

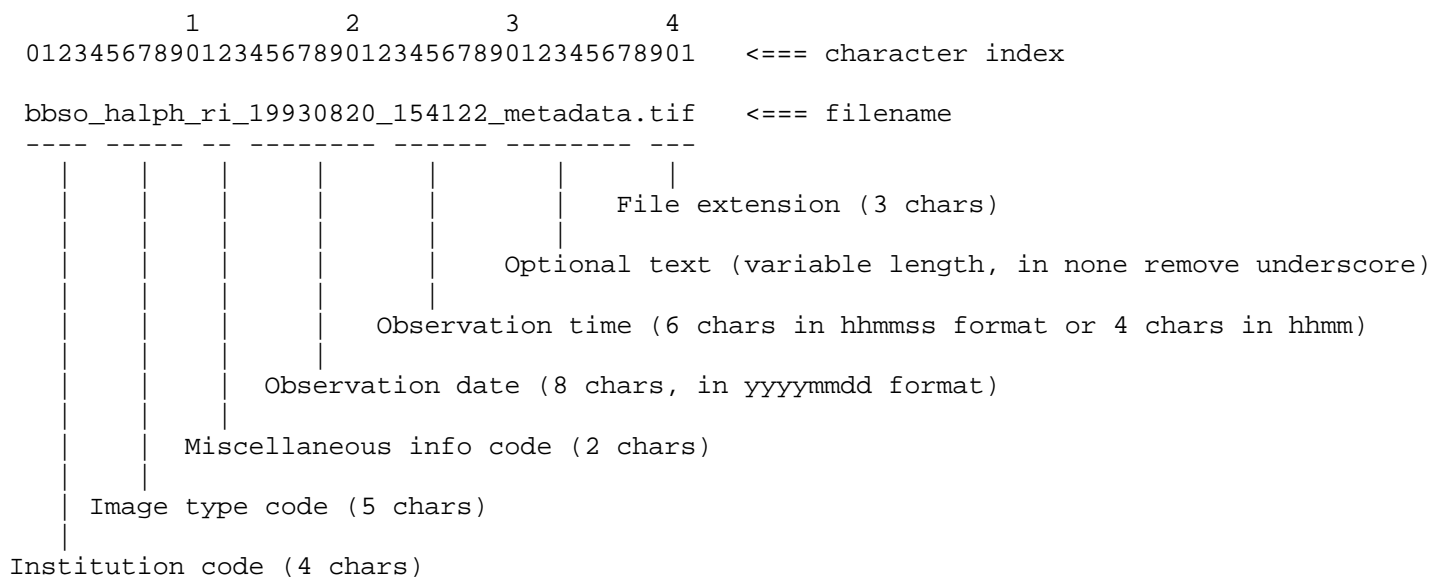
=====

**FILENAMING CONVENTION
FOR THE
NGDC SOLAR IMAGES DATA ARCHIVE**

=====

NGDC generally follows the SOHO and BBSO convention (see example below). The observation time may use a 6-character format for HHMMSS or 4-character format for HHMM - if no time is indicated use xxxx or xxxxxx. The miscellaneous info code is used to represent pertinent information such as whether the image was scanned from film or from a photograph. The optional text (metadata) with preceding underscore is used to provide additional details and/or information. All filenames use small letters rather than capital letters.

Example:



Following are a list of institute codes (or see list at end of text):

- bbso Big Bear Solar Observatory
- beog Beograd (Belgrade) Solar Observatory
- boul Boulder Solar Observatory
- canr Canary Islands
- csch Charles Schott (Coast Survey, pre NOAA - proposed 28 Nov 11)
- igy1 International Geophysical Year - Solar Activity Maps-D1 (proposed 28 Nov 2011)
- igy2 International Geophysical Year - Solar Activity Maps-D2 (proposed 28 Nov 2011)
- kalo Haynald Observatory, Kalocsa, Hungary (proposed 03 Nov 11)
- kanz Kanzelhoehe Solar Observatory
- lmnk Lomnický štít Observatory, Slovakia (added 14 Jan 2014 / WFD)
- mcma McMath Solar Observatory
- mwil Mt. Wilson Solar Observatory
- nwob Northwest Observatory, Spokane, WA (proposed 22 Nov 11)
- sacp Sacramento Peak Solar Observatory, Sunspot New Mexico
- sanf San Fernando Solar Observatory, California
- wend Wendelstein Solar Observatory
- wsox Wilcox Observatory, Stanford University (proposed 03Jan13)
- ynao Yunnan Astronomical Observatory

Following are the 4-letter codes for the USAF SEON sites

- aplms Learmonth, Western Australia, Australia (see also LEAR)

Updated: 14 Jul 2015 wfd

| | |
|------|---|
| k7o1 | Sagamore Hill MA {I believe that this is RSTN only} |
| khmn | Holloman AFB, NM (see also HOLL) |
| liss | San Vito, Italy (see also SVTO) |
| phff | Palehua, HI (see also PALE - now closed; RSTN ops at Kaena Pt)) |
| tjff | Ramey AFB, Puerto Rico (see also RAMY - SEON closed after 9/2002) |

