

Nuclear Event as a Technosignature

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Abstract

The common lists of technosignatures for Exoplanets and moons often refer to spectrums associated with pollution, industrial production, nighttime light emissions, radio signals, satellites and other bio signatures from atmospheric gases, along with four or five others.

As a hypothesis, this document suggests that nuclear events (the actual detonations and fireball) could also be on the list. While many Earth detonations exist for 1 minute, larger tests have fireballs lasting longer.

Analysis and Research

The observation of such events is no doubt keenly dependent on precise and fortunate timing from the remote observer locale. Our Observational Astronomy instrumentation is rapidly conquering Time Domain astronomy that captures sky changes moment-to-moment. Rubin Observatory/LSST is a grand example (bibl ref.? <https://rubinobservatory.org/about/history>). Perhaps the entire Galactic sphere could be captured moment-to-moment in the future.

Using Earth nuclear detonations as a case study

In contemplating such a hypothesis, the author used Earth based Nuclear events since the 1940s to project where on the night sky these detonations would be aimed at the initial detonation. The list of events was retrieved from **Paul Richards, Columbia University, Bibliography(See WW nuclear tests IASPEI HB.pdf)**

The steps in this process employ a very basic iteration using Python:

Harvest list of raw event country, lat/long locations, date, time

- The 7 nuclear nations are india, US, USSR, UK, Pakistan, France and China.

- Scrub list of events of Nans Nulls and unusable event data (Reduced from 2,054 to 1,306 useables)

- The reduced list of Nuclear events is in Appendix A.

- Locations refer to latitude and longitude on Earth

- Time range covers full Nuclear age from 1945 until late 1998

Using *SkyCoord* package translate the past event location, date and time to a sky RA and Dec

- Translate the RA and Dec from above to an actual constellation name using *get_constellation* function

Generate 3 plots for each countrys event data, using matplotlib module:

- Latitude and Longitude Coordinates for the country nuclear event detonation

- ICRS coordinates for the country nuclear event detonation

- Galactic RA, Dec for the country nuclear event detonation

Python Jupyter Lab artifacts

The GitHub repository is at <https://github.com/fklich/EarthsTechnoSignature>

Summary of Detonations

These 7 sets of images depict the 3 plots for each country which include details in Table 1 below.

Nuclear Country	# Earth Detonation Locales (*1)	# Events	Constellations	Date Range
US	20	706	Andromeda, Aquila, Aries, Auriga, Boötes, Canes Venatici, Canis Minor, Coma Berenices, Corona Borealis, Cygnus, Delphinus, Gemini, Hercules, Hydra, Lacerta, Leo Minor, Lynx, Lyra, Monoceros, Ophiucus, Orion, Pegasus, Perseus, Taurus, Triangulum, Ursa Major	1945 - 1992
USSR	55	497	Andromeda, Auriga, Boötes, Camelopardalis, Canes Venatici, Cassiopeia, Cepheus, Cygnus, Draco, Hercules, Lacerta, Leo Minor, Lynx, Perseus, Ursa Major, Ursa Minor	1949 - 1990
UK	6	42	Andromeda, Antlia, Aquarius, Auriga, Boötes, Canes Venatici, Canis Minor, Centaurus, Cetus, Corona Borealis, Cygnus, Hercules, Hydra, Lacerta, Leo Minor, Lynx, Monoceros, Ophiucus, Orion, Pisces, Pyxis, Sextans	1952 - 1991
France	1	39	Canis Major, Cetus, Corvus, Eridanus, Hydra, Lepus, Puppis, Pyxis	1966 - 1974
China	1	18	Andromeda, Auriga, Boötes, Canes Venatici, Lacerta, Lynx, Perseus	1964 - 1980
India	1	2	Gemini, Pegasus	1974 - 1998
Pakistan	1	2	Gemini, Taurus	1998 - 1998

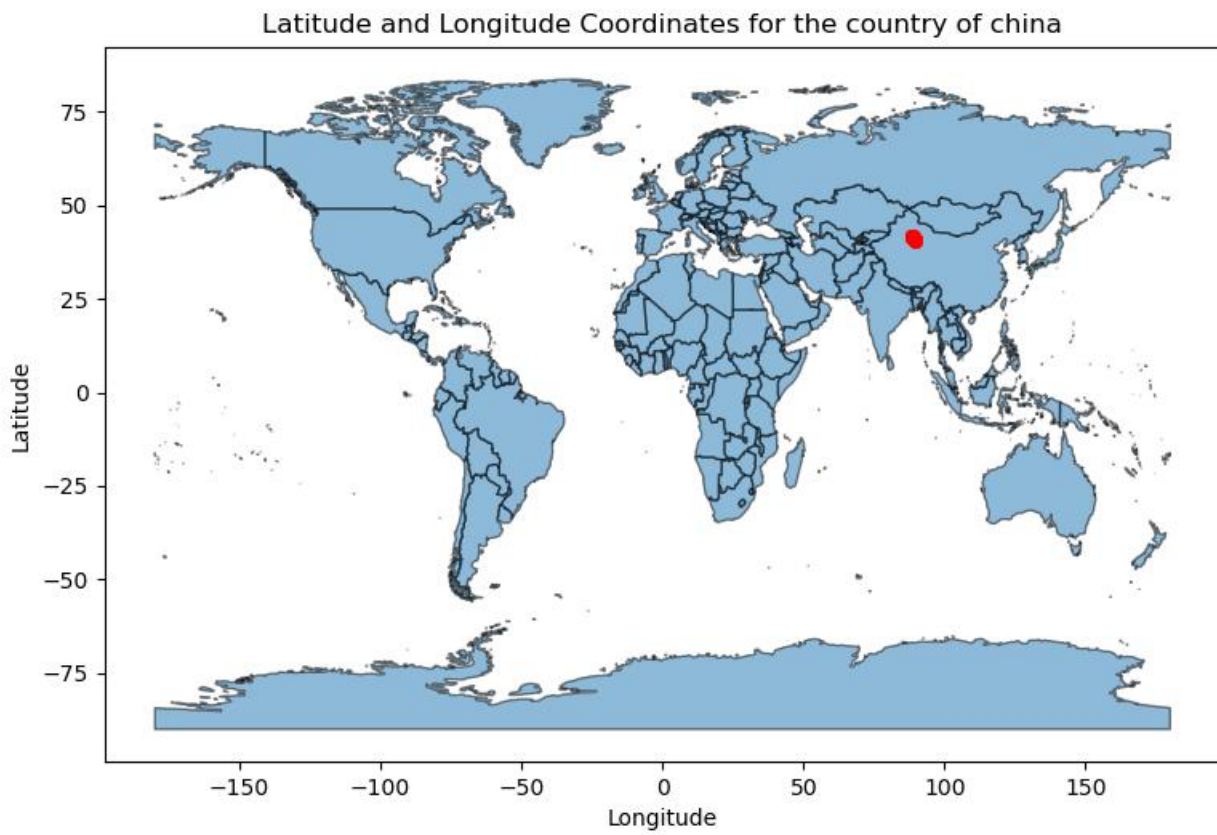
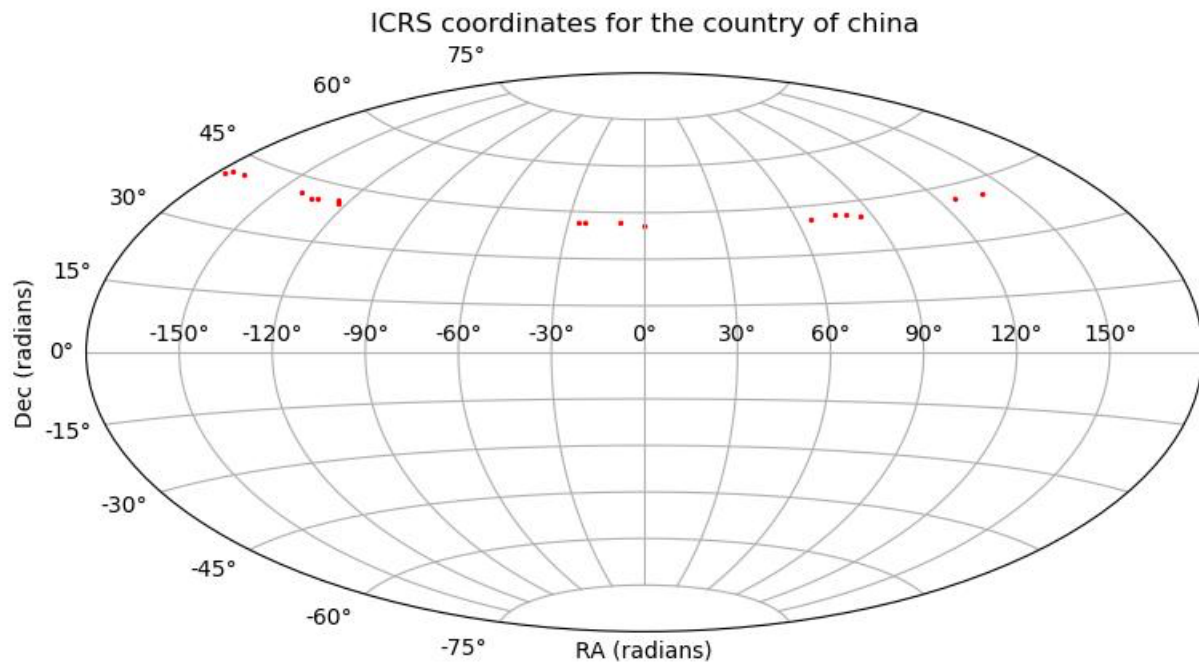
*1 Locales summarizes each unique Earth latitude within 1 degree

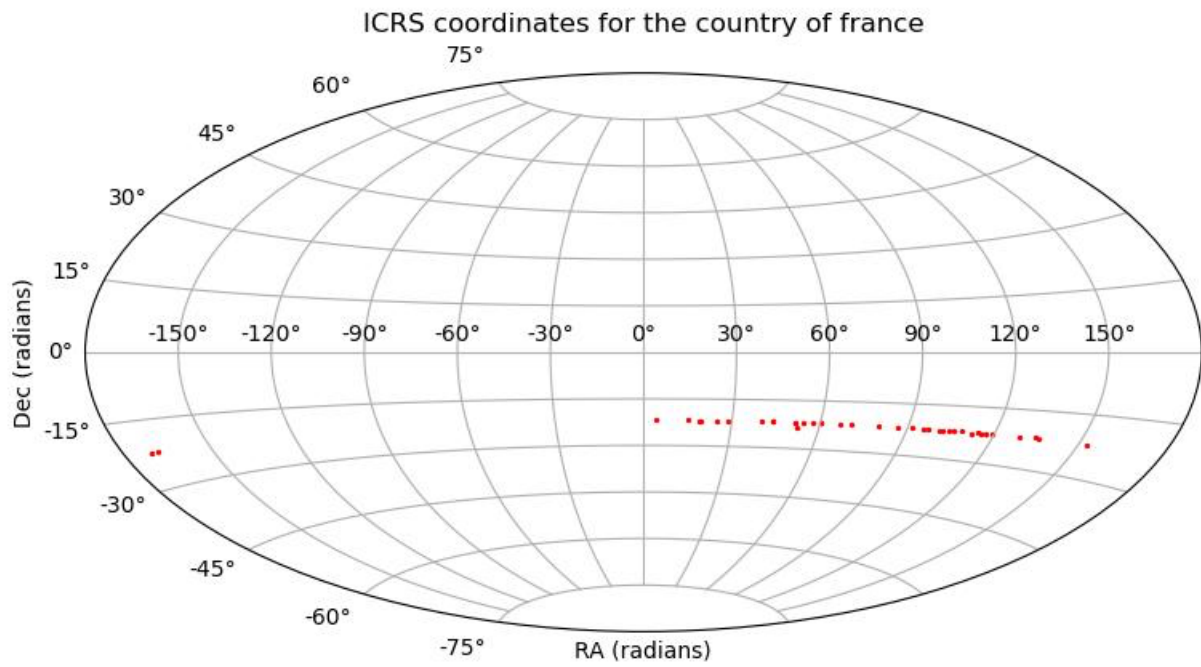
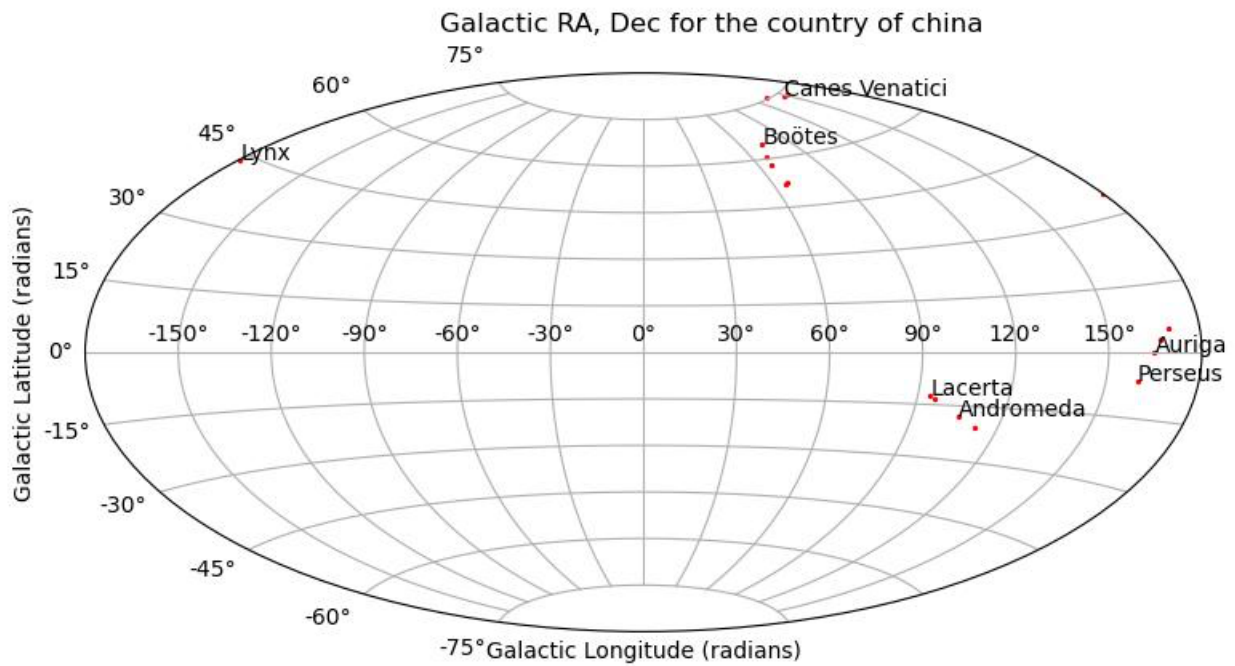
Proposal

