

International Geophysical Calendar for 1974

(See other side for information on the use of this Calendar)

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2						1	2
6	7	8	9	10	11	12	3	4	5	6	7	8	9	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23	17	18	19	20	21	22	23
27	28	29	30	31			24	25	26	27	28			24	25	26	27	28	29	30
														31						
APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6				1	2	3	4							1
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
28	29	30					26	27	28	29	30	31		23	24	25	26	27	28	29
														30						
JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3							
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					
OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2							
6	7	8	9	10	11	12	3	4	5	6	7	8	9	1	2	3	4	5	6	7
13	14	15	16	17	18	19	10	11	12	13	14	15	16	8	9	10	11	12	13	14
20	21	22	23	24	25	26	17	18	19	20	21	22	23	15	16	17	18	19	20	21
27	28	29	30	31			24	25	26	27	28	29	30	22	23	24	25	26	27	28
														29	30	31				

JANUARY 1975

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

- 15 Regular World Day (RWD)
- 16 Priority Regular World Day (PRWD)
- 19 Quarterly World Day (QWD)
also a PRWD and RGD
- 9 Regular Geophysical Day (RGD)
- 13 Day of Solar Eclipse

* Micropulsation Interval Day

10 11 World Geophysical Interval (WGI)

3 Day with unusual meteor shower activity,
Northern Hemisphere

4 Day with unusual meteor shower activity,
Southern Hemisphere

20 21 Airglow and Aurora Period

Notes: GARP Special Periods: AMTEX — February 14-28; GATE — June 25-July 14, July 27-August 16, August 30-September 19 tentative); DST — all year; WWW — all year but especially GATE periods. See reverse for details.

EXPLANATIONS

This Calendar continues the series begun for the IGY years 1957-58, and is issued annually to recommend dates for solar and geophysical observations which cannot be carried out continuously. Thus, the amount of observational data in existence tends to be larger on Calendar days. The recommendations on data reduction and especially the flow of data to World Data Centers (WDCs) in many instances emphasize Calendar days. The Calendar is prepared by the International Ursigram and World Days Service (IUWDS) with the advice of spokesmen for the various scientific disciplines. For greater detail concerning explanations or recommendations your attention is called to information published periodically in STP Notes, IAGA News, IUGG Chronicle, URSI Information Bulletin or other scientific journals.

The definitions of the designated days remain as described on previous Calendars. Universal Time (UT) is the standard of time for all world days. Regular Geophysical Days (RGD) are each Wednesday. Regular World Days (RWD) are three consecutive days each month, always Tuesday, Wednesday and Thursday near the middle of the month. Priority Regular World Days (PRWD) are the RGD which fall on Wednesdays. Quarterly World Days (QWD) are one day each quarter and are the PRWD which fall in the World Geophysical Intervals (WGI). The WGI are fourteen consecutive days in each season, beginning on the second Monday of the selected months, and normally shift from year to year, but in 1974 the WGI will again be in March, June, September and December in order to include the Solar Eclipses.

The Solar Eclipses are June 20 (total) observable from southern Indian Ocean across mid-Indian Ocean to southwestern tip of Australia ending in South Pacific Ocean south of Tasmania, and December 13 (partial) maximum beginning off coast of southern California crossing northern Hudson Bay and southern Greenland ending off Morocco in Africa. Geophysical stations in the eclipse zones and their conjugate areas treat these days as world days and undertake special programs to study eclipse effects on the earth's atmosphere.

Meteor Showers (selected by P. M. Millman, Ottawa) include important visual showers and also unusual showers observable mainly by radio and radar techniques. The dates are coded to indicate whether the shower is observable in the northern or southern hemisphere.

The occurrence of unusual solar or geophysical conditions is announced or forecast by the IUWDS through various types of geophysical "Alerts" which are widely distributed by telegram and radio broadcast on a current schedule. Stratospheric warmings (STRATWARM) are also designated. The meteorological telecommunications network coordinated by WMO carries these worldwide Alerts once daily soon after 0400 UT. For definitions of Alerts see IUWDS "Synoptic Codes for Solar and Geophysical Data, Third Revised Edition 1973" and its amendments. Retrospective World Intervals are selected and announced in STP Notes and elsewhere to provide additional analyzed data for particular events studied in the ICSU Special Committee on Solar-Terrestrial Physics (SCOSTEP) programs.