Following are a list of image type codes:

| | |
|-------|--|
| 03934 | Calcium II K line (3934 A) |
| 05694 | Calcium XV line (5694 A) |
| coron | Corona |
| compo | Composite |
| drawx | Drawing (sunspot) |
| 05303 | Iron XIV line (5303 A) |
| 06374 | Iron X line (6374 A) |
| haplh | H alpha |
| magne | Magnetogram, (Ca @ 854.2 nm // Ni @ 676.8 nm) |
| magn2 | Magnetogram, Source Surface Fields (proposed 03Jan13) |
| magn3 | Magnetogram, Photospheric Magnetic Fields (proposed 03Jan13) |
| neutl | Neutral line drawings |
| radio | Solar radio measurements (proposed 26Feb13-WFD) |
| vmgcv | Vectomagnetogram, component V |
| white | White light |
| 10830 | He I line 10830 A |

The miscellaneous info code can be:

| | |
|----|---|
| cd | Coronagraph scanned from drawing |
| fp | Full disk image scanned from photograph |
| ff | Full disk image scanned from film |
| fd | Full disk image scanned from drawing |
| fo | Full disk image, offband |
| fr | Full disk image, limb darkening subtracted (BBSO) |
| fs | Full disk image, received from observatory |
| rp | Region image of the Sun scanned from photo |
| rf | Region image scanned from film |
| ro | Region image, offband |
| sm | Synoptic map (Carrington Rotation - see Note) |

Note: For synoptic maps use the Carrington Rotation start time for the date and time. In the metadata use crxxxx where "xxxx" is the Carrington Rotation #. See table at back.

File extension name should be as informative as possible, indicating the data format of the file:

| | |
|-----|--|
| fts | FITS (Flexible Image Transport System) |
| gif | GIF (Graphics Interchange Format) |
| jpg | JPEG (Joint Photographic Experts Group) |
| mpg | MPEG-1 (Moving Picture Experts Group Phase 1) |
| pdf | PDF (Portable Document Format) |
| tif | TIFF (Tagged Image File Format) |
| txt | ASCII (American Standard Code for Information Interchange) |

Added notes:

1. The archive filename convention used for the Boulder H-alpha images is as follows:

"boul_halph_ff_yyyymmdd_hhmm_ccccc.tif"

where:

boul - Boulder Solar observatory

Updated: 14 Jul 2015 wfd

SMDI SOHO MDI

Following are a list of image type codes:

| | |
|-------|------------------------------------|
| BBAND | Broadband |
| CAIIK | Calcium II K line |
| CAXVM | Calcium XV synoptic coronal map |
| DOPPL | Dopplergram |
| HALPH | H alpha |
| HEIMP | He I 10830, synoptic map |
| MAGFE | Magnetogram, Fe 5250 A |
| MAGMP | Magnetogram, synoptic map |
| IGRAM | Intensitygram |
| RADIO | Radio |
| VMGAV | Vectomagnetogram, average |
| VMGCI | Vectomagnetogram, component I |
| VMGCQ | Vectomagnetogram, component Q |
| VMGCU | Vectomagnetogram, component U |
| VMGCV | Vectomagnetogram, component V |
| VMGTF | Vectomagnetogram, transverse field |
| WHITE | White light |
| SOFTX | Soft X rays |
| HARDX | Hard X rays |
| 00171 | Fe IX/X line 171 A |
| 00195 | Fe XII line 195 A |
| 00284 | Fe XV line 284 A |
| 00304 | He II line 304 A |
| 10830 | He I line 10830 A |

The miscellaneous info code can be:

| | |
|----|-------------------|
| FD | Full disk |
| RE | Region of the Sun |
| LM | Solar Limb Image |

Observation date should be in YYYYMMDD format, and observation time should be in HHMM format.

File extension name should be as informative as possible, indicating the data format of the file:

| | |
|------|----------------------------------|
| CDF | Common Data Format |
| FITS | FITS |
| GIF | GIF |
| JPG | JPEG |
| MPG | MPEG-1 (possibly MPEG-2 as well) |
| PPM | Portable pixmap |
| YOH | Yohkoh format |

In case a field is not determinable, that field should still be filled with proper number of the letter "x".

=====

Revised 2005-09-08 by Helen Coffey, NOAA NGDC.

