

International Geophysical Calendar 1986

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

	S	M	T	W	T	F	S	S	M	T	W	T	F	S	
				1	2	3	4			1	2	3	4	5	
	5	6	7	8	9	10	11	6	7	8	9 ⁺	10 ⁺	11	12	
JANUARY	12	13	14 ⁺	15 ⁺	16 ⁺	17 ⁺	18	13	14	15	16	17	18	19	JULY
	19	20	21	22	23	24	25	20	21	22	23	24	25	26	
	26	27	28	29	30	31	1	27	28	29	30	31	1	2	
	2	3	4	5	6	7	8	3	4	5	6	7	8	9	
FEBRUARY	9	10	11 [*]	12 [*]	13	14	15	10	11	12	13	14	15	16	AUGUST
	16	17	18	19	20	21	22	17	18	19	20	21	22	23	
	23	24	25	26	27	28	1	24	25	26	27 ⁺	28 ⁺	29	30	
	2	3	4	5 ⁺	6 ⁺	7	8	31	1	2	3	4	5	6	
MARCH	9	10	11 [*]	12 [*]	13	14	15	7	8	9	10	11	12	13	
	16	17	18	19	20	21	22	14	15	16	17	18	19	20	SEPTEMBER
	23	24	25	26	27	28	29	21	22	23	24 ⁺	25 ⁺	26 ⁺	27	
	30	31	1 ⁺	2 ⁺	3 ⁺	4 ⁺	5	28	29	30	1	2	3	4	
	6	7	8 [*]	9 [*]	10	11	12	5	6	7	8	9	10	11	
APRIL	13	14	15	16	17	18	19	12	13	14	15	16	17	18	OCTOBER
	20	21	22	23	24	25	26	19	20	21	22	23	24	25	
	27	28	29	30	1	2	3	26	27	28	29 ⁺	30 ⁺	31	1	
	4	5	6 ⁺	7 ⁺	8	9	10	2	3	4	5	6	7	8	
MAY	11	12	13	14	15	16	17	9	10	11	12	13	14	15	NOVEMBER
	18	19	20	21	22	23	24	16	17	18	19	20	21	22	
	25	26	27	28	29	30	31	23	24	25	26 [*]	27 [*]	28	29	
	1	2	3	4 ⁺	5 ⁺	6	7	30	1	2	3	4	5	6	
JUNE	8	9	10	11	12	13	14	7	8	9	10 ⁺	11 ⁺	12	13	DECEMBER
	15	16	17	18	19	20	21	14	15	16	17	18	19	20	
	22	23	24	25	26	27	28	21	22	23	24 [*]	25 [*]	26	27	
	29	30						28	29	30	31	1	2	3	
	S	M	T	W	T	F	S	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	1987
								S	M	T	W	T	F	S	JANUARY

- ⑭ Regular World Day (RWD)
- ⑮ Priority Regular World Day (PRWD)
- ◇ Quarterly World Day (QWD)
also a PRWD and RWD
- Regular Geophysical Day (RGD)
- 3 4 World Geophysical Interval (WGI)
- 14⁺ Incoherent Scatter Coordinated
Observation Day and Coordinated
Tidal Observation Day

- 9 Day of Solar Eclipse
- 9 10 Airglow and Aurora Period
- 11^{*} Dark Moon Geophysical Day (DMGD)

NOTES:

