REPUBLIC OF\*\*\*\*\*  
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A HYDRO-METEOROLOGICAL SERVICE, P.O.BOX 100,  
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\*\*\*\*\*KOREA, REPUBLIC OF\*\*\*\*\*  
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A CENTRAL METEOROLOGICAL OFFICE,  
 1 SONGWOL-DONG, SEDUL 120

PUBLICATION

K01 MONTHLY WEATHER REPORT  
 CENTRAL METEOROLOGICAL OFFICE  
 REPUBLIC OF KOREA

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PUBLICATION

CLIMATOLOGICAL DATA  
 METEOROLOGICAL DEPARTMENT

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A MINISTERE DE L'AGRICULTURE DES FORETS ET DE L'IRRIGATION  
 B.P.323  
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 MOSCOW D-376

PUBLICATIONS

SU1 SOLAR RADIATION AND RADIATION BALANCE DATA  
 (THE WORLD NETWORK), MONTHLY 1964-  
 LENINGRAD

SU2 SOLAR RADIATION AND RADIATION BALANCE DATA  
 (THE WORLD NETWORK), ANNUAL DATA: 1964-1968, 1969-1973  
 LENINGRAD

SU3 ACTINOMETRIC MONTHLY, 1962-  
 LENINGRAD

ADDRESS: VOEIKOV MAIN GEOPHYSICAL OBSERVATORY  
 7, KARBYSHEVA  
 LENINGRAD 194018, USSR

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BUENOS AIRES

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CALLE AYACUCHO 467  
LA PAZ

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A DEPARTAMENTO NACIONAL DE METEOROLOGIA  
PRAÇA XV DE NOVEMBRO, 2/5 ANDAR  
20000 RIO DE JANEIRO, EST. DO RIO DE JANEIRO

## PUBLICATION

-----  
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DG	BRIDGEWATER STATE COLLEGE, MASS.	US18 INPUT DATA FOR SOLAR SYSTEMS, NOVEMBER 1978, PREPARED FOR DEPARTMENT OF ENERGY BY THE US DEPARTMENT OF INFORMATION SERVICE, NATIONAL CLIMATIC CENTER, ASHEVILLE, NC
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- NZ3 SUNSHINE NORMALS, 1941-1970,  
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PUBL. 183  
WIEN  
  
A3 SCHLERN-SCHRIFTEN  
BD 145 & BD 236, ERWIN MAYR  
  
A4 JAHRBUCH DER ZENTRALANSTALT FUR MET. UND GEOD.: 1947  
ANHANG 6  
  
A5 TAGES UND JAHRESPASS DER SONNENSCHEINDAUER IN ÖSTERREICH  
(1929-1968)  
F. STEINHAUSER  
ARBEITEN AUS DER Z.F.M.U.G. HEFT 12, PUBL. 202  
  
A6 METEOROLOGISCHE MESSDATEN FÜR DIE NUTZUNG DER SONNENENERGIE  
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INSTITUT ROYAL METEOROLOGIQUE DE BELGIQUE  
  
B3 OBSERVATIONS RADIOMETRIQUES  
STATION DE UCCLE : STATISTIQUES DE 15 ANNUS : 1951 - 1965

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DK1 PUBLICATIONS  
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YEARLY REPORT

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KUUKAUSIKATSaus SUOMEN ILMASTOON  
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SF2 MEASUREMENTS OF RADIATION AND BRIGHT SUNSHINE  
METEOROLOGICAL YEARBOOK OF FINLAND, PART 4  
  
SF3 RESULTS OF RADIATION MEASUREMENTS IN FINLAND DURING  
THE YEARS 1957-1967, VEIKKO ROSSI  
SUPPLEMENT TO THE MET. YEARBOOK OF FINLAND PART 4  
  
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YEARLY PUBL. 1976- MONTHLY PUBL. 1954-1975. BEFORE 1973  
ONLY HAMBURG DATA.

D6 GLOBALSTRÄHLUNG IN MÜNCHEN 1960-1974  
UNIVERSITÄT MÜNCHEN METEOROLOGISCHES INSTITUT

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H1 A NAPSUGARZAS MAGYARORSZAGON  
1058 - 1972, BUDAPEST 1976.  
(THE SOLAR RADIATION IN HUNGARY 1958 - 1972).

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MONTHLY REPORT OF THE ICELANDIC METEOROLOGICAL OFFICE

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METEOROLOGICAL INSTITUTION, BET DAGAN, 1962-1968  
SERIES A, NO 25, 1970, MET. NOTES

IL4 SOLAR RADIATION AND SUNSHINE IN JERUSALEM, 1971-1974  
HEBREW UNIVERSITY, DEP.OF CLIMAT. AND MET.JERUSALEM

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I5 SCIENTIFIC REPORTS ON METEOROLOGY AND  
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PUBLICATIONS		K J.R. MULLER EPFL INST. DE THERMIQUE APPLIQUE	
PL1 ROCZNIC METEOROLOGICZNY (METEOROLOGICAL ANNUAL) 1959-		L O. GUISAN UNIV. GENF SECTION DE PHYSIQUE	
<b>*****PORTUGAL*****</b>		M G. DAYER GRANDE DIXERCE, SA	
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PUBLICATION			
R1 LUCRARILE OBSERVATORULUI DE FIZICA ATMOSFEREI 1961-1966 ANUARUL OBSERVATORULUI DE FIZICA ATMOSFEREI 1967-			
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SYR1 ANNUAL CLIMATOLOGICAL DATA  
MINISTRY OF DEFENCE  
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SU1 SOLAR RADIATION AND RADIATION BALANCE DATA  
(THE WORLD NETWORK), MONTHLY 1964-  
LENINGRAD

SU2 SOLAR RADIATION AND RADIATION BALANCE DATA  
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LENINGRAD

SU3 ACTINOMETRIC MONTHLY, 1962-  
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## PUBLICATIONS

GB1 MONTHLY WEATHER REPORT OF THE BRITISH METEOROLOGICAL  
OFFICE

GB2 MAPS OF AVERAGE DURATION OF BRIGHT SUNSHINE  
OVER THE UNITED KINGDOM 1941-1970,  
METEOROLOGICAL OFFICE

GB3 SOLAR RADIATION CLIMATOLOGY OF THE BRITISH ISLES  
(NOT YET PUBLISHED)

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BEOGRAD-ZELENO BRDO, YEARBOOK 1957-1971  
RESULTATS DES MESURES SPECIALES EN YUGOSLAVIE  
YEARBOOK 1972-

YU2 METEOROLOGICAL BULLETIN  
UNIVERSITY OF ZAGREB, OBSERVATORY GRIC  
P.O.BOX 224, YU-41001 ZAGREB

YU3 ANNUAL REPORT OF THE METEOROLOGICAL AERLOGICAL  
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