Given the evolution of time domain astronomy and exoplanet science, it is reasonable to consider nuclear detonations as possible other indications of intelligent life. As Earth's scrutiny on exoplanets evolves both in coverage and time increments, the probability would improve for such discoveries.

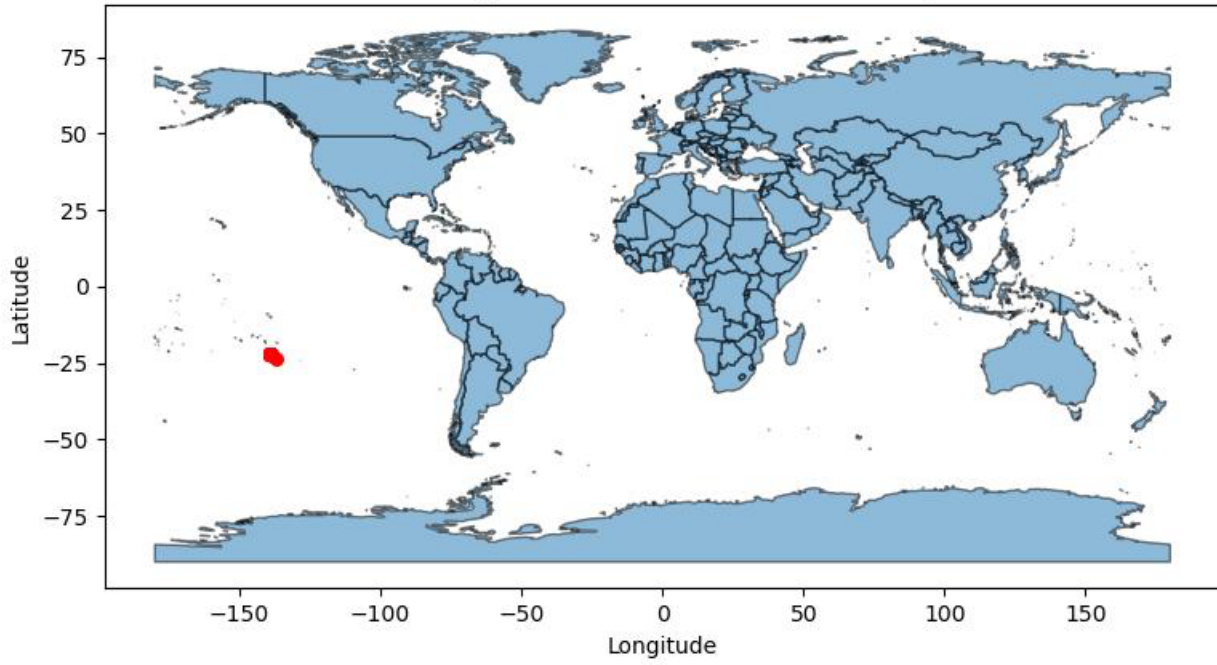
Plots

Each country has 3 plots.

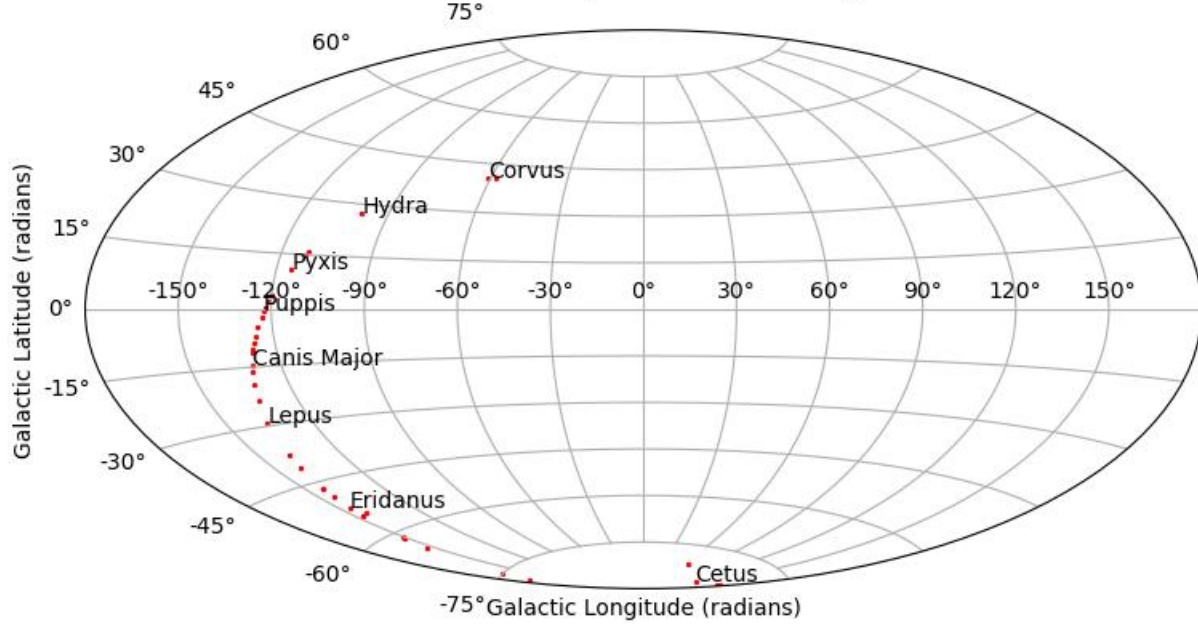


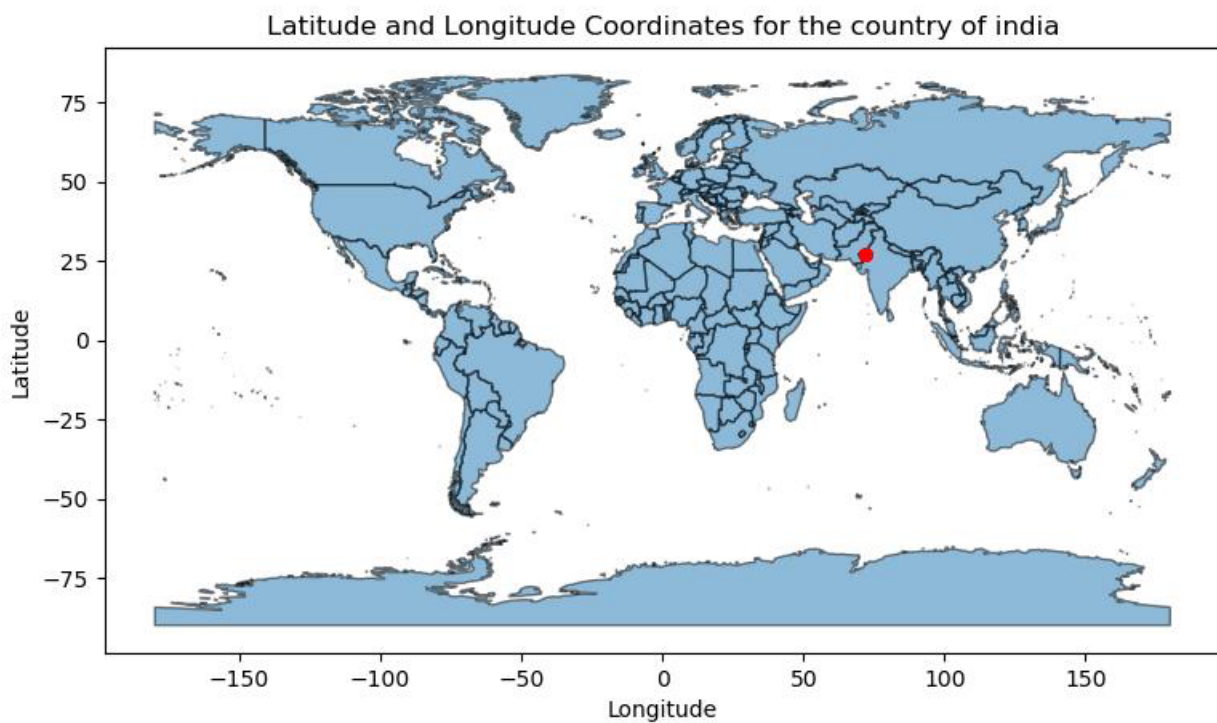
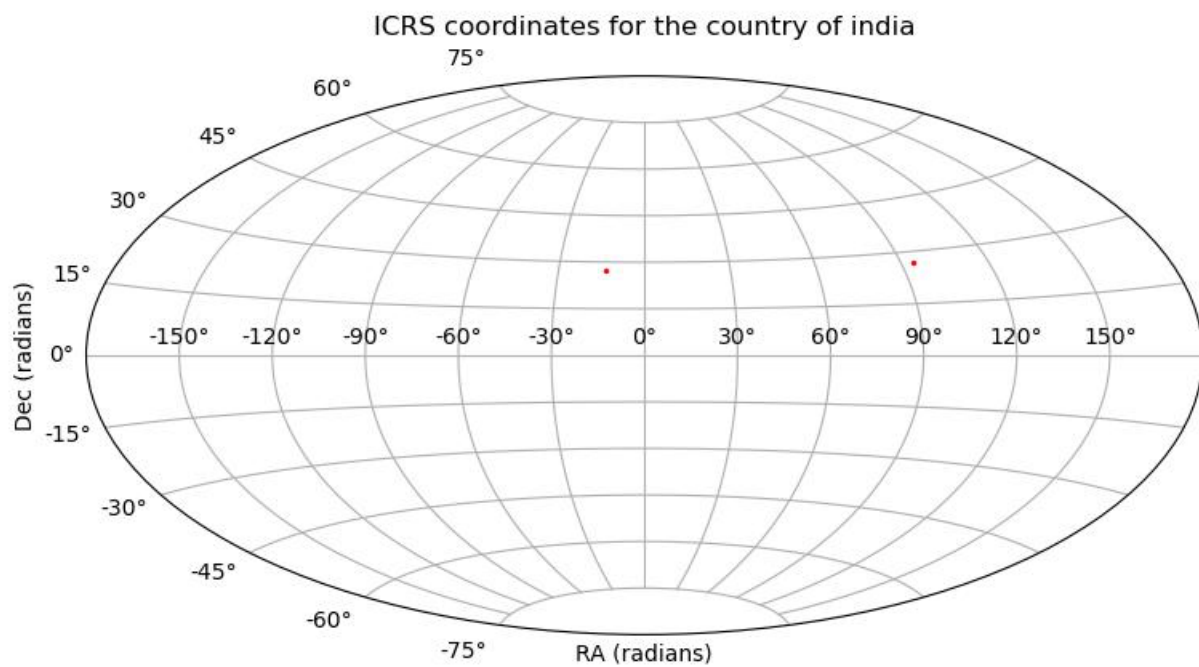