Updated: 14 Jul 2015 wfd

824 ABST ABASTUMANI, GEORGIAN SSR (ABASTUMANI)
901 ADLE ADLER PLANATARIUM (CHICAGO)
825 ALMA MTN OBS, ALMA-ATA, KAZAK SSR (ALMA-ATA)
512 ARCE ARCETRI, FLORENCE, ITALY (ARCETRI)
521 AROS AROSA, SWITZERLAND (AROSA)
508 (16716) ATHN NATL OBS, ATHENS, GREECE (ATHENES)
832 BAKO BAKOU, PIRCULI, USSR (PIRCULI)
843 BEOG BEOGRAD (Belgrade), SERBIA
549 BERN BERNE
902 BEYR BEYROTH
650 BIGB BIG BEAR CITY, CALIFORNIA (BIG BEAR)
647 BOUL BOULDER, COLORADO
560 BUCA NATL OBS, BUCHAREST, ROMANIA (BUCHAREST)
323 CAMB CAMBRIDGE
321 CANB CANBERRA
557 CANR GRAN CANARIA, CANARY IS. (TWO SPELLINGS AND CODES)
151 CAPE R.O. CAPETOWN, CAPE OF GOOD HOPE, SOUTH AFRICA CAPETOWN
506 CAPF ANACAPRI, ITALY {GERMAN} (CAPRI-G)
519 CAPS ANACAPRI, ITALY {SWEDISH} (CAPRI-S)
466 CART CARTER OBS, WELLINGTON, NEW ZEALAND (CARTER)
570 CATA CATALINA, SICILY, ITALY (CATANIA)
450 CHRI CHRISTCHURCH, NEW ZEALAND (CHRISTCHURCH)
639 CLMX HIGH ALTITUDE OBS, CLIMAX, COLORADO, USA (CLIMAX)
800 COOK COOK (WYNNEWOOD, MR. WYNNE COOK)
322 CREI CRETEIL
826 CRIM SIMEIS, CRIMEA, RSFSR (CRIMEE, SIMEIZ)
403 CRON CARNARVON, AUSTRALIA
471 DHRA DEHRA DUN, INDIA
402 CULG CULGOORA, AUSTRALIA
511 DUNS DUNSINK OBS, DUBLIN, IRELAND (DUNSINK)
536 EDIN R.O. EDINBURGH, SCOTLAND (R.O. EDINBURGH)
801 EWHU EWHURST (MR. EVERSLED)
564 FRIB FRANHOFER INST, FREIBURG, GFR (NEW SCHAUINSLAND)
912 GEOR GEOGIANA
777 GOES GEOSTATIONARY OPERATIONAL ENVIRONMENTAL SATELLITE
478 HALE HALEAKALA, MAUI, HAWAII, USA (HALEAKALA)
472 HARV HARVARD COLLEGE OBS, CAMBRIDGE, MA, USA
537 HERS (GREE) R. GREENWICH OBS, HERSTMONCEUX, ENGLAND (HERSTMONCEUX)
649 (72269) HOLL HOLLOMON AFB, N.MEX (see KHMN in USAF SEON, above - 18 Nov 2011)
440 HONO HONOLULU, HAWAII, USA (HAWAII)
646 (HOUT)? HOUS HOUSTON, TEXAS, USA
563 HTPR HAUTE-PROVENCE, FRANCE (HAUTE-PROVENCE)
718 HUAN GEOPHYSICAL INST, HUANCAYO, PERU (HUANCAYO)
517 HURB HURBANOVA, CZECHOSLOVAKIA
313 IKOM IKOMASAN OBS, KYOTO, JAPAN (KYOTO)
358 ISTA UNIV OBS, ISTANBUL, TURKEY (ISTANBUL)
831 IZMI IZMIRAN, KRASNAYA, PAKHRA, USSR (NIZMIR, KRASNAYA PAKHRA)
382 KAND KANDILLI OBS, ISTANBOUL
547 KANZ GRAZ OBS, KANZELHOHE, AUSTRIA (KANZELHOHE)
827 KHAR KHARKOV, UKRANIAN, SSR (KHARKOV)
828 KIEV KIEV, GAO, UKRANIAN, SSR (KIEV, KO)
829 KIKY KIEV, UNIV, UKRANIAN, SSR (KIEV, KY)
309 KODA KODAIKANAL, INDIA (KODAIKANAL)
403 (94302) LEAR LEARMONTH, WESTERN AUSTRALIA, AUSTRALIA
522 LOCA LOCARNO, SWITZERLAND
659 LOCK LOCKHEED, LOS ANGELES, CALIFORNIA, USA (LOCKHEED)
876 LVOV LVOV, UKRANIAN, SSR (LVOV)
468 (98429) MANI MANILA, PHILLIPINE ISLANDS (MANILA)
470 MAUR MAURITIUS
642 MCMA MCMATH-HULBERT, PONTIAC, MICHIGAN, USA (MCMATH)
473 MELB MELBOURNE, AUSTRALIA