RECOMMENDED SCIENTIFIC PROGRAMS OPERATIONAL EDITION

(The following material was reviewed in 1973 by spokesmen of SCOSTEP and at the XVI Meeting of COSPAR as suitable for coordinated geophysical programs in 1974.)

Airglow and Auroral Phenomena. Airglow and auroral observatories operate with their full capacity around the New Moon periods. However, for progress in understanding the mechanism of, inter alia, low latitude aurora, the coordinated use of all available techniques, optical and radio, from the ground and in space is required. Thus, for the airglow and aurora periods on the Calendar, ionosonde, incoherent scatter, special satellite or balloon observations, etc., are especially encouraged.

Atmospheric Electricity. Not-continuous measurements and data reduction for continuous measurements of atmospheric electric current density, field, conductivities, space charges, ion number densities, ionosphere potentials, condensation nuclei, etc.; both at ground as well as with radiosondes, aircraft, rockets; should be done with first priority on the RGD each Wednesday, beginning on 2 January 1974 at 0600 UT, 9 January at 1200 UT, 16 January at 1800 UT, 23 January at 0000 UT, 30 January at 0600 UT, etc. (beginning hour shifts six hours each week, but is always on a Wednesday). Minimum program is at the same time on PRWD beginning with 16 January at 1800 UT. Data reduction for continuous measurements should be extended, if possible, to cover at least the full RGD including, in addition, at least 6 hours prior to indicated beginning time. Measurements prohibited by bad weather should be done 24 hours later. Results on sferics and ELF are wanted with first priority for the same hours, short-period measurements centered around the minutes 35-50 of the hours indicated. **Priority Weeks** are the weeks which contain a PRWD, minimum priority weeks are the ones with a QWD. The World Data Centre for Atmospheric Electricity, 7 Karbysheva, Leningrad K-18, USSR, is the collection point for data and information on measurements.

Geomagnetic Phenomena. It has always been a leading principle for geomagnetic observatories that operations should be as continuous as possible and the great majority of stations undertake the same program without regard to the Calendar. Special efforts recommended are:

Micropulsations: to improve the cooperation between observatories in the analysis of worldwide distribution of different types of micropulsations, it is recommended both to the fixed observatories as well as to research groups making special investigations of micropulsations to con-

duct quick run registrations of pulsations in the following time intervals during the year: March 20-26, June 17-23, September 13-19, December 10-16. These periods coincide with the **Airglow and Aurora Periods**.

Ionospheric Phenomena. Special attention is continuing on particular events which cannot be forecast in advance with reasonable certainty. These will be identified by Retrospective World Intervals. The importance of obtaining full observational coverage is therefore stressed even if it is possible to analyze the detailed data only for the chosen events. In the case of vertical incidence soundings, the need to obtain quarter-hourly ionograms at as many stations as possible is particularly stressed and takes priority over recommendation (a) below when both are not practical.

For the vertical incidence (VI) sounding program, the summary recommendations are: (a) soundings to be made at five minute intervals on RWDs for stations normally making observations every quarter hour; all other stations are recommended to make at least quarter-hourly observations on RWDs; (b) f-plots are made for high latitude stations and for the so-called "representative" stations at lower latitudes for all days (i.e., including RWDs and WGIs), (Continuous records of ionospheric parameters are acceptable in place of f-plots at temperate and low latitude stations); (c) profile parameters h_c , q_c or recommended similar parameters to be determined and sent to WDCs for RWDs for all stations except those undertaking full profile programs or producing monthly median profiles; (d) copies of hourly ionograms with appropriate scales for RWDs are to be sent to WDCs; (e) stations in the eclipse zone and its conjugate area should take continuous observations on solar eclipse days and special observations on adjacent days. See also recommendations under **Airglow and Auroral Phenomena**.

For incoherent scatter observation program, every effort should be made to obtain measurements at least on all RWDs and intensive series should be attempted whenever possible in WGIs or the **Airglow and Aurora Periods**. The need for collateral VI observations with not more than quarter-hourly spacing at least during all observation periods is stressed.