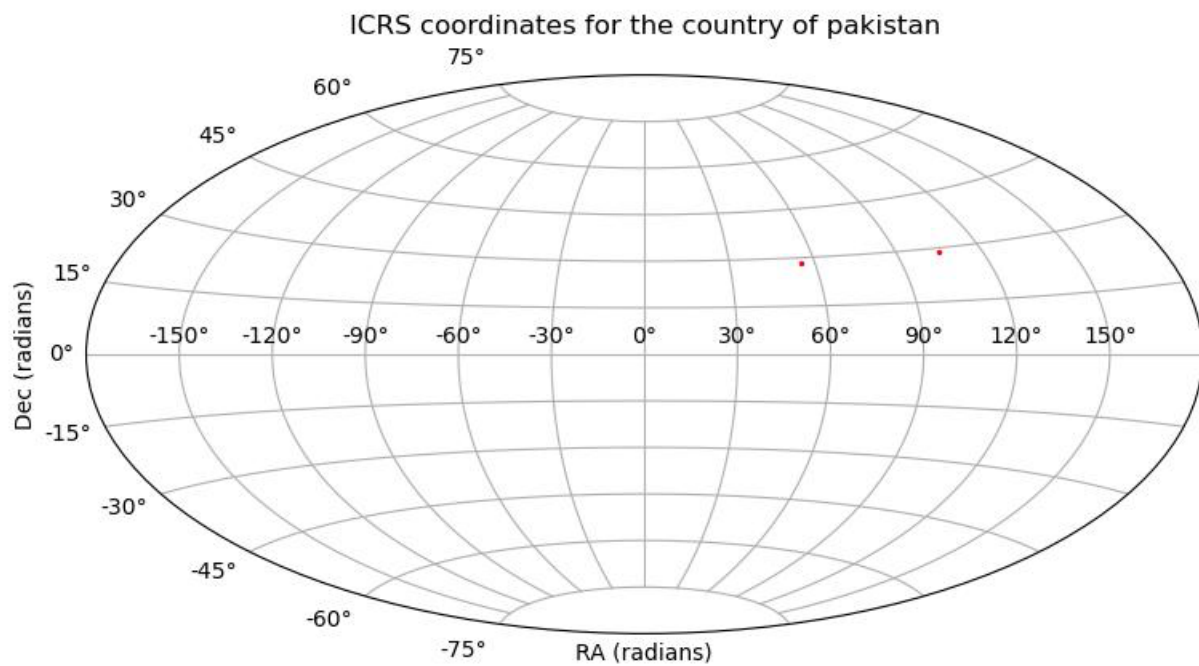
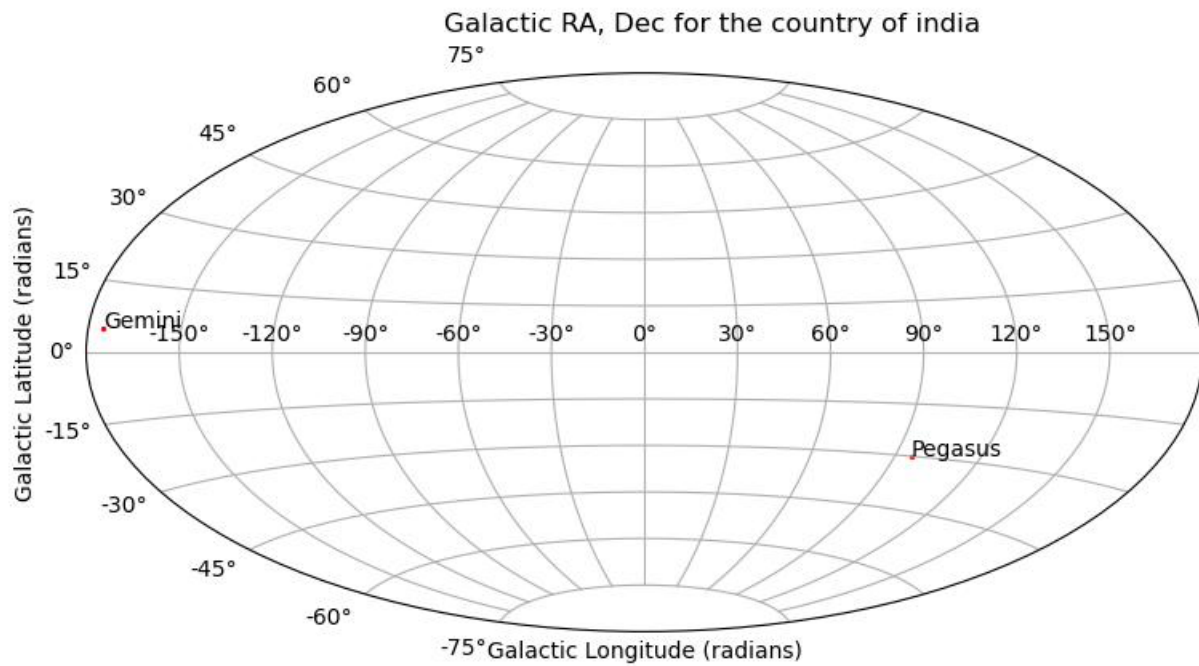
Latitude and Longitude Coordinates for the country of france



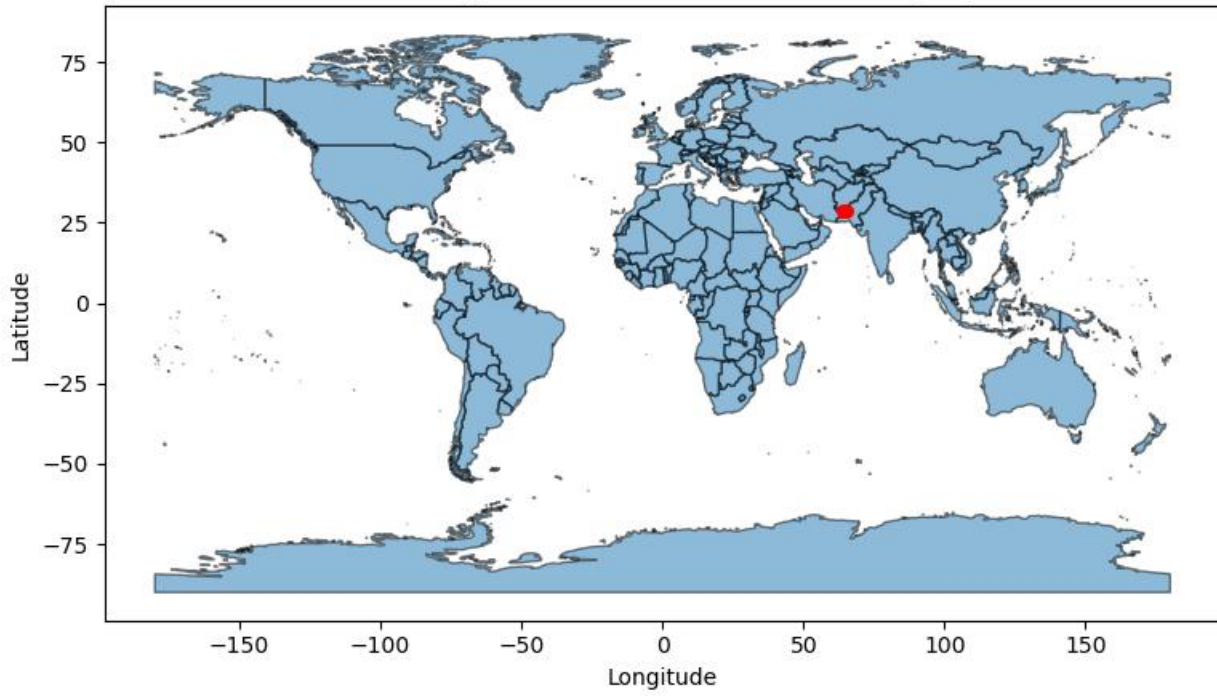
Galactic RA, Dec for the country of france