Updated: 14 Jul 2015 wfd

505 MEUD MEUDON,FRANCE (MEUDON)
314 MITK MITAKA,TOKYO,JAPAN (MITAKA)
555 MONT MONTE MARIO OBS,ROME,ITALY (ROME)
830 MOSC MOSCOU,MOSCOW-GAISH,RSFSR (MOSCOW-G)
525 MUSW MUSWELL HILL
643 MWIL MT.WILSON,CALIFORNIA,USA (MT.WILSON)
515 NERA NEDERHORST DEN BERG,NETHERLANDS (NERA,NEDERHORST)
310 NIZH NIZAMIAH,HYDERBAD,INDIA (NIZAMIAH)
504 ONDR ONDREJOV,PRAGUE,CZECHOSLAVIA (ONDREJOV)
603 OTTA OTTAWA,ONTARIO,CANADA (OTTAWA)
476 (91178) PALE PALEHUA,HAWAII,USA
387 PASA PASADENA,CALIFORNIA,USA
360 PEKG PEKING
903 POMO POMONA COLLEGE (CLAREMONT)
548 POTS POTSDAM,GDR (POTSDAM)
359 PURP PURPLE MTN,NANKING,CHINA (PURPLE MT)
648 (78514) RAMY RAMEY AFB,PUERTO RICO
645 SACP SACRAMENTO PEAK,SUNSPOT,NEW MEXICO,USA (SAC PEAK)
572 SALO SALONIQUE(THESSALONIKA)GREECE (THESSALONIKA)
520 SALT SALTSJOBADEN,STOCKHOLM,SWEDEN (STOCKHOLM)
748 SANF SAN FERNANDO, CALIFORNIA
758 SANM SAN MIGUEL,ARGENTINA (SAN MIGUEL)
507 SCHA SCHAUINSLAD MT,GFR (SCHAUINSLAND)
880 SHEM SHEMAKHA(AZERBAISAN)SSR
802 SHER SHERBORNE(2)
862 SIBE SIBERIE(SIBERIAN IZMIR)IRKUTSK,RSFSR (IRKUTSK)
526 SVTO SAN VITO, ITALY
401 SYDN C.S.I.R.O.SYDNEY,AUSTRALIA (SYDNEY)
833 TACH TACHKENT,UZBECK,SSR (TASHKENT)
341 (40754) TEHR TEHRAN,IRAN
342 TELV TEL AVIV,ISRAEL
661 TONA TONANTZINTLA,MEXICO (TONANTZINTLA)
556 TORT TORTOSA,SPAIN (TORTOSA)
502 UCCL UCCL,R.O.BRUSSELS,BELGIUM (UCCL)
474 USNO US NAVAL OBSERVATORY, WASHINGTON, DC, USA
664 USNR USNRL,WASHINGTON,D.C.,USA (USNRL)
514 UPIC UPICE,CZECHOSLOVAKIA
362 URUM URUMQI ASTRONOMICAL STATION, URUMQI, CHINA
516 UTRE SONNENBORGH OBS,UTRECHT,NETHERLANDS (UTRECHT)
834 VORO VOROSHILOV,USSR (VOROSHILOV,USSURISK)
803 WATH WATHEROO
671 WATU WATUKOSEK, EAST JAVA, INDONESIA
546 WEND WENDELSTEIN,GFR (WENDELSTEIN)
804 WHIT WHITEN (WELLESLEY)
574 WROC WROCLAW,POLAND (WROCLAW)
805 WORT WORTHING (MR. NEWBEGIN)
904 YERK YERKES
361 YUNN YUNNAN
523 ZURI EIDGENOSSISCHE STERNWORTE,ZURICH,SWITZERLAND (ZURICH)
324 ZOSE ZO-SE

Updated: 14 Jul 2015 wfd

Additional Notes - Selected items from the Glossary of Solar-Terrestrial Terms maintained by the NOAA Space Weather Prediction Center. (<http://www.swpc.noaa.gov/info/glossary.html>)

Corona - The outermost layer of the solar atmosphere, characterized by low densities ($< 10^9$ cm⁻³) and high temperatures ($> 10^6$ K).

Doppler Shift - A change in the perceived frequency of a radiated signal caused by motion of the source relative to the observer.

H-Alpha - The first atomic transition in the hydrogen Balmer series; wavelength = 656.3 nm. This absorption line of neutral hydrogen falls in the red part of the visible spectrum and is convenient for solar observations. The Ha line is commonly used for patrol observations of solar flares, filaments, prominences, and the fine structure of active regions.

Magnetogram - A plot showing the amplitude of one or more vector components of a magnetic field versus space or time. Solar magnetograms are a graphic representation of solar magnetic field strengths and polarity.

Neutral Line - The line that separates solar magnetic fields of opposite polarity, typically determined from solar magnetograms recording the longitudinal magnetic component.

Sunspot - An area seen as a dark spot, in contrast with its surroundings, on the photosphere of the Sun. Sunspots are concentrations of magnetic flux, typically occurring in bipolar clusters or groups. They appear dark because they are cooler than the surrounding photosphere. Larger and darker sunspots sometimes are surrounded (completely or partially) by penumbrae. The dark centers are umbrae. The smallest, immature spots are sometimes called pores.

White Light - The sum of all visible wavelengths of light (400-700 nm) so that all colors are blended to appear white to the eye. No pronounced contribution from any one spectral line (or light-emitting element) is implied.

X-ray - Radiation of extremely short wavelength (generally less than 1 nm).

Updated: 14 Jul 2015 wfd

Table of Carrington Rotation Times (CMP = Central Meridian Passage)