1. Days with unusual meteor shower activity are: Northern Hemisphere Jan 3,4; Apr 21-23; May 3-5; Jun 8-12; Jul 27-29; Aug 10-14; Oct 19-23; Nov 2-4, 17-18; Dec 12-16, 21-23, 1986; Jan 3,4, 1987. Southern Hemisphere May 3-5; Jun 8-12; Jul 26-30; Oct 19-23; Nov 2-4, 17-18; Dec 5-7, 12-16, 1986.
2. Study of Traveling Interplanetary Phenomena (STIP) Interval XIX: March 1986 International Halley Watch
Revised STIP dates: STIP XV 12-21 Feb 1984; STIP XVI 20 April - 4 May 1984; STIP XVII 15 May - 30 June 1985; and STIP XVIII September 1985.
3. Middle Atmosphere Cooperation (MAC) begins 1 Jan 1986 and runs through 1988.
4. Day intervals that IMP 8 satellite is in the solar wind (begin and end days are generally partial days): 1985 Dec 29-1986 Jan 6; Jan 11-19, 24-31; Feb 6-13, 18-26; Mar 3-10, 15-23 and 28-Apr 4; Apr 9-17, 22-30; May 5-13, 18-25, 30-Jun 7; Jun 11-19, 23-Jul 2; Jul 6-15, 18-27, 31-Aug 8; Aug 13-21, 26-Sep 3; Sep 7-15, 20-28; Oct 3-10, 15-22, 28-Nov 3; Nov 10-16, 22-29; Dec 5-12, 18-25, 31-1987 Jan 6.
There will not be total IMP 8 data monitoring coverage during these intervals.
(Information kindly provided by the WDC-A for Rockets and Satellites, Greenbelt, MD U.S.A.).
5. + Incoherent Scatter programs start at 1600 UT on the first day of the intervals indicated, and end at 1600 UT on the last day of the intervals.

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 **IAGA News**, **IUGG Chronicle**, **URSI Information Bulletin** or other scientific journals.

The **Solar Eclipses** are: April 9 (partial — maximum magnitude 0.82) covering about half of the Antarctic, moving across the south part of New Zealand, across Australia, the eastern part of Indonesia and most of New Guinea (maximum eclipse path includes the South Magnetic Pole area in Antarctica, Macquarie Island, the south part of New Zealand, the eastern part of Australia and the eastern part of New Guinea); October 3 (annular-total) beginning in the extreme eastern USSR, moving across the arctic regions, Greenland, Iceland, and across N. America except the extreme SW, across Central America and the Caribbean Sea, and ending in Colombia, Venezuela, Guyana, Surinam, French Guiana and northern Brazil (maximum eclipse (about 0.3 seconds) path in eastern USSR, Alaska, eastern Greenland and Iceland with the Sun only 5 degrees in altitude).

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 for Northern Hemisphere meteor showers are: Jan 3, 4; Apr 21-23; May 3-5; Jun 8-12; Jul 27-29; Aug 10-14; Oct 19-23; Nov 2-4, 17-18; Dec 12-16, 21-23, 1986; and Jan 3, 4, 1987. The dates for Southern Hemisphere meteor showers are: May 3-5; Jun 8-12; Jul 26-30; Oct 19-23; Nov 2-4, 17-18; and Dec 5-7, 12-16, 1986. Note that the meteor showers that come in the first week of May and the third week in October are of particular interest (fragments of Halley's comet) because of the approach of Halley's comet in 1986. Especially note Halley's comet approach (Perihelion February 9 at 0.59 AU) and STIP Interval XIX March 1986 — International Halley Watch.

Definitions:

Time = Universal Time (UT);

Regular Geophysical Days (**RGD**) = each Wednesday;

Regular World Days (**RWD**) = Tuesday, Wednesday and Thursday near the middle of the month (see calendar);

Priority Regular World Days (**PRWD**) = the Wednesday **RWD**;

Quarterly World Days (**QWD**) = **PRWD** in the **WGI**;

World Geophysical Intervals (**WGI**) = 14 consecutive days each season (see calendar);

ALERTS = occurrence of unusual solar or geophysical conditions, broadcast once daily soon after 0400 UT;

STRATWARM = stratospheric warmings
Retrospective World Intervals (**RWI**) = intervals selected by MONSEE for study.

For more detailed explanations of the definitions, please see one of the following or contact H. Coffey (address below): *Solar-Geophysical Data*, November issue; *URSI Information Bulletin*; *COSPAR Information Bulletin*; *IAGA News*; *IUGG Chronicle*; *WMO Bulletin*; *IAU Information Bulletin*; *Solar-Terrestrial Environmental Research in Japan*; *Journal of the Radio Research Laboratories (Japan)*; *Geomagnetism and Aeronomy (USSR)*; *Journal of Atmospheric and Terrestrial Physics (UK)*; *EOS Magazine (AGU/USA)*.