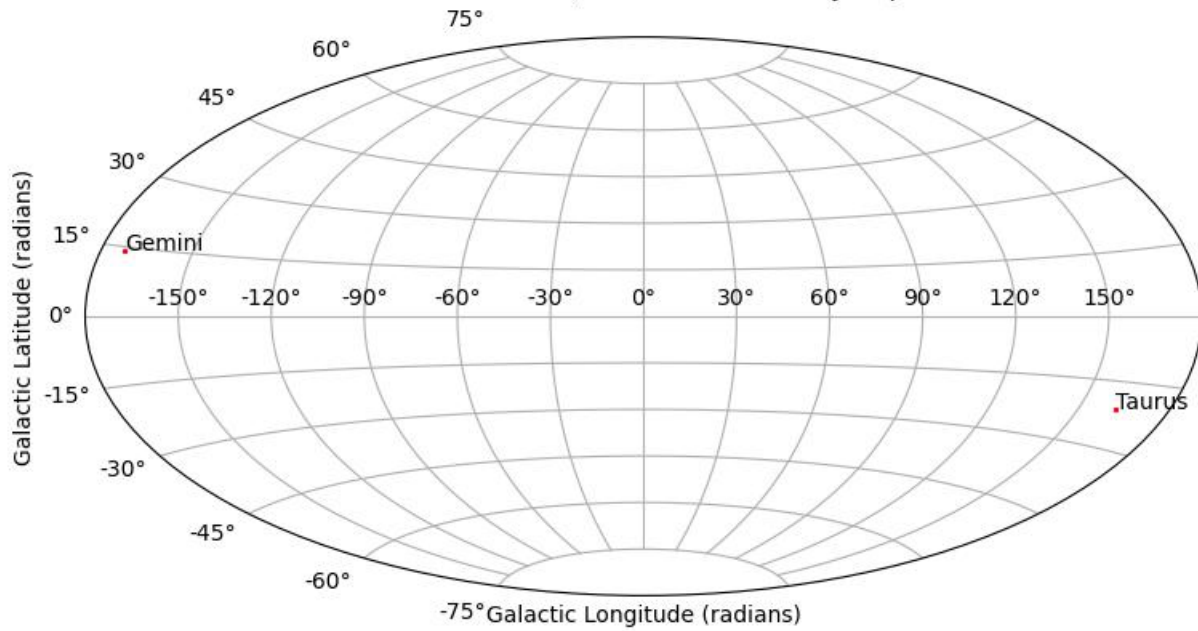


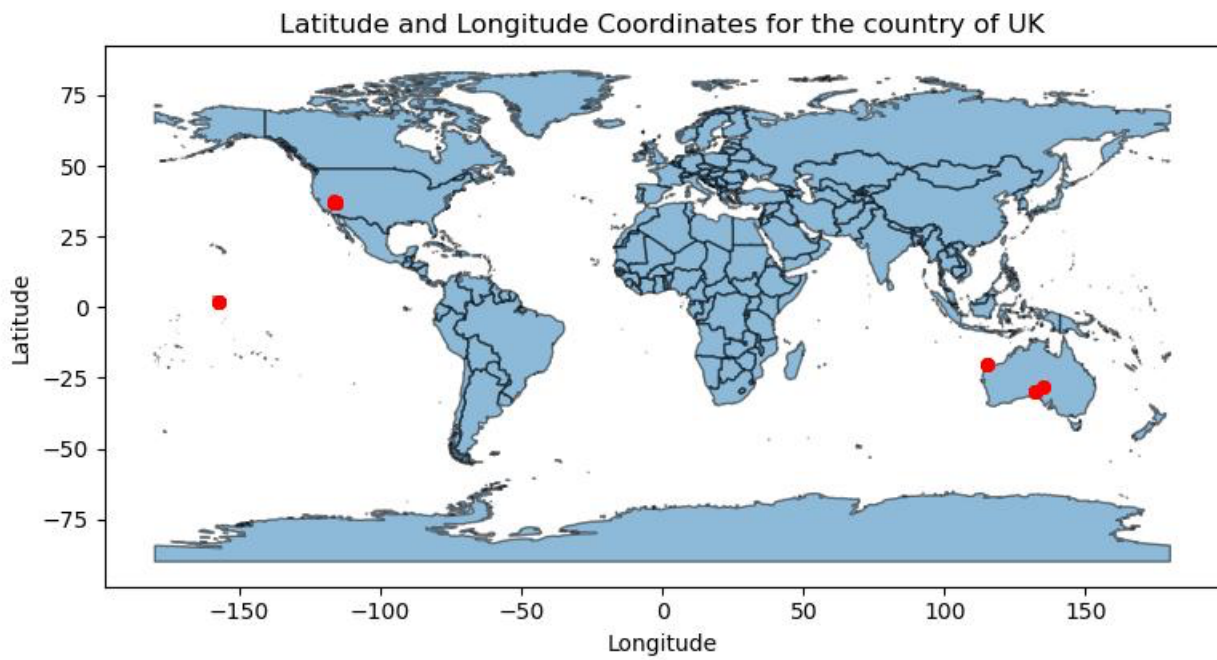
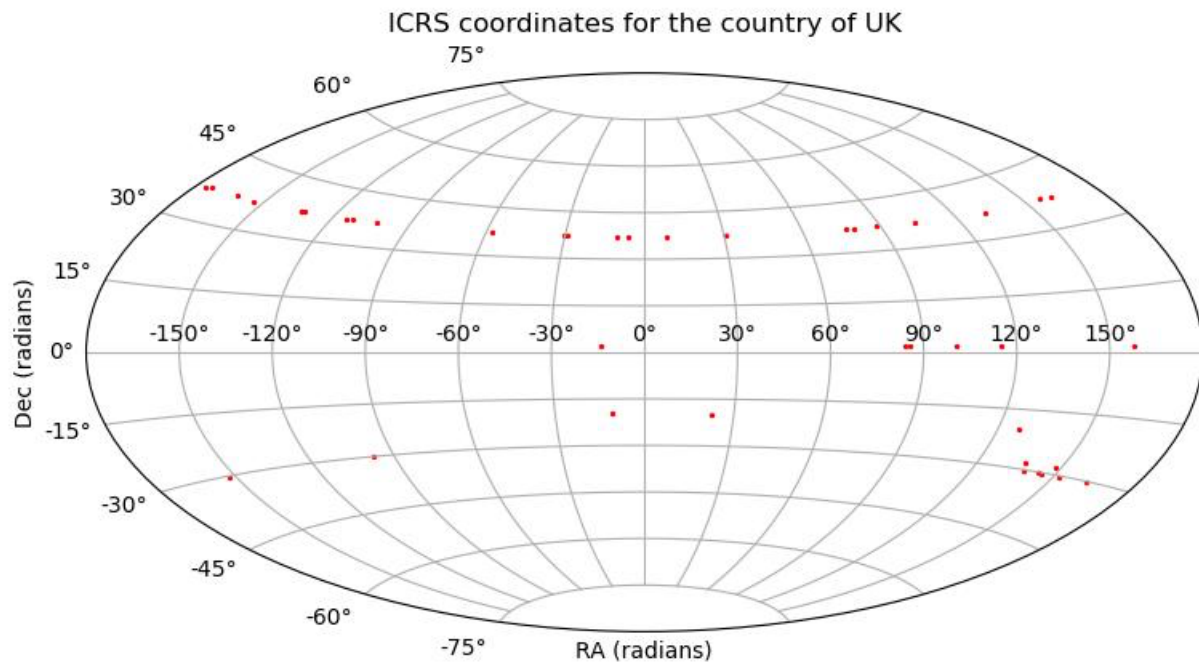


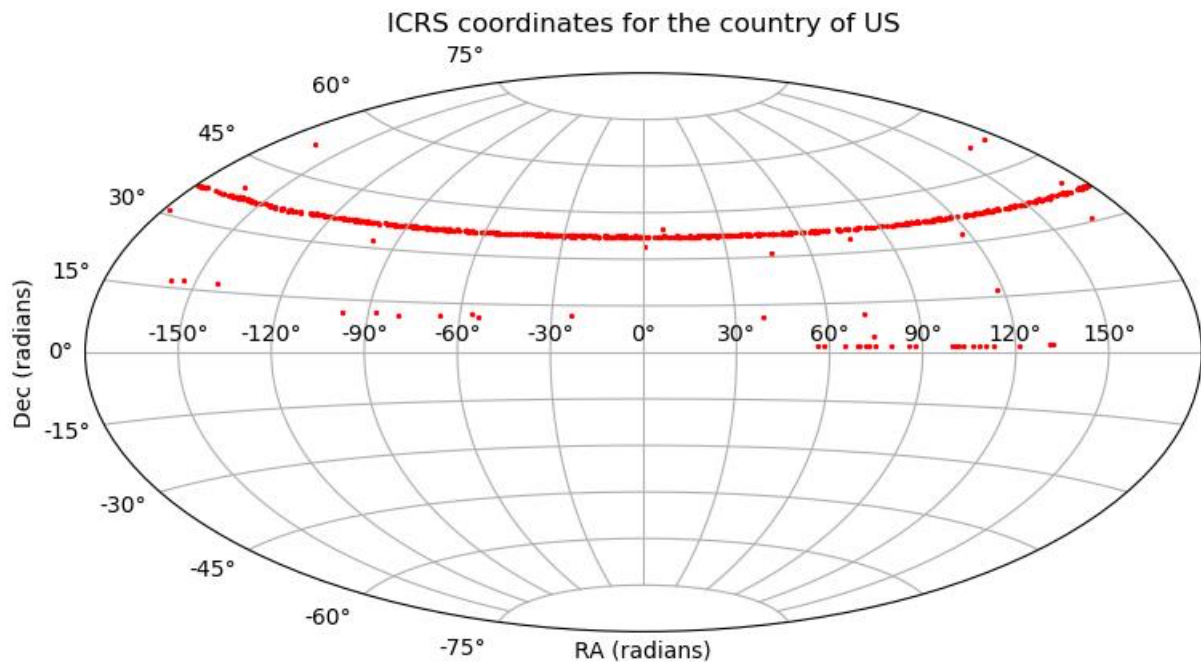
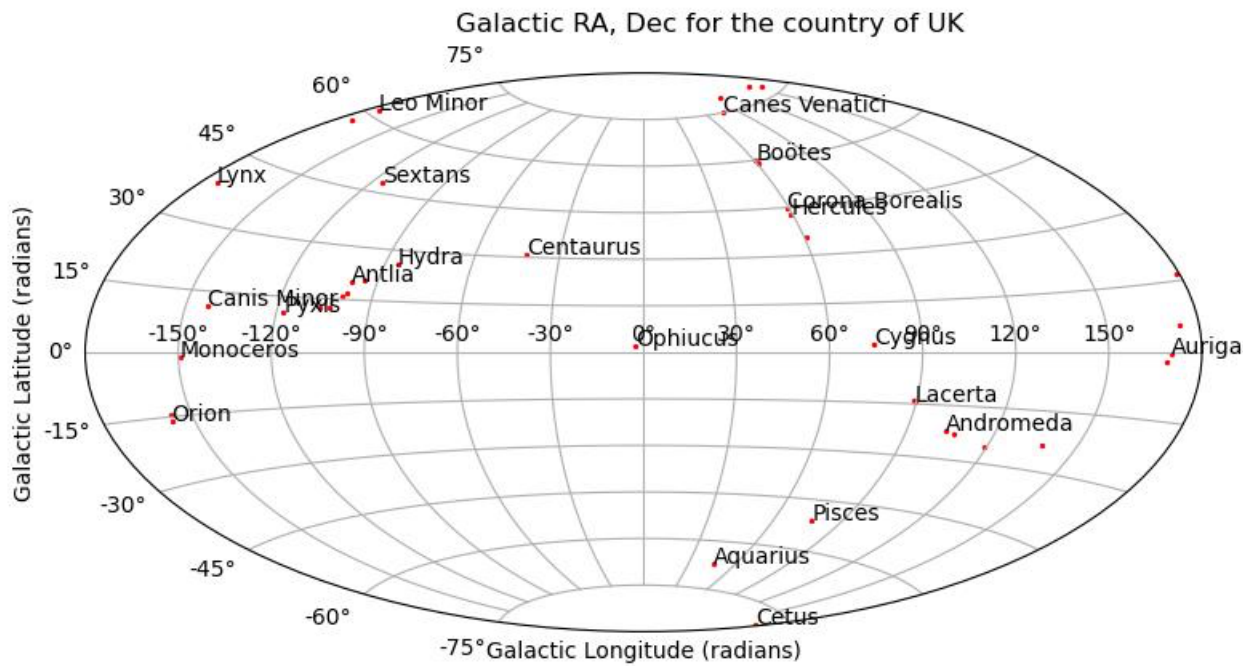
Latitude and Longitude Coordinates for the country of pakistan



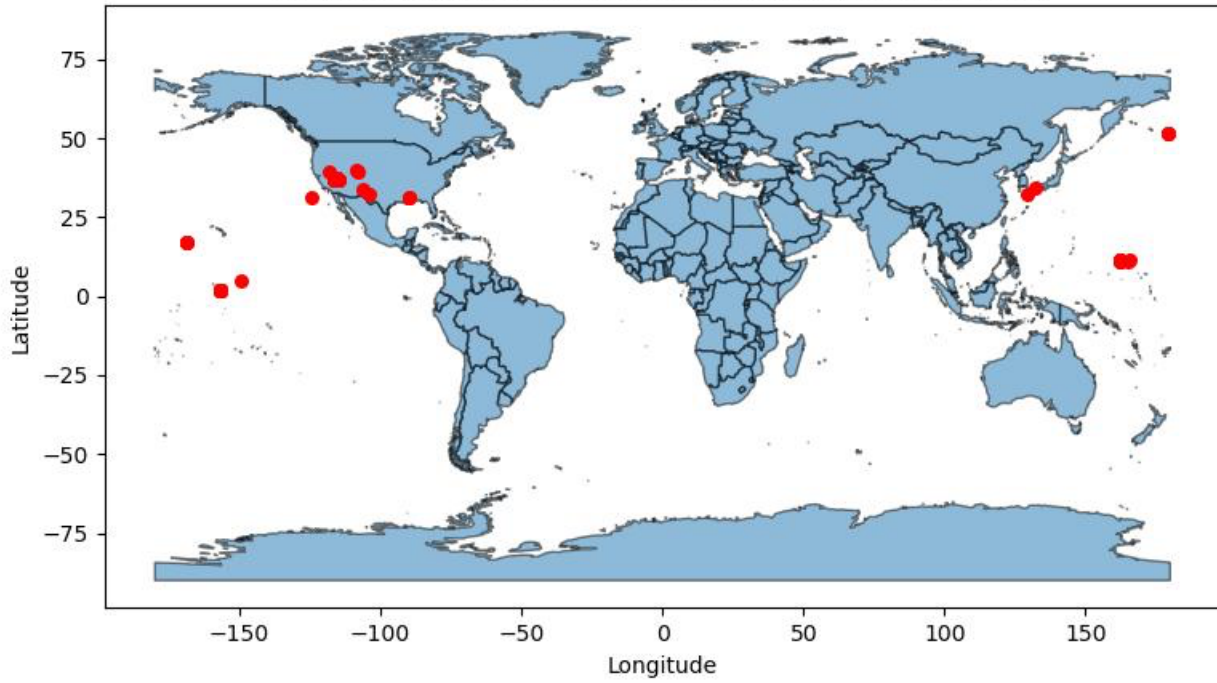
Galactic RA, Dec for the country of pakistan