| CR | Start | CMP | End |
|------|-------------------------|-------------------------|-------------------------|
| 1908 | 1996.04.08_00:17:51_TAI | 1996.04.21_15:23:14_TAI | 1996.05.05_06:18:55_TAI |
| 1909 | 1996.05.05_06:18:55_TAI | 1996.05.18_21:06:12_TAI | 1996.06.01_11:46:52_TAI |
| 1910 | 1996.06.01_11:46:52_TAI | 1996.06.15_02:22:53_TAI | 1996.06.28_16:56:15_TAI |
| 1911 | 1996.06.28_16:56:15_TAI | 1996.07.12_07:28:57_TAI | 1996.07.25_22:03:01_TAI |
| 1912 | 1996.07.25_22:03:01_TAI | 1996.08.08_12:40:17_TAI | 1996.08.22_03:22:18_TAI |
| 1913 | 1996.08.22_03:22:18_TAI | 1996.09.04_18:10:34_TAI | 1996.09.18_09:07:15_TAI |
| 1914 | 1996.09.18_09:07:15_TAI | 1996.10.02_00:14:51_TAI | 1996.10.15_15:34:44_TAI |
| 1915 | 1996.10.15_15:34:44_TAI | 1996.10.29_07:06:50_TAI | 1996.11.11_22:50:20_TAI |
| 1916 | 1996.11.11_22:50:20_TAI | 1996.11.25_14:43:54_TAI | 1996.12.09_06:45:35_TAI |
| 1917 | 1996.12.09_06:45:35_TAI | 1996.12.22_22:52:47_TAI | 1997.01.05_15:02:34_TAI |
| 1918 | 1997.01.05_15:02:24_TAI | 1997.01.19_07:11:11_TAI | 1997.02.01_23:15:46_TAI |
| 1919 | 1997.02.01_23:15:46_TAI | 1997.02.15_15:12:59_TAI | 1997.03.01_07:00:26_TAI |
| 1920 | 1997.03.01_07:00:26_TAI | 1997.03.14_22:37:34_TAI | 1997.03.28_14:04:59_TAI |
| 1921 | 1997.03.28_14:04:59_TAI | 1997.04.11_05:22:41_TAI | 1997.04.24_20:30:18_TAI |
| 1922 | 1997.04.24_20:30:18_TAI | 1997.05.08_11:27:59_TAI | 1997.05.22_02:16:32_TAI |
| 1923 | 1997.05.22_02:16:32_TAI | 1997.06.04_16:57:15_TAI | 1997.06.18_07:31:54_TAI |
| 1924 | 1997.06.18_07:31:54_TAI | 1997.07.01_22:02:37_TAI | 1997.07.15_12:31:56_TAI |
| 1925 | 1997.07.15_12:31:56_TAI | 1997.07.29_03:52:25_TAI | 1997.08.11_17:36:32_TAI |
| 1926 | 1997.08.11_17:36:32_TAI | 1997.08.25_08:16:37_TAI | 1997.09.07_23:05:28_TAI |
| 1927 | 1997.09.07_23:05:28_TAI | 1997.09.21_14:05:58_TAI | 1997.10.05_05:19:42_TAI |
| 1928 | 1997.10.05_05:19:42_TAI | 1997.10.18_20:46:34_TAI | 1997.11.01_12:25:24_TAI |
| 1929 | 1997.11.01_12:25:24_TAI | 1997.11.15_04:14:32_TAI | 1997.11.28_20:11:49_TAI |
| 1930 | 1997.11.28_20:11:49_TAI | 1997.12.12_12:14:40_TAI | 1997.12.26_04:20:23_TAI |
| 1931 | 1997.12.26_04:20:23_TAI | 1998.01.08_20:26:20_TAI | 1998.01.22_12:29:58_TAI |
| 1932 | 1998.01.22_12:29:58_TAI | 1998.02.05_04:28:48_TAI | 1998.02.18_20:20:48_TAI |
| 1933 | 1998.02.18_20:20:48_TAI | 1998.03.04_12:05:22_TAI | 1998.03.18_03:42:43_TAI |
| 1934 | 1998.03.18_03:42:43_TAI | 1998.03.31_19:12:09_TAI | 1998.04.14_10:32:16_TAI |
| 1935 | 1998.04.14_10:32:16_TAI | 1998.04.28_01:41:54_TAI | 1998.05.11_16:40:38_TAI |
| 1936 | 1998.05.11_16:40:38_TAI | 1998.05.25_07:28:49_TAI | 1998.06.07_22:07:37_TAI |
| 1937 | 1998.06.07_22:07:37_TAI | 1998.06.21_12:39:02_TAI | 1998.07.05_03:05:46_TAI |
| 1938 | 1998.07.05_03:05:46_TAI | 1998.06.21_12:39:02_TAI | 1998.08.01_09:43:46_TAI |
| 1939 | 1998.08.01_09:43:46_TAI | 1998.06.21_12:39:02_TAI | 1998.08.28_16:20:13_TAI |
| 1940 | 1998.08.28_16:20:13_TAI | 1998.06.21_12:39:02_TAI | 1998.09.24_22:56:40_TAI |
| 1941 | 1998.09.24_22:56:40_TAI | 1998.10.08_10:30:24_TAI | 1998.10.22_02:04:07_TAI |
| 1942 | 1998.10.22_02:04:07_TAI | 1998.11.04_17:48:42_TAI | 1998.11.18_09:41:42_TAI |
| 1943 | 1998.11.18_09:41:42_TAI | 1998.12.02_01:40:19_TAI | 1998.12.15_17:41:56_TAI |