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 (FAGS) of the International Council of Scientific Unions (ICSU). The IUWDS coordinates the international aspects of the world days program and rapid data interchange.

This Calendar for 1986 has been drawn up by H.E. Coffey, of the IUWDS Steering Committee, in association with spokesmen for the various scientific disciplines in SCOSTEP, IAGA and URSI. 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 H.E. Coffey, WDC-A for Solar-Terrestrial Physics, NOAA/E/GC2, 325 Broadway, Boulder, Colorado 80303, USA.

Priority recommended programs for measurements not made continuously — (in addition to unusual **ALERT** periods):

Aurora and Airglow — Observation periods are New Moon periods, especially the 7 day intervals on the calendar;

Atmospheric Electricity — Observation periods are the **RGD** each Wednesday, beginning on 1 January 1986 at 1800 UT, 8 January at 0000 UT, 15 January at 0600 UT, 22 January at 1200 UT, etc. Minimum program are **PRWDs**.

Geomagnetic Phenomena — Observation periods on **RWDs**.

Ionospheric Phenomena — Quarter-hourly ionograms; more frequently on **RWDs**, particularly at high latitude sites; f-plots on **RWDs**; hourly ionograms to **WDCs** on **QWDs**; continuous observations for solar eclipse in the eclipse zone. See Airglow and Aurora.

Incoherent Scatter — Observations on Incoherent Scatter Coordinated Days; also intensive series on **WGI**s or Airglow and Aurora periods. **Special programs:** Dr. V. Wickwar, SRI International, 333 Ravenswood Ave., Menlo Park, CA 94025 U.S.A., URSI Working Group G.5.

Ionospheric Drifts — During weeks with **RWDs**.

Traveling Ionosphere Disturbances — special periods, probably **PRWD** or **RWDs**.

Ionospheric Absorption — Half-hourly on **RWDs**; continuous on solar eclipse days for stations in eclipse zone and conjugate area. Daily measurements during Absorption Winter Anomaly at temperate latitude stations (Oct-Mar Northern Hemisphere; Apr-Sep Southern Hemisphere).

Backscatter and Forward Scatter — **RWDs** at least.

Mesospheric D region electron densities — **RGD** around noon.

ELF Noise Measurements of earth-ionosphere cavity resonances — **WGI**s.

All Programs — Intensive observations during unusual meteor activity.

Meteorology — Especially on **RGDs**. On **WGI**s and **STRATWARM** Alert Intervals, please monitor on Mondays and Fridays as well as Wednesdays.

Middle Atmosphere Cooperation (MAC) — **RGDs**, **PRWDs** and **QWDs**. For planetary waves and tides monitor at least 10 days centered on **PRWDs** and **QWDs**. See Middle Atmosphere Dynamics Calendar for 1986. (Dr. T. VanZandt, NOAA R/E/AL3, 325 Broadway, Boulder, CO 80303 U.S.A.)

Solar Phenomena — Solar eclipse days, **RWDs**, and during **PROTON/FLARE ALERTS**.

Study of Traveling Interplanetary Phenomena (STIP) — XV = 12-21 Feb 1984 solar GLE; XVI = 20 Apr-4 May 1984 Forbush decrease; XVII = 15 May-30 Jun 1985 alignment of Venus magnetotail with satellites VEGA 1, VEGA 2, MS-T5, PVO, and ICE; XVIII = Sep 1985 Giacobini-Zinner Comet fly-by by ICE; XIX = March 1986 International Halley Watch.

Space Research, Interplanetary Phenomena, Cosmic Rays, Aeronomy — **QWDs**, **RWD**, and Airglow and Aurora periods.

URSI/IAGA Coordinated Tidal Observations Program (CTOP) — Dr. R. G. Roper, School of Geophysical Sci., Geophysical Sci., Georgia Inst. of Tech., Atlanta, GA 30332 U.S.A. has the 1986 CTOP calendar.