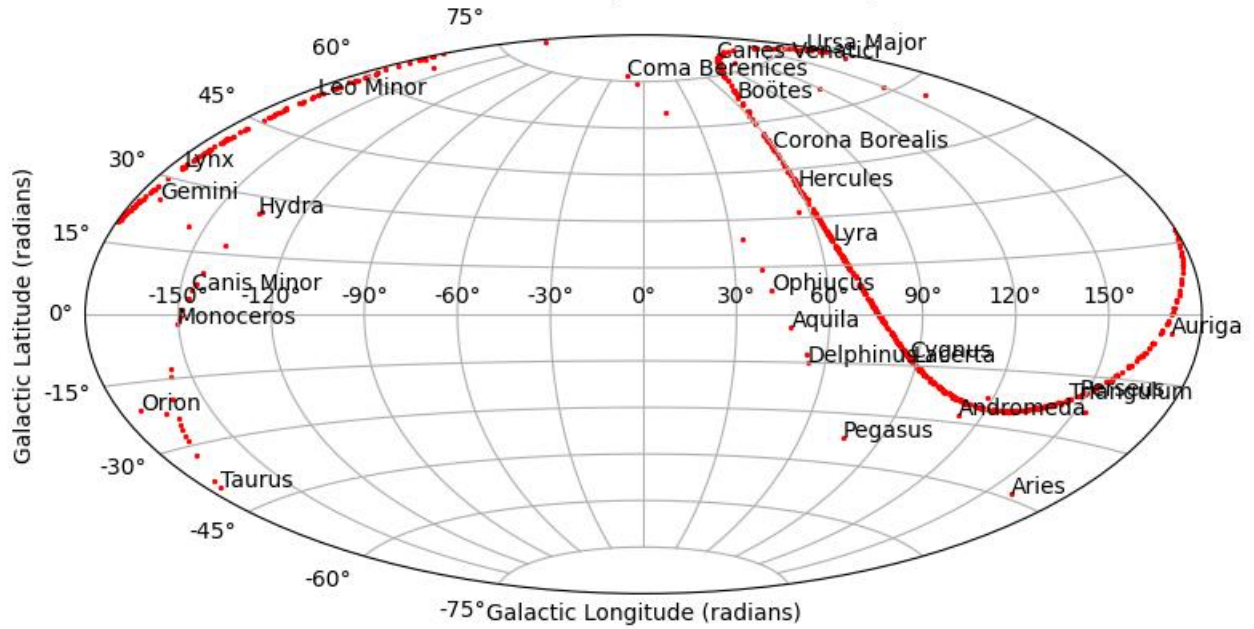


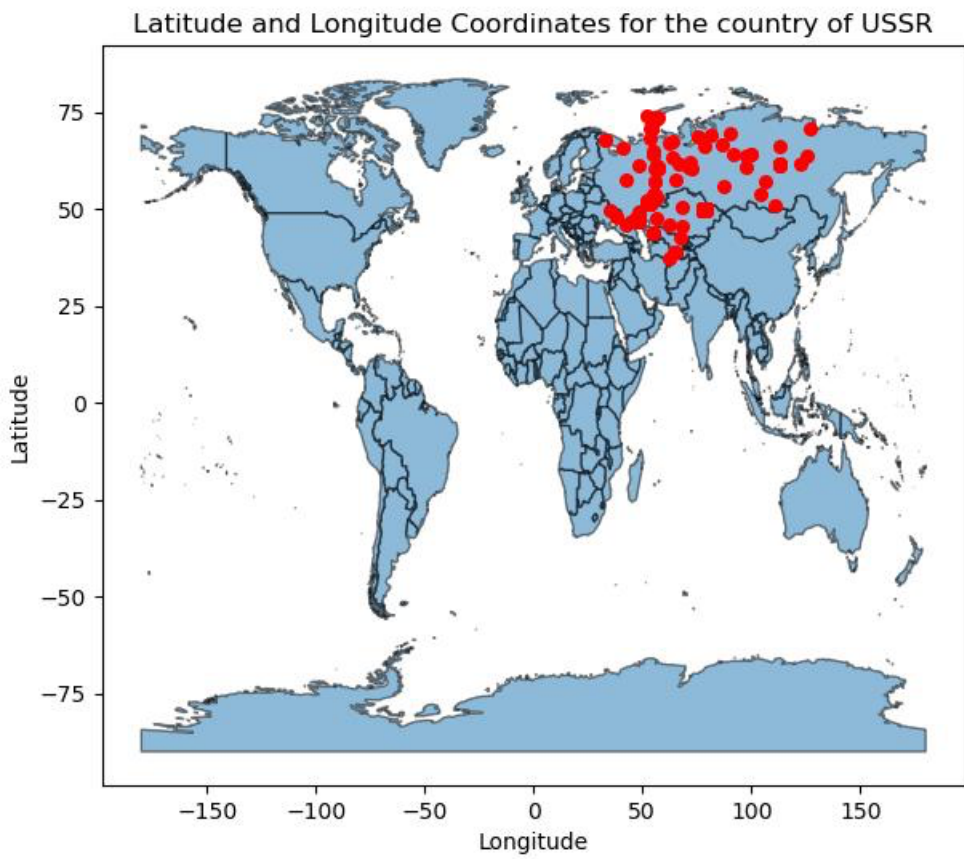
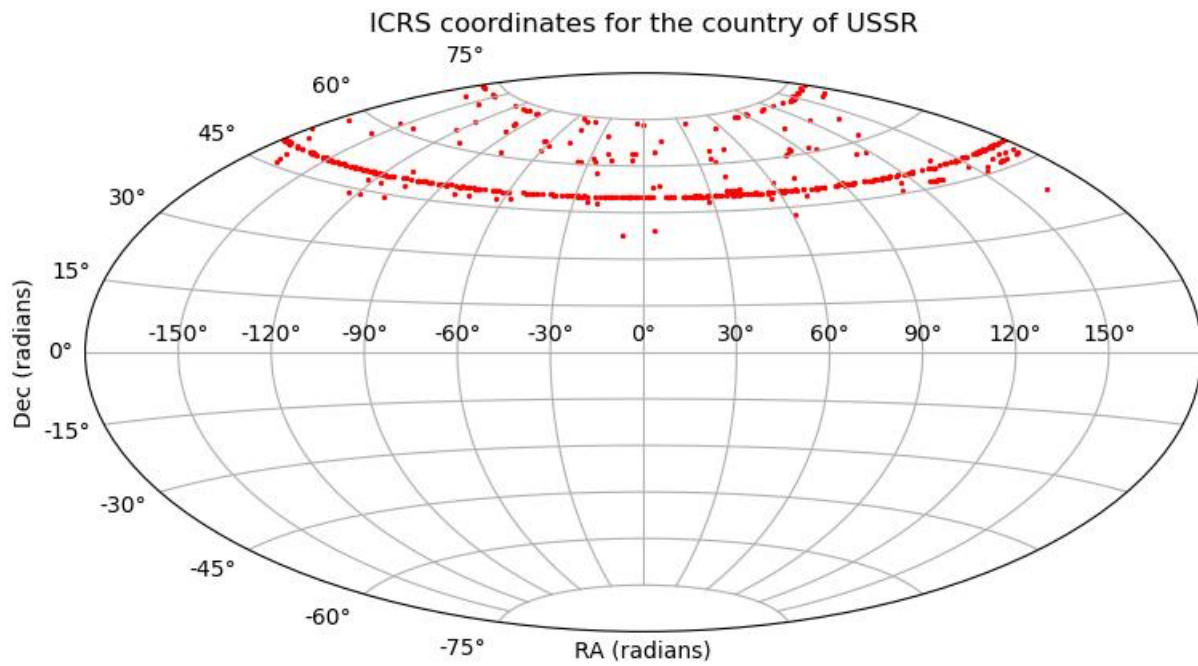


Latitude and Longitude Coordinates for the country of US

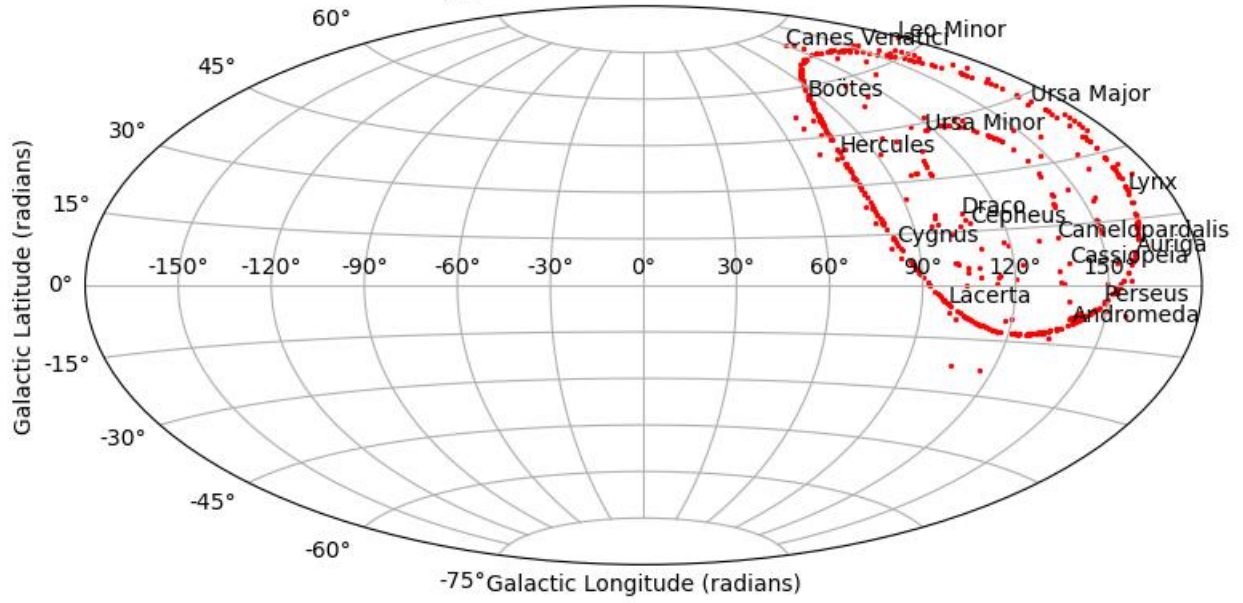


Galactic RA, Dec for the country of US





Galactic RA, Dec for the country of USSR
75°



Appendix A: Raw Data List of Nuclear Events (in date order) with responsible country

<i>cntry</i>	<i>datetime</i>	<i>latitude</i>	<i>longitude</i>
US	1945-07-16 11:29:21.000	33.6753	-106.4747
US	1945-08-05 23:16:02.000	34.2200	132.2500
US	1945-08-09 01:58:00.000	32.4800	129.5300
US	1946-06-30 21:01:00.000	11.0000	165.0000
US	1946-07-24 21:34:59.800	11.5833	165.5000
US	1948-04-14 18:16:59.000	11.0000	162.0000
US	1948-04-30 18:08:59.000	11.0000	162.0000
US	1948-05-14 18:04:00.000	11.0000	162.0000
USSR	1949-08-29 00:00:00.000	50.0000	78.0000
US	1951-01-27 13:44:51.000	36.8000	-115.9500
US	1951-01-28 13:52:04.500	36.8000	-115.9500
US	1951-02-01 13:46:39.500	36.8000	-115.9500
US	1951-02-02 13:48:48.000	36.8000	-115.9500
US	1951-02-06 13:46:55.000	36.8000	-115.9500
US	1951-04-07 17:33:57.800	11.5558	162.3544
US	1951-04-20 17:27:00.100	11.6689	162.2403
US	1951-05-08 20:30:00.700	11.6269	162.3147
US	1951-05-24 17:16:59.300	11.6730	162.2486
USSR	1951-09-24 00:00:00.000	50.0000	78.0000
USSR	1951-10-18 00:00:00.000	50.0000	78.0000
US	1951-10-22 14:00:00.000	37.0839	-116.0239
US	1951-10-28 15:20:08.900	37.0850	-116.0200
US	1951-10-30 15:00:29.800	37.0850	-116.0203
US	1951-11-01 15:30:01.600	37.0847	-116.0197
US	1951-11-05 16:29:58.200	37.0919	-116.0244
US	1951-11-19 16:59:59.700	37.1317	-116.0386
US	1951-11-29 19:59:59.700	37.1697	-116.0425
US	1952-04-01 17:00:07.500	36.7983	-115.9356
US	1952-04-15 17:29:57.100	37.0842	-116.0194
US	1952-04-22 17:30:10.000	37.0844	-116.0203
UK	1952-10-03 00:00:00.000	-20.0000	115.0000
USSR	1953-08-12 00:00:00.000	50.0000	78.0000
USSR	1953-08-23 00:00:00.000	50.0000	78.0000
USSR	1953-09-03 00:00:00.000	50.0000	78.0000
USSR	1953-09-08 00:00:00.000	50.0000	78.0000
USSR	1953-09-10 00:00:00.000	50.0000	78.0000
UK	1953-10-14 22:30:00.000	-28.0000	135.0000
UK	1953-10-26 22:30:00.000	-28.0000	135.0000
USSR	1954-09-14 00:00:00.000	64.0000	55.0000
USSR	1954-09-29 00:00:00.000	50.0000	78.0000
USSR	1954-10-01 00:00:00.000	50.0000	78.0000
USSR	1954-10-03 00:00:00.000	50.0000	78.0000
USSR	1954-10-05 00:00:00.000	50.0000	78.0000
USSR	1954-10-08 00:00:00.000	50.0000	78.0000
USSR	1954-10-19 00:00:00.000	50.0000	78.0000
USSR	1954-10-23 00:00:00.000	50.0000	78.0000
USSR	1954-10-26 00:00:00.000	50.0000	78.0000
USSR	1954-10-30 00:00:00.000	50.0000	78.0000
USSR	1955-07-29 00:00:00.000	50.0000	78.0000
USSR	1955-08-02 00:00:00.000	50.0000	78.0000
USSR	1955-08-05 00:00:00.000	50.0000	78.0000
USSR	1955-09-21 00:00:00.000	70.7000	54.5600
USSR	1955-11-06 00:00:00.000	50.0000	78.0000
USSR	1955-11-22 00:00:00.000	50.0000	78.0000
USSR	1956-02-02 00:00:00.000	46.0000	62.0000
USSR	1956-03-16 00:00:00.000	50.0000	78.0000
USSR	1956-03-25 00:00:00.000	50.0000	78.0000
UK	1956-05-16 00:00:00.000	-20.0000	115.0000