| 1944 | 1998.12.15_17:41:56_TAI | 1998.12.29_09:44:17_TAI | 1999.01.12_01:45:29_TAI |
| 1945 | 1999.01.12_01:45:29_TAI | 1999.01.25_17:43:49_TAI | 1999.02.08_09:37:50_TAI |
| 1946 | 1999.02.08_09:37:50_TAI | 1999.02.22_01:27:44_TAI | 1999.03.07_17:12:29_TAI |
| 1947 | 1999.03.07_17:12:29_TAI | 1999.03.21_08:51:50_TAI | 1999.04.04_00:23:34_TAI |
| 1948 | 1999.04.04_00:23:34_TAI | 1999.04.17_15:45:24_TAI | 1999.05.01_06:55:39_TAI |
| 1949 | 1999.05.01_06:55:39_TAI | 1999.05.14_21:53:33_TAI | 1999.05.28_12:39:20_TAI |
| 1950 | 1999.05.28_12:39:20_TAI | 1999.06.11_03:14:25_TAI | 1999.06.24_17:41:24_TAI |
| 1951 | 1999.06.24_17:41:24_TAI | 1999.07.08_08:03:45_TAI | 1999.07.21_22:25:15_TAI |
| 1952 | 1999.07.21_22:25:15_TAI | 1999.08.04_12:49:50_TAI | 1999.08.18_03:21:49_TAI |
| 1953 | 1999.08.18_03:21:49_TAI | 1999.08.31_18:05:35_TAI | 1999.09.14_09:04:03_TAI |
| 1954 | 1999.09.14_09:04:03_TAI | 1999.09.28_00:17:45_TAI | 1999.10.11_15:45:34_TAI |
| 1955 | 1999.10.11_15:45:34_TAI | 1999.10.25_07:25:19_TAI | 1999.11.07_23:14:11_TAI |
| 1956 | 1999.11.07_23:14:11_TAI | 1999.11.21_15:09:04_TAI | 1999.12.05_07:07:04_TAI |
| 1957 | 1999.12.05_07:07:04_TAI | 1999.12.18_23:05:59_TAI | 2000.01.01_15:04:16_TAI |
| 1958 | 2000.01.01_15:04:16_TAI | 2000.01.15_07:00:48_TAI | 2000.01.28_22:54:47_TAI |
| 1959 | 2000.01.28_22:54:47_TAI | 2000.02.11_14:46:20_TAI | 2000.02.25_06:36:08_TAI |
| 1960 | 2000.02.25_06:36:08_TAI | 2000.03.09_22:23:28_TAI | 2000.03.23_14:05:43_TAI |
| 1961 | 2000.03.23_14:05:43_TAI | 2000.04.06_05:39:39_TAI | 2000.04.19_21:02:17_TAI |
| 1962 | 2000.04.19_21:02:17_TAI | 2000.05.03_12:11:32_TAI | 2000.05.17_03:06:27_TAI |
| 1963 | 2000.05.17_03:06:27_TAI | 2000.05.30_17:47:40_TAI | 2000.06.13_08:17:20_TAI |
| 1964 | 2000.06.13_08:17:20_TAI | 2000.06.26_22:38:56_TAI | 2000.07.10_12:56:38_TAI |
| 1965 | 2000.07.10_12:56:38_TAI | 2000.07.24_03:15:02_TAI | 2000.08.06_17:39:12_TAI |
| 1966 | 2000.08.06_17:39:12_TAI | 2000.08.20_08:14:22_TAI | 2000.09.02_23:04:18_TAI |
| 1967 | 2000.09.02_23:04:18_TAI | 2000.09.16_14:10:14_TAI | 2000.09.30_05:31:25_TAI |
| 1968 | 2000.09.30_05:31:25_TAI | 2000.10.13_21:05:43_TAI | 2000.10.27_12:50:06_TAI |
| 1969 | 2000.10.27_12:50:06_TAI | 2000.11.10_04:41:03_TAI | 2000.11.23_20:35:19_TAI |
| 1970 | 2000.11.23_20:35:19_TAI | 2000.12.07_12:30:48_TAI | 2000.12.21_04:25:10_TAI |
| 1971 | 2000.12.21_04:25:10_TAI | 2001.01.03_20:18:40_TAI | 2001.01.17_12:10:51_TAI |
| 1972 | 2001.01.17_12:10:51_TAI | 2001.01.31_04:02:27_TAI | 2001.02.13_19:54:47_TAI |
| 1973 | 2001.02.13_19:54:47_TAI | 2001.02.27_11:47:41_TAI | 2001.03.13_03:38:35_TAI |
| 1974 | 2001.03.13_03:38:35_TAI | 2001.03.26_19:23:36_TAI | 2001.04.09_11:16:28_TAI |
| 1975 | 2001.04.09_11:16:28_TAI | 2001.04.23_02:25:41_TAI | 2001.05.06_17:19:05_TAI |
| 1976 | 2001.05.06_17:19:05_TAI | 2001.05.20_07:58:49_TAI | 2001.06.02_22:28:16_TAI |
| 1977 | 2001.06.02_22:28:16_TAI | 2001.06.16_12:51:39_TAI | 2001.06.30_03:13:27_TAI |
| 1978 | 2001.06.30_03:13:27_TAI | 2001.07.13_17:37:55_TAI | 2001.07.27_08:08:44_TAI |
| 1979 | 2001.07.27_08:08:44_TAI | 2001.08.09_22:48:34_TAI | 2001.08.23_13:38:55_TAI |
| 1980 | 2001.08.23_13:38:55_TAI | 2001.09.06_04:40:08_TAI | 2001.09.19_19:51:33_TAI |
| 1981 | 2001.09.19_19:51:33_TAI | 2001.10.03_11:11:50_TAI | 2001.10.17_02:39:28_TAI |