For synoptic observations of mesospheric (D region) electron densities, several groups have agreed on using the RGD for the hours around noon.

For programs in drifts, absorption, backscatter, ELF noise, see recommendations attached to 1973 Calendar.

Meteorology. Particular efforts should be made to carry out an intensified program on the RGD — each Wednesday, UT. A desirable goal would be the scheduling of meteorological rocketsondes, ozone sondes and radiometer sondes on these days, together with maximum-altitude rawinsonde ascents at both 0000 and 1200 UT.

During WGI and STRATWARM Alert intervals, intensified programs are also desirable, preferably by the implementation of RGD-type programs (see above) on Mondays and Fridays, as well as on Wednesdays.

Special observing periods for **GARP**: Global Atmospheric Research Program (for further information, contact GARP Joint Planning Staff at WMO in Geneva):

AMTEX — February 14-28. Air Mass Transformation Experiment will be carried out in ocean area surrounding Okinawa. Participants are Japan (lead), Australia, Canada, USA, USSR. Mainly aircraft and ship observations.

GATE — June 25-July 14, July 27-August 16, August 30-September 19 (all tentative dates). GARP Atlantic Tropical Experiment in equatorial Atlantic and adjacent land areas 20° N to 10° S. The international program includes aircraft, ship and satellite observations of meso-scale convective systems and their relationships with larger-scale flow, including intensified land-based observations.

DST — all year. Data Systems Test for GARP Global Experiment circa 1977. Global data sets will be produced by USA (gridded and in near real time for selected periods) combining conventional ground based and operational satellite observing systems with experimental satellite, balloon, etc., systems.

WWW — all year. Surface and upper-air meteorological stations should strive to meet World Weather Watch observing and data transmission schedules. In the tropical zone 20° N to 10° S priority should be given to obtaining observations in the three GATE periods.

Solar Phenomena. Observatories making specialized studies of solar phenomena, particularly using new or complex techniques, such that continuous observation or reporting is impractical, are requested to make special efforts to provide to WDCs data for solar eclipse days, RWDs, and during **PROTONALERTs** or **XRAYALERTs**. The attention of those recording solar noise spectra, solar magnetic fields and doing specialized optical studies is particularly drawn to this recommendation.

Space Research, Interplanetary Phenomena, Cosmic Rays, Aeronomy. Experimenters should take into account that observational effort in other disciplines tends to be intensified on the days marked on the Calendar, and schedule balloon and rocket experiments accordingly if there are no other geophysical reasons for choice. In particular it is desirable to make rocket measurements of ionospheric characteristics on the same day at as many locations as possible; where feasible, experimenters should endeavor to launch rockets to monitor at least normal conditions on the **Quarterly World Days (QWD)** or on RWDs, since these are also days when there will be maximum support from ground observations. Also, special efforts should be made to assure recording of telemetry on QWD and **Airglow and Aurora Periods** of experiments on satellites and of experiments on spacecraft in orbit around the sun.

The International Ursigram and World Days Service (IUWDS) is a permanent scientific service of the International Union of Radio Science (URSI), with the participation of the International Astronomical Union and the International Union Geodesy and Geophysics. IUWDS adheres to the Federation of Astronomical and Geophysical Services of the International Council of Scientific Unions. The IUWDS coordinates the international aspects of the world days program and rapid data interchange, and also publishes subsequently **Condensed Calendar Records** of solar and geophysical indices and events, published in STP Notes.

This Calendar for 1974 has been drawn up by J. V. Lincoln, of the IUWDS Steering Committee, in close association with A. H. Shapley, Chairman of MONSEE of SCOSTEP, and spokesmen for the various scientific disciplines in SCOSTEP and COSPAR. Similar Calendars have been issued annually beginning with the IGY, 1957-58, and have been published in various widely available scientific publications.

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Additional copies are available upon request to IUWDS Chairman, Dr. P. Simon, Ursigrammes Observatoire, 92190 Meudon, France, or IUWDS Secretary for World Days, Miss J. V. Lincoln, WDC-A for Solar-Terrestrial Physics, NOAA, Boulder, Colorado, 80302, U.S.A.