UK	1956-06-19	00:00:00.000	-20.0000	115.0000
UK	1956-09-27	00:00:00.000	-30.0000	132.0000
UK	1956-10-04	00:00:00.000	-30.0000	132.0000
UK	1956-10-11	00:00:00.000	-30.0000	132.0000
UK	1956-10-22	00:00:00.000	-30.0000	132.0000
UK	1957-09-14	05:30:00.000	-30.0000	132.0000
UK	1957-09-25	00:30:00.000	-30.0000	132.0000
UK	1957-10-09	07:30:00.000	-30.0000	132.0000
UK	1957-11-08	17:47:00.000	1.6700	-157.2500
UK	1958-04-28	19:05:00.000	1.6700	-157.2500
UK	1958-08-22	18:00:00.000	1.6700	-157.2500
UK	1958-09-02	17:24:00.000	1.6700	-157.2500
UK	1958-09-11	17:48:00.000	1.6700	-157.2500
UK	1958-09-23	17:58:00.000	1.6700	-157.2500
US	1958-10-14	18:00:00.200	37.1939	-116.1997
US	1958-10-15	16:00:00.200	36.8022	-115.9322
US	1958-10-16	06:00:00.100	37.1842	-116.2011
US	1958-10-16	14:20:00.100	37.0867	-116.0236
US	1958-10-17	23:00:00.200	37.1225	-116.0347
US	1958-10-18	14:25:00.100	37.0411	-116.0258
US	1958-10-20	14:30:00.200	37.0447	-116.0297
US	1958-10-22	00:00:00.000	37.0000	-116.0000
US	1958-10-22	13:30:00.200	37.0867	-116.0236
US	1958-10-22	16:50:00.100	36.7981	-115.9289
US	1958-10-22	23:40:00.100	37.1347	-116.0408
US	1958-10-24	15:00:00.200	37.0431	-116.0269
US	1958-10-24	16:01:00.200	37.1233	-116.0378
US	1958-10-26	04:00:00.200	37.1814	-116.0686
US	1958-10-26	10:20:00.100	36.7981	-115.9289
US	1958-10-26	16:00:00.100	37.0867	-116.0236
US	1958-10-27	00:00:00.000	37.0000	-116.0000
US	1958-10-29	00:00:00.000	37.0000	-116.0000
US	1958-10-29	00:00:00.200	37.1947	-116.2047
US	1958-10-29	14:45:00.100	37.0478	-116.0247
US	1958-10-30	00:00:00.000	37.0000	-116.0000
US	1958-10-30	03:00:00.100	37.0867	-116.0236
US	1958-10-30	15:00:00.200	37.1858	-116.2019
US	1958-10-30	20:34:00.200	37.1772	-116.0692
US	1961-09-15	17:00:00.100	37.1879	-116.2078
US	1961-09-16	19:45:00.100	37.0484	-116.0328
US	1961-10-01	22:30:00.100	37.0483	-116.0345
US	1961-10-10	18:00:00.100	37.1943	-116.2070
US	1961-10-29	18:30:00.100	37.0486	-116.0311
US	1961-12-03	23:04:59.600	37.0459	-116.0277
US	1961-12-10	19:00:00.000	32.2636	-103.8658
US	1961-12-13	18:00:00.200	37.1266	-116.0488
US	1961-12-17	16:35:00.100	37.0432	-116.0253
US	1961-12-22	16:30:00.100	37.1949	-116.2083
US	1962-01-09	16:30:00.100	37.0446	-116.0351
US	1962-01-18	18:00:00.100	37.0473	-116.0344
US	1962-01-30	18:00:00.100	37.0468	-116.0395
US	1962-02-08	18:00:00.200	37.1273	-116.0527
US	1962-02-09	16:30:00.100	37.0436	-116.0389
US	1962-02-15	18:00:00.100	37.2263	-116.0593
US	1962-02-19	16:30:00.100	37.0491	-116.0295
US	1962-02-19	17:50:00.200	37.1274	-116.0371
US	1962-02-23	18:00:00.200	37.1289	-116.0483
US	1962-02-24	16:30:00.100	37.0483	-116.0319
UK	1962-03-01	19:10:00.100	37.0413	-116.0287
US	1962-03-05	18:15:00.100	37.1111	-116.3649
US	1962-03-06	16:30:00.100	37.0484	-116.0337

US 1962-03-08	18:00:00.200	37.1222	-116.0489
US 1962-03-15	16:30:00.100	37.0440	-116.0310
US 1962-03-28	18:00:00.200	37.1243	-116.0339
US 1962-03-31	18:00:00.100	37.0469	-116.0369
US 1962-04-05	18:00:00.100	37.0445	-116.0235
US 1962-04-06	18:00:00.200	37.1177	-116.0440
US 1962-04-12	18:00:00.200	37.1272	-116.0449
US 1962-04-14	18:00:00.100	37.2220	-116.1574
US 1962-04-21	18:40:00.200	37.1190	-116.0315
US 1962-04-25	00:00:00.000	2.0000	-157.0000
US 1962-04-27	00:00:00.000	2.0000	-157.0000
US 1962-05-04	00:00:00.000	2.0000	-157.0000
US 1962-05-06	00:00:00.000	4.8333	-149.4167
US 1962-05-07	19:33:00.100	37.0466	-116.0250
US 1962-05-08	00:00:00.000	2.0000	-157.0000
US 1962-05-09	00:00:00.000	2.0000	-157.0000
US 1962-05-10	15:00:00.200	37.1276	-116.0483
US 1962-05-11	00:00:00.000	2.0000	-157.0000
US 1962-05-11	20:02:05.900	31.2450	-124.2117
US 1962-05-12	00:00:00.000	2.0000	-157.0000
US 1962-05-12	19:00:00.100	37.0652	-116.0304
US 1962-05-14	00:00:00.000	2.0000	-157.0000
US 1962-05-19	00:00:00.000	2.0000	-157.0000
US 1962-05-19	15:00:00.200	37.1226	-116.0472
US 1962-05-25	00:00:00.000	2.0000	-157.0000
US 1962-05-25	15:00:00.200	37.1248	-116.0520
US 1962-05-27	00:00:00.000	2.0000	-157.0000
US 1962-06-01	17:00:00.100	37.0456	-116.0345
US 1962-06-06	17:00:00.100	37.0457	-116.0393
US 1962-06-08	00:00:00.000	2.0000	-157.0000
US 1962-06-09	00:00:00.000	2.0000	-157.0000
US 1962-06-10	00:00:00.000	2.0000	-157.0000
US 1962-06-12	00:00:00.000	2.0000	-157.0000
US 1962-06-13	21:00:00.100	37.2222	-116.1621
US 1962-06-15	00:00:00.000	2.0000	-157.0000
US 1962-06-17	00:00:00.000	2.0000	-157.0000
US 1962-06-19	00:00:00.000	2.0000	-157.0000
US 1962-06-21	17:00:00.100	37.0431	-116.0303
US 1962-06-22	00:00:00.000	2.0000	-157.0000
US 1962-06-27	18:00:00.100	37.0416	-116.0353
US 1962-06-28	17:00:00.100	37.0091	-116.2011
US 1962-06-30	00:00:00.000	2.0000	-157.0000
US 1962-06-30	21:30:00.200	37.1174	-116.0474
US 1962-07-06	17:00:00.100	37.1770	-116.0454
US 1962-07-07	00:00:00.000	37.0000	-116.0000
US 1962-07-09	00:00:00.000	17.0000	-169.0000
US 1962-07-10	00:00:00.000	2.0000	-157.0000
US 1962-07-11	00:00:00.000	2.0000	-157.0000
US 1962-07-11	16:45:00.100	37.1224	-116.3330
US 1962-07-13	16:00:00.200	37.0551	-116.0334
US 1962-07-14	00:00:00.000	37.0000	-116.0000
US 1962-07-17	00:00:00.000	37.0000	-116.0000
US 1962-07-27	21:00:00.200	37.1297	-116.0565
US 1962-08-24	15:00:00.200	37.1186	-116.0395
US 1962-08-24	17:00:00.100	37.0461	-116.0238
US 1962-09-06	17:00:00.200	37.1303	-116.0447
US 1962-09-14	17:10:00.100	37.0439	-116.0211
US 1962-09-20	17:10:00.100	37.0551	-116.0293
US 1962-09-29	17:00:00.200	37.1167	-116.0328
US 1962-10-02	00:00:00.000	17.0000	-169.0000
US 1962-10-05	17:00:00.200	37.1394	-116.0503

US	1962-10-06	00:00:00.000	17.0000	-169.0000
US	1962-10-12	15:00:00.200	37.1228	-116.0508
US	1962-10-12	17:00:00.100	37.0488	-116.0326
US	1962-10-18	00:00:00.000	17.0000	-169.0000
USSR	1962-12-01	00:00:00.000	50.0000	78.0000
UK	1962-12-07	19:00:00.100	37.0518	-116.0293
USSR	1962-12-18	00:00:00.000	73.0000	55.0000
USSR	1962-12-18	00:00:00.000	73.0000	55.0000
USSR	1962-12-20	00:00:00.000	73.0000	55.0000
USSR	1962-12-22	00:00:00.000	73.0000	55.0000
USSR	1962-12-23	00:00:00.000	73.0000	55.0000
USSR	1962-12-23	00:00:00.000	73.0000	55.0000
USSR	1962-12-23	00:00:00.000	73.0000	55.0000
USSR	1962-12-23	00:00:00.000	50.0000	78.0000
USSR	1962-12-24	00:00:00.000	50.0000	78.0000
USSR	1962-12-24	00:00:00.000	50.0000	78.0000
USSR	1962-12-24	10:44:21.900	74.2000	52.3000
USSR	1962-12-24	11:11:42.000	73.6000	57.5000
USSR	1962-12-25	00:00:00.000	73.0000	55.0000
USSR	1962-12-25	13:35:57.200	73.4000	56.5000
US	1963-05-15	00:00:00.000	37.0000	-115.0000
US	1963-05-17	14:55:00.100	37.0439	-116.0156
US	1963-05-17	14:55:00.100	37.0483	-116.0324
US	1963-05-22	15:40:00.100	37.1111	-116.0391
US	1963-05-25	00:00:00.000	37.0000	-115.0000
US	1963-05-29	15:03:30.200	37.1281	-116.0425
US	1963-05-31	00:00:00.000	37.0000	-115.0000
US	1963-06-05	17:00:00.100	37.1966	-116.2092
US	1963-06-06	14:00:00.100	37.0450	-116.0364
US	1963-06-06	16:58:00.200	37.1247	-116.0400
US	1963-06-09	00:00:00.000	37.0000	-115.0000
US	1963-06-14	14:10:00.100	37.0461	-116.0184
US	1963-06-25	23:00:00.200	37.1314	-116.0681
US	1963-08-12	23:45:00.100	37.0417	-116.0156
US	1963-08-15	13:00:00.200	37.1541	-116.0766
US	1963-08-23	13:20:00.100	37.1250	-116.0354
US	1963-09-13	13:53:00.200	37.1634	-116.0806
US	1963-09-13	17:00:00.100	37.0604	-116.0217
US	1963-09-27	00:00:00.000	37.0000	-116.0000
US	1963-09-27	00:00:00.000	37.0000	-116.0000
US	1963-10-11	14:00:00.100	37.0373	-116.0212
US	1963-10-11	14:00:00.200	37.1187	-116.0339
US	1963-10-16	17:00:00.100	37.1982	-116.2295
US	1963-10-17	00:00:00.000	37.0000	-116.0000
US	1963-10-26	17:00:00.100	39.2002	-118.3803
US	1963-11-14	16:00:00.100	37.0395	-116.0184
US	1963-12-04	16:38:30.100	37.0396	-116.0294
US	1963-12-12	16:02:00.200	37.1310	-116.0439
US	1963-12-20	00:00:00.000	37.0000	-116.0000
US	1964-01-16	16:00:00.200	37.1423	-116.0491
US	1964-01-23	16:00:00.200	37.1264	-116.0363
US	1964-01-30	00:00:00.000	37.0000	-116.0000
US	1964-02-12	00:00:00.000	37.0000	-116.0000
US	1964-02-13	00:00:00.000	37.0000	-116.0000
US	1964-02-18	00:00:00.000	37.0000	-116.0000
US	1964-02-18	00:00:00.000	37.0000	-116.0000
US	1964-02-20	15:30:00.100	37.1509	-116.0401
US	1964-03-12	00:00:00.000	37.0000	-116.0000
US	1964-03-13	16:02:00.100	37.0505	-116.0115
USSR	1964-03-15	08:00:00.400	49.8160	78.0752
US	1964-04-14	14:40:00.100	37.1289	-116.0298