Updated: 14 Jul 2015 wfd

| | | | |
|------|-------------------------|-------------------------|-------------------------|
| 1982 | 2001.10.17_02:39:28_TAI | 2001.10.30_18:13:08_TAI | 2001.11.13_09:52:02_TAI |
| 1983 | 2001.11.13_09:52:02_TAI | 2001.11.27_01:35:56_TAI | 2001.12.10_17:25:04_TAI |
| 1984 | 2001.12.10_17:25:04_TAI | 2001.12.24_09:19:42_TAI | 2002.01.07_01:19:40_TAI |
| 1985 | 2002.01.07_01:19:40_TAI | 2002.01.20_17:23:58_TAI | 2002.02.03_09:30:26_TAI |
| 1986 | 2002.02.03_09:30:26_TAI | 2002.02.17_01:35:48_TAI | 2002.03.02_17:35:58_TAI |
| 1987 | 2002.03.02_17:35:58_TAI | 2002.03.16_09:26:42_TAI | 2002.03.30_01:04:20_TAI |
| 1988 | 2002.03.30_01:04:20_TAI | 2002.04.12_16:26:25_TAI | 2002.04.26_07:32:06_TAI |
| 1989 | 2002.04.26_07:32:06_TAI | 2002.05.09_22:22:19_TAI | 2002.05.23_12:59:29_TAI |
| 1990 | 2002.05.23_12:59:29_TAI | 2002.06.06_03:27:15_TAI | 2002.06.19_17:49:55_TAI |
| 1991 | 2002.06.19_17:49:55_TAI | 2002.07.03_08:11:56_TAI | 2002.07.16_22:37:31_TAI |
| 1992 | 2002.07.16_22:37:31_TAI | 2002.07.30_13:10:06_TAI | 2002.08.13_03:52:07_TAI |
| 1993 | 2002.08.13_03:52:07_TAI | 2002.08.26_18:44:51_TAI | 2002.09.09_09:48:21_TAI |
| 1994 | 2002.09.09_09:48:21_TAI | 2002.09.23_01:01:49_TAI | 2002.10.06_16:23:49_TAI |
| 1995 | 2002.10.06_16:23:49_TAI | 2002.10.20_07:52:51_TAI | 2002.11.02_23:27:42_TAI |
| 1996 | 2002.11.02_23:27:42_TAI | 2002.11.16_15:07:41_TAI | 2002.11.30_06:52:42_TAI |
| 1997 | 2002.11.30_06:52:42_TAI | 2002.12.13_22:43:00_TAI | 2002.12.27_14:38:50_TAI |
| 1998 | 2002.12.27_14:38:50_TAI | 2003.01.10_06:39:51_TAI | 2003.01.23_22:44:51_TAI |
| 1999 | 2003.01.23_22:44:51_TAI | 2003.02.06_14:51:23_TAI | 2003.02.20_06:55:59_TAI |
| 2000 | 2003.02.20_06:55:59_TAI | 2003.03.05_22:54:28_TAI | 2003.03.19_14:42:39_TAI |
| 2001 | 2003.03.19_14:42:39_TAI | 2003.04.02_06:17:04_TAI | 2003.04.15_21:35:35_TAI |
| 2002 | 2003.04.15_21:35:35_TAI | 2003.04.29_12:37:47_TAI | 2003.05.13_03:24:55_TAI |
| 2003 | 2003.05.13_03:24:55_TAI | 2003.05.26_17:59:43_TAI | 2003.06.09_08:25:60_TAI |
| 2004 | 2003.06.09_08:25:60_TAI | 2003.06.22_22:48:09_TAI | 2003.07.06_13:10:36_TAI |
| 2005 | 2003.07.06_13:10:36_TAI | 2003.07.20_03:37:27_TAI | 2003.08.02_18:11:54_TAI |
| 2006 | 2003.08.02_18:11:54_TAI | 2003.08.16_08:56:11_TAI | 2003.08.29_23:51:17_TAI |
| 2007 | 2003.08.29_23:51:17_TAI | 2003.09.12_14:57:02_TAI | 2003.09.26_06:12:29_TAI |
| 2008 | 2003.09.26_06:12:29_TAI | 2003.10.09_21:36:08_TAI | 2003.10.23_13:06:31_TAI |
| 2009 | 2003.10.23_13:06:31_TAI | 2003.11.06_04:42:31_TAI | 2003.11.19_20:23:34_TAI |
| 2010 | 2003.11.19_20:23:34_TAI | 2003.12.03_12:09:42_TAI | 2003.12.17_04:01:12_TAI |
| 2011 | 2003.12.17_04:01:12_TAI | 2003.12.30_19:58:12_TAI | 2004.01.13_12:00:14_TAI |
| 2012 | 2004.01.13_12:00:14_TAI | 2004.01.27_04:05:48_TAI | 2004.02.09_20:12:15_TAI |
| 2013 | 2004.02.09_20:12:15_TAI | 2004.02.23_12:15:54_TAI | 2004.03.08_04:12:29_TAI |
| 2014 | 2004.03.08_04:12:29_TAI | 2004.03.21_19:57:56_TAI | 2004.04.04_11:29:02_TAI |
| 2015 | 2004.04.04_11:29:02_TAI | 2004.04.18_02:43:60_TAI | 2004.05.01_17:42:46_TAI |