US	1964-04-15	14:30:00.100	37.0439	-116.0184
US	1964-04-17	00:00:00.000	37.0000	-116.0000
US	1964-04-24	20:10:00.200	37.1496	-116.0554
US	1964-04-29	20:47:00.100	37.0396	-116.0266
US	1964-05-07	00:00:00.000	37.0000	-116.0000
US	1964-05-14	14:40:00.200	37.1173	-116.0389
US	1964-05-15	16:15:00.100	37.0417	-116.0122
USSR	1964-05-16	06:00:59.800	49.8077	78.1020
USSR	1964-06-06	00:00:00.000	49.7747	77.9881
US	1964-06-11	16:45:00.200	37.1486	-116.0760
US	1964-06-12	00:00:00.000	37.0000	-116.0000
US	1964-06-18	00:00:00.000	37.0000	-116.0000
US	1964-06-25	13:30:00.100	37.1111	-116.0288
US	1964-06-30	13:33:00.100	37.1744	-116.0564
US	1964-07-16	13:15:00.200	37.1822	-116.0454
UK	1964-07-17	17:18:30.000	37.0176	-116.0296
USSR	1964-07-19	06:00:00.600	49.8091	78.0929
USSR	1964-08-18	06:00:00.000	49.8206	78.0819
US	1964-09-11	00:00:00.000	37.0000	-116.0000
USSR	1964-09-18	08:00:00.400	73.6670	54.5330
UK	1964-09-25	00:00:00.000	37.0000	-116.0000
USSR	1964-09-30	00:00:00.000	50.0000	78.0000
US	1964-10-02	20:03:00.000	37.0779	-116.0085
US	1964-10-09	14:00:00.100	37.1513	-116.0770
china	1964-10-16	07:00:00.000	41.5000	88.5000
US	1964-10-16	15:59:30.000	37.0395	-116.0157
US	1964-10-22	16:00:00.000	31.1421	-89.5699
US	1964-10-23	00:00:00.000	37.0000	-116.0000
USSR	1964-10-25	07:59:58.100	73.3870	54.9850
US	1964-10-31	17:04:58.600	37.1072	-116.0323
US	1964-11-05	15:00:00.100	37.1744	-116.0670
USSR	1964-11-16	06:00:00.200	49.8087	78.1334
US	1964-12-05	21:15:00.000	37.1343	-116.0697
US	1964-12-05	21:15:00.100	37.1144	-116.0534
US	1964-12-16	00:00:00.000	37.0000	-116.0000
US	1964-12-16	20:00:00.000	37.0348	-116.0123
US	1964-12-16	20:10:00.100	37.1778	-116.0670
US	1964-12-18	19:35:00.100	37.0825	-116.3425
US	1965-01-14	16:00:00.100	37.1190	-116.0248
US	1965-01-29	00:00:00.000	37.0000	-116.0000
US	1965-02-04	15:30:00.100	37.1308	-116.0616
US	1965-02-12	15:10:29.500	37.1645	-116.0766
US	1965-02-16	17:30:00.000	37.0516	-116.0238
US	1965-02-18	16:18:47.200	36.8180	-115.9492
US	1965-02-19	00:00:00.000	37.0000	-116.0000
US	1965-03-03	19:13:00.000	37.0645	-116.0372
USSR	1965-03-27	06:30:00.000	49.7747	77.9881
USSR	1965-03-30	08:00:00.000	52.9000	56.5000
US	1965-05-07	15:47:11.200	37.1404	-116.0666
USSR	1965-05-11	06:40:00.200	49.7702	77.9943
US	1965-05-12	18:15:00.100	37.2427	-116.4309
china	1965-05-14	02:00:00.000	41.5000	88.5000
US	1965-05-14	14:57:52.200	36.8234	-115.9668
US	1965-05-14	17:32:36.200	37.0588	-116.0105
US	1965-05-21	13:08:52.100	37.1186	-116.0277
USSR	1965-06-10	07:00:00.000	52.9000	56.5000
US	1965-06-11	00:00:00.000	37.0000	-116.0000
US	1965-06-11	19:45:00.000	37.0428	-116.0170
US	1965-06-16	16:30:00.200	36.8181	-115.9561
USSR	1965-06-17	03:45:00.000	49.8284	78.0669
US	1965-06-17	17:00:00.100	37.2234	-116.0570

US	1965-07-16	00:00:00.000	37.0000	-116.0000
US	1965-07-22	00:00:00.000	37.0000	-116.0000
US	1965-07-23	17:00:00.000	37.0978	-116.0330
USSR	1965-07-29	03:05:00.200	49.7797	77.9981
US	1965-08-06	17:23:30.000	37.0177	-116.0398
US	1965-08-21	00:00:00.000	37.0000	-116.0000
US	1965-08-27	13:51:13.100	37.1373	-116.0701
US	1965-09-01	20:08:00.000	37.0230	-116.0090
UK	1965-09-10	17:12:00.000	37.0780	-116.0167
USSR	1965-09-17	04:00:00.100	49.8116	78.1467
US	1965-09-17	15:08:23.100	37.1110	-116.0346
USSR	1965-10-08	06:00:00.400	49.8259	78.1114
USSR	1965-10-14	04:00:00.200	49.9906	77.6357
US	1965-10-29	21:00:00.100	51.4381	179.1826
US	1965-11-12	18:00:00.100	37.0500	-116.0221
USSR	1965-11-21	04:58:00.000	49.8192	78.0636
US	1965-11-23	00:00:00.000	37.0000	-116.0000
US	1965-12-03	15:13:02.100	37.1648	-116.0523
US	1965-12-16	15:39:18.200	37.1408	-116.0632
USSR	1965-12-24	05:00:00.200	49.8045	78.1067
USSR	1966-02-13	04:58:00.100	49.8089	78.1210
US	1966-02-24	15:55:07.000	37.2718	-116.4338
US	1966-03-05	18:15:00.100	37.1745	-116.2084
US	1966-03-07	18:41:00.100	37.0374	-116.0294
US	1966-03-12	18:04:13.100	37.1437	-116.0525
US	1966-03-18	19:00:00.000	37.0093	-116.0091
USSR	1966-03-20	05:50:00.300	49.7616	78.0239
US	1966-03-24	14:55:28.100	37.1133	-116.0314
US	1966-04-01	18:40:00.000	37.1027	-116.0199
US	1966-04-06	13:57:17.100	37.1395	-116.1409
US	1966-04-07	22:27:30.000	37.0174	-115.9922
US	1966-04-14	14:13:43.100	37.2427	-116.4309
USSR	1966-04-21	03:58:00.100	49.8097	78.1000
USSR	1966-04-22	02:58:00.300	47.8290	47.9350
US	1966-04-23	00:00:00.000	37.0000	-116.0000
US	1966-04-25	18:38:00.100	36.8874	-115.9407
US	1966-04-29	00:00:00.000	37.0000	-116.0000
US	1966-05-04	13:32:17.100	37.1371	-116.1371
US	1966-05-05	14:00:00.000	37.0506	-116.0379
US	1966-05-06	15:00:00.100	37.3480	-116.3219
USSR	1966-05-07	03:58:00.200	49.7429	78.1050
china	1966-05-09	08:00:00.000	41.5000	88.5000
US	1966-05-12	19:37:26.200	37.1343	-116.0711
US	1966-05-13	13:30:00.000	37.0869	-116.0334
US	1966-05-19	13:56:28.100	37.1111	-116.0579
US	1966-05-27	20:00:00.000	37.1784	-116.0978
US	1966-06-02	15:30:00.100	37.2271	-116.0555
US	1966-06-03	14:00:00.000	37.0684	-116.0353
USSR	1966-06-29	06:58:00.500	49.8344	78.0734
france	1966-07-02	15:34:00.000	-22.0000	-139.0000
france	1966-07-19	15:05:00.000	-22.0000	-139.0000
USSR	1966-07-21	03:58:00.000	49.7367	78.0970
USSR	1966-08-05	03:57:59.600	49.7643	78.0424
US	1966-08-12	00:00:00.000	37.0000	-116.0000
USSR	1966-08-19	03:52:59.900	49.8271	78.1088
USSR	1966-09-07	03:51:59.700	49.8288	78.0638
france	1966-09-11	17:30:00.000	-22.0000	-139.0000
US	1966-09-12	15:30:00.500	36.8769	-115.9506
US	1966-09-23	18:00:00.000	37.0209	-116.0364
france	1966-09-24	17:00:00.000	-22.0000	-139.0000
US	1966-09-29	14:45:30.100	37.1687	-116.0461

USSR	1966-09-30	05:59:51.000	38.9680	64.5170
france	1966-10-04	21:00:00.000	-22.0000	-139.0000
US	1966-10-15	00:00:00.000	37.0000	-116.0000
USSR	1966-10-19	03:57:59.900	49.7471	78.0205
USSR	1966-10-27	00:00:00.000	73.0000	55.0000
USSR	1966-10-27	05:57:58.100	73.3870	54.8360
US	1966-11-05	14:45:00.000	37.1699	-116.0472
US	1966-11-11	12:00:00.100	37.1344	-116.0498
US	1966-11-18	15:02:00.000	37.0428	-116.0103
US	1966-11-22	00:00:00.000	37.0000	-116.0000
USSR	1966-12-03	05:02:00.200	49.7469	78.0334
US	1966-12-03	12:15:00.100	31.1421	-89.5699
US	1966-12-13	00:00:00.000	37.0000	-116.0000
US	1966-12-13	21:00:00.100	36.8773	-115.9379
USSR	1966-12-18	04:58:00.000	49.9246	77.7472
US	1966-12-20	15:30:00.100	37.3021	-116.4083
US	1967-01-18	00:00:00.000	37.0000	-116.0000
US	1967-01-19	16:45:00.100	37.1437	-116.1352
US	1967-01-20	17:40:03.400	37.0999	-116.0038
US	1967-01-26	00:00:00.000	37.0000	-116.0000
USSR	1967-01-30	04:01:59.500	49.7674	77.9914
US	1967-02-08	15:15:00.100	37.1675	-116.0471
US	1967-02-23	18:34:00.000	37.0175	-116.0159
US	1967-02-23	18:50:00.000	37.1269	-116.0664
USSR	1967-02-26	03:57:59.800	49.7457	78.0823
US	1967-03-02	15:00:00.000	37.1659	-116.0487
US	1967-03-03	00:00:00.000	37.0000	-116.0000
USSR	1967-03-25	05:58:01.100	49.7536	78.0630
USSR	1967-04-20	04:08:00.000	49.7416	78.1054
US	1967-05-20	15:00:00.000	37.1304	-116.0639
US	1967-05-23	14:00:00.000	37.2751	-116.3700
US	1967-05-26	00:00:00.000	37.0000	-116.0000
US	1967-05-26	15:00:01.500	37.2479	-116.4802
USSR	1967-05-28	04:07:59.600	49.7564	78.0169
france	1967-06-05	19:00:00.000	-22.0000	-139.0000
china	1967-06-17	00:19:08.200	40.7440	89.7750
US	1967-06-22	13:10:00.000	37.1256	-116.0287
US	1967-06-26	16:00:00.000	37.2021	-116.2078
france	1967-06-27	18:30:00.000	-22.0000	-139.0000
USSR	1967-06-29	02:56:59.900	49.8167	78.0490
US	1967-06-29	11:25:00.000	37.0286	-116.0226
france	1967-07-02	17:30:00.000	-22.0000	-139.0000
US	1967-07-14	00:00:00.000	37.0000	-116.0000
USSR	1967-07-15	03:26:59.900	49.8359	78.1182
US	1967-07-27	13:00:00.000	37.1487	-116.0485
US	1967-08-04	00:00:00.000	37.0000	-116.0000
USSR	1967-08-04	06:58:00.300	49.7603	78.0555
US	1967-08-10	14:10:00.000	37.1567	-116.0473
US	1967-08-18	20:12:30.000	37.0122	-116.0365
US	1967-08-24	00:00:00.000	37.0000	-116.0000
US	1967-08-31	16:30:00.000	37.1776	-116.2089
USSR	1967-09-02	04:04:00.000	49.7419	78.0256
US	1967-09-07	13:45:00.000	37.1532	-116.0528
US	1967-09-15	00:00:00.000	37.0000	-116.0000
USSR	1967-09-16	04:04:00.300	49.9372	77.7281
US	1967-09-21	20:45:00.000	37.1660	-116.0384
USSR	1967-09-22	05:03:59.000	49.9596	77.6911
US	1967-09-27	17:00:00.000	37.0988	-116.0532
USSR	1967-10-06	06:59:57.500	57.7000	65.2000
USSR	1967-10-17	05:04:00.200	49.7809	78.0038
US	1967-10-18	14:30:00.000	37.1156	-116.0576