| 2016 | 2004.05.01_17:42:46_TAI | 2004.05.15_08:26:57_TAI | 2004.05.28_22:59:33_TAI |
| 2017 | 2004.05.28_22:59:33_TAI | 2004.06.11_13:24:33_TAI | 2004.06.25_03:46:24_TAI |
| 2018 | 2004.06.25_03:46:24_TAI | 2004.07.08_18:09:29_TAI | 2004.07.22_08:37:44_TAI |
| 2019 | 2004.07.22_08:37:44_TAI | 2004.08.04_23:14:11_TAI | 2004.08.18_14:00:46_TAI |
| 2020 | 2004.08.18_14:00:46_TAI | 2004.09.01_04:58:13_TAI | 2004.09.14_20:06:11_TAI |
| 2021 | 2004.09.14_20:06:11_TAI | 2004.09.28_11:23:32_TAI | 2004.10.12_02:48:46_TAI |
| 2022 | 2004.10.12_02:48:46_TAI | 2004.10.25_18:50:27_TAI | 2004.11.08_09:57:33_TAI |
| 2023 | 2004.11.08_09:57:33_TAI | 2004.11.22_01:39:42_TAI | 2004.12.05_17:26:58_TAI |
| 2024 | 2004.12.05_17:26:58_TAI | 2004.12.19_09:19:39_TAI | 2005.01.02_01:17:49_TAI |
| 2025 | 2005.01.02_01:17:49_TAI | 2005.01.15_17:20:47_TAI | 2005.01.29_09:26:49_TAI |
| 2026 | 2005.01.29_09:26:49_TAI | 2005.02.12_01:32:60_TAI | 2005.02.25_17:35:28_TAI |
| 2027 | 2005.02.25_17:35:28_TAI | 2005.03.11_09:29:58_TAI | 2005.03.25_01:12:32_TAI |
| 2028 | 2005.03.25_01:12:32_TAI | 2005.04.07_16:40:14_TAI | 2005.04.21_07:51:38_TAI |
| 2029 | 2005.04.21_07:51:38_TAI | 2005.05.04_22:47:03_TAI | 2005.05.18_13:28:25_TAI |
| 2030 | 2005.05.18_13:28:25_TAI | 2005.06.01_03:59:01_TAI | 2005.06.14_18:22:57_TAI |
| 2031 | 2005.06.14_18:22:57_TAI | 2005.06.28_08:44:42_TAI | 2005.07.11_23:08:37_TAI |
| 2032 | 2005.07.11_23:08:37_TAI | 2005.07.25_13:38:25_TAI | 2005.08.08_04:16:56_TAI |
| 2033 | 2005.08.08_04:16:56_TAI | 2005.08.21_19:05:51_TAI | 2005.09.04_10:05:39_TAI |
| 2034 | 2005.09.04_10:05:39_TAI | 2005.09.18_01:15:46_TAI | 2005.10.01_16:34:58_TAI |
| 2035 | 2005.10.01_16:34:58_TAI | 2005.10.15_08:01:42_TAI | 2005.10.28_23:34:37_TAI |
| 2036 | 2005.10.28_23:34:37_TAI | 2005.11.11_15:12:50_TAI | 2005.11.25_06:56:04_TAI |
| 2037 | 2005.11.25_06:56:04_TAI | 2005.12.08_22:44:29_TAI | 2005.12.22_14:38:22_TAI |
| 2038 | 2005.12.22_14:38:22_TAI | 2006.01.05_06:37:40_TAI | 2006.01.18_22:41:29_TAI |
| 2039 | 2006.01.18_22:41:29_TAI | 2006.02.01_14:47:50_TAI | 2006.02.15_06:53:34_TAI |
| 2040 | 2006.02.15_06:53:34_TAI | 2006.02.28_22:54:40_TAI | 2006.03.14_14:46:53_TAI |
| 2041 | 2006.03.14_14:46:53_TAI | 2006.03.28_06:26:26_TAI | 2006.04.10_21:50:40_TAI |
| 2042 | 2006.04.10_21:50:40_TAI | 2006.04.24_12:58:31_TAI | 2006.05.08_03:50:40_TAI |
| 2043 | 2006.05.08_03:50:40_TAI | 2006.05.21_18:29:23_TAI | 2006.06.04_08:58:10_TAI |
| 2044 | 2006.06.04_08:58:10_TAI | 2006.06.17_23:21:15_TAI | 2006.07.01_13:43:07_TAI |
| 2045 | 2006.07.01_13:43:07_TAI | 2006.07.15_04:08:01_TAI | 2006.07.28_18:39:31_TAI |
| 2046 | 2006.07.28_18:39:31_TAI | 2006.08.11_09:20:11_TAI | 2006.08.25_00:11:28_TAI |
| 2047 | 2006.08.25_00:11:28_TAI | 2006.09.07_15:13:34_TAI | 2006.09.21_06:25:47_TAI |
| 2048 | 2006.09.21_06:25:47_TAI | 2006.10.04_21:46:45_TAI | 2006.10.18_13:14:55_TAI |
| 2049 | 2006.10.18_13:14:55_TAI | 2006.11.01_04:49:02_TAI | 2006.11.14_20:28:21_TAI |
| 2050 | 2006.11.14_20:28:21_TAI | 2006.11.28_12:12:40_TAI | 2006.12.12_04:02:15_TAI |
| 2051 | 2006.12.12_04:02:15_TAI | 2006.12.25_19:57:20_TAI | 2007.01.08_11:57:43_TAI |