USSR	1967-10-21	04:59:58.500	73.3900	54.8100
US	1967-10-25	00:00:00.000	37.0000	-116.0000
US	1967-10-25	00:00:00.000	37.0000	-116.0000
US	1967-10-25	14:30:00.100	37.0316	-116.0264
USSR	1967-10-30	06:04:00.000	49.7944	78.0079
USSR	1967-11-22	04:03:59.900	49.9419	77.6868
USSR	1967-12-08	06:03:59.800	49.8171	78.1638
USSR	1968-01-07	03:46:59.900	49.7544	78.0309
US	1968-01-24	00:00:00.000	37.0000	-116.0000
US	1968-01-26	16:00:00.100	37.2809	-116.5144
US	1968-01-31	00:00:00.000	37.0000	-116.0000
US	1968-02-21	00:00:00.000	37.0000	-116.0000
US	1968-02-21	15:30:00.000	37.1166	-116.0537
US	1968-02-29	17:08:30.000	37.1846	-116.2114
US	1968-03-05	00:00:00.000	37.0000	-116.0000
US	1968-03-12	17:04:00.000	37.0076	-116.3705
US	1968-03-14	15:19:00.100	37.0477	-116.0108
US	1968-03-22	15:00:00.000	37.3326	-116.3107
US	1968-03-25	18:44:27.000	36.8717	-115.9311
US	1968-04-04	00:00:00.000	37.0000	-116.0000
US	1968-04-10	14:00:00.000	37.1544	-116.0789
US	1968-04-18	14:05:00.000	37.1525	-116.0370
US	1968-04-23	17:01:30.000	37.3377	-116.3756
USSR	1968-04-24	10:35:59.700	49.8452	78.1032
US	1968-04-26	15:00:00.000	37.2954	-116.4557
US	1968-05-03	00:00:00.000	37.0000	-116.0000
US	1968-05-08	00:00:00.000	37.0000	-116.0000
US	1968-05-17	13:00:00.000	37.1201	-116.0588
USSR	1968-05-21	03:59:12.000	38.9180	65.0320
USSR	1968-05-23	00:00:00.000	50.0000	78.0000
US	1968-05-28	00:00:00.000	37.0000	-116.0000
US	1968-06-05	00:00:00.000	37.0000	-116.0000
US	1968-06-06	21:30:00.000	37.1654	-116.0434
USSR	1968-06-11	03:05:59.700	49.7930	78.1451
USSR	1968-06-19	05:05:59.800	49.9803	78.9855
USSR	1968-07-01	04:02:00.500	47.9090	47.9120
france	1968-07-07	22:00:00.000	-22.0000	-139.0000
USSR	1968-07-12	12:08:00.000	49.7547	78.0899
france	1968-07-15	19:00:00.000	-22.0000	-139.0000
france	1968-08-03	21:00:00.000	-22.0000	-139.0000
US	1968-08-15	00:00:00.000	37.0000	-116.0000
USSR	1968-08-20	04:05:59.600	49.8226	78.0745
france	1968-08-24	18:30:00.500	-22.2280	-138.6440
US	1968-08-27	16:30:00.000	36.8772	-115.9311
US	1968-08-29	22:45:00.000	37.2503	-116.3469
US	1968-09-06	14:00:00.100	37.1361	-116.0472
france	1968-09-08	19:00:01.000	-21.8210	-138.9750
US	1968-09-12	14:00:00.000	37.0318	-116.0116
US	1968-09-17	14:00:00.000	37.1199	-116.1275
US	1968-09-24	17:05:00.100	37.2048	-116.2064
US	1968-10-03	00:00:00.000	37.0000	-116.0000
US	1968-10-03	14:29:00.000	37.0259	-115.9928
US	1968-10-10	00:00:00.000	37.0000	-116.0000
US	1968-10-29	00:00:00.000	37.0000	-116.0000
USSR	1968-10-29	03:54:00.000	49.8333	78.0928
US	1968-10-31	00:00:00.000	37.0000	-116.0000
US	1968-10-31	00:00:00.000	37.0000	-116.0000
US	1968-11-04	00:00:00.000	37.0000	-116.0000
US	1968-11-04	15:15:00.100	37.1305	-116.0865
USSR	1968-11-07	10:02:05.500	73.3870	54.8580
USSR	1968-11-09	02:54:00.100	49.8005	78.1391

USSR	1968-11-12	07:30:00.000	49.7124	78.4613
US	1968-11-15	00:00:00.000	37.0000	-116.0000
US	1968-11-15	15:45:00.000	37.0261	-116.0333
US	1968-11-20	18:00:00.000	37.0098	-116.2064
US	1968-11-22	16:19:00.000	37.1399	-116.0423
US	1968-12-08	16:00:00.100	37.3434	-116.5659
US	1968-12-12	00:00:00.000	37.0000	-116.0000
US	1968-12-12	00:00:00.000	37.0000	-116.0000
US	1968-12-12	15:10:00.100	37.1189	-116.0783
USSR	1968-12-18	05:01:59.700	49.7459	78.0920
US	1969-02-04	00:00:00.000	37.0000	-116.0000
US	1969-02-04	00:00:00.000	37.0000	-116.0000
US	1969-02-12	16:18:20.900	37.1691	-116.2107
USSR	1969-03-07	08:26:59.800	49.8215	78.0627
US	1969-03-18	00:00:00.000	37.0000	-116.0000
US	1969-03-18	00:00:00.000	37.0000	-116.0000
US	1969-03-20	18:12:00.000	37.0220	-116.0302
US	1969-03-21	14:30:00.000	37.1332	-116.0867
USSR	1969-04-04	04:57:00.000	49.7533	78.0536
USSR	1969-04-13	04:04:00.000	49.7356	78.1047
US	1969-04-24	00:00:00.000	37.0000	-116.0000
US	1969-04-30	17:00:00.000	37.0903	-116.0056
US	1969-04-30	17:00:00.000	37.0815	-116.0139
US	1969-05-07	13:45:00.000	37.2829	-116.5006
US	1969-05-15	00:00:00.000	37.0000	-116.0000
USSR	1969-05-16	04:02:59.700	49.7594	78.0758
US	1969-05-27	00:00:00.000	37.0000	-116.0000
US	1969-05-27	14:15:00.000	37.0751	-115.9953
USSR	1969-05-31	05:01:59.400	49.9503	77.6942
US	1969-06-12	14:00:00.000	37.0088	-116.0303
US	1969-06-26	00:00:00.000	37.0000	-116.0000
USSR	1969-07-04	02:46:59.600	49.7460	78.1113
US	1969-07-16	13:02:30.000	37.1194	-116.0551
US	1969-07-16	14:55:00.000	37.1395	-116.0874
USSR	1969-07-23	02:47:00.200	49.8156	78.1296
US	1969-08-14	14:30:00.000	37.1603	-116.0636
US	1969-08-27	00:00:00.000	37.0000	-116.0000
US	1969-08-27	13:45:00.000	37.0215	-116.0381
USSR	1969-09-02	04:59:58.600	57.2200	55.3930
USSR	1969-09-08	04:59:58.700	57.2200	55.4170
US	1969-09-10	21:00:00.000	39.4058	-107.9481
USSR	1969-09-11	04:02:00.000	49.7763	77.9967
china	1969-09-22	16:14:59.200	41.3760	88.3180
USSR	1969-09-26	06:59:58.100	45.8480	42.6000
china	1969-09-29	08:40:12.400	40.7220	89.5150
US	1969-10-01	00:00:00.000	37.0000	-116.0000
USSR	1969-10-01	04:02:59.900	49.7825	78.0983
US	1969-10-02	22:06:00.000	51.4171	179.1823
US	1969-10-08	14:30:00.100	37.2567	-116.4408
USSR	1969-10-14	07:00:06.600	73.3900	54.7870
US	1969-10-16	00:00:00.000	37.0000	-116.0000
US	1969-10-29	19:30:00.000	37.1215	-116.1278
US	1969-10-29	20:00:00.000	37.1353	-116.1359
US	1969-10-29	22:01:51.000	37.1433	-116.0638
USSR	1969-10-30	00:00:00.000	50.0000	78.0000
US	1969-11-13	15:15:00.100	37.1646	-116.0748
US	1969-11-21	00:00:00.000	37.0000	-116.0000
US	1969-11-21	14:52:00.000	37.0312	-116.0021
USSR	1969-11-27	05:02:00.000	49.8367	78.0597
USSR	1969-11-30	03:32:59.700	49.9243	78.9558
US	1969-12-05	17:00:00.000	37.1800	-116.2109

USSR	1969-12-06	07:02:59.900	43.8670	54.8000
US	1969-12-10	00:00:00.000	37.0000	-116.0000
US	1969-12-10	00:00:00.000	37.0000	-116.0000
US	1969-12-17	15:00:00.000	37.0838	-116.0016
US	1969-12-17	15:15:00.000	37.0066	-116.0228
US	1969-12-18	19:00:00.000	37.1205	-116.0348
USSR	1969-12-28	03:47:00.200	49.9373	77.7142
USSR	1969-12-29	04:02:00.000	49.7337	78.1023
US	1970-01-23	16:30:00.200	37.1374	-116.0368
USSR	1970-01-29	07:03:00.000	49.7956	78.1239
US	1970-01-30	17:00:00.000	37.0308	-116.0348
US	1970-02-04	00:00:00.000	37.0000	-116.0000
US	1970-02-04	17:00:00.000	37.0981	-116.0265
US	1970-02-05	15:00:00.000	37.1640	-116.0388
US	1970-02-11	19:15:00.000	37.2013	-116.2052
US	1970-02-25	14:28:38.000	37.0367	-115.9996
US	1970-02-26	15:30:00.000	37.1164	-116.0614
US	1970-03-06	14:24:00.900	37.0231	-116.0918
US	1970-03-06	15:00:00.200	37.1396	-116.0368
US	1970-04-21	15:00:00.000	37.1156	-116.0801
US	1970-05-01	00:00:00.000	37.0000	-116.0000
US	1970-05-01	14:13:00.000	37.0592	-116.0282
US	1970-05-01	14:40:00.200	37.1330	-116.0341
US	1970-05-05	15:30:00.200	37.2165	-116.1841
US	1970-05-12	14:00:00.000	37.0104	-116.2019
US	1970-05-15	13:30:00.000	37.1619	-116.0389
france	1970-05-15	18:00:00.000	-22.0000	-139.0000
US	1970-05-21	14:00:00.000	37.0289	-115.9919
US	1970-05-21	14:15:00.000	37.0708	-116.0130
france	1970-05-22	18:30:00.000	-22.0000	-139.0000
US	1970-05-26	14:16:00.200	37.1826	-116.2134
US	1970-05-26	15:00:00.100	37.1134	-116.0623
US	1970-05-28	00:00:00.000	37.0000	-116.0000
US	1970-05-28	12:00:00.200	37.1300	-116.0500
france	1970-05-30	17:59:59.900	-22.3090	-138.6060
france	1970-06-24	18:30:00.000	-22.0000	-139.0000
US	1970-06-26	13:00:00.000	37.1139	-116.0861
USSR	1970-06-28	00:00:00.000	50.0000	78.0000
USSR	1970-06-28	01:58:00.000	49.8015	78.1068
france	1970-07-03	18:30:00.300	-21.9350	-138.9170
USSR	1970-07-21	03:02:59.700	49.9524	77.6729
USSR	1970-07-24	03:57:00.000	49.8097	78.1284
france	1970-07-27	19:00:00.000	-22.0000	-139.0000
france	1970-08-02	19:00:00.000	-22.0000	-139.0000
france	1970-08-06	19:00:00.000	-22.0000	-139.0000
USSR	1970-09-06	00:00:00.000	50.0000	78.0000
USSR	1970-09-06	04:02:59.900	49.7598	78.0054
US	1970-10-13	00:00:00.000	37.0000	-116.0000
USSR	1970-10-14	05:59:57.600	73.3040	55.0270
china	1970-10-14	07:29:56.900	40.5200	89.7790
US	1970-10-14	14:30:00.000	37.0707	-116.0051
US	1970-10-28	00:00:00.000	37.0000	-116.0000
USSR	1970-11-04	06:02:59.800	49.9892	77.7624
US	1970-11-05	15:00:00.000	37.0295	-116.0118
US	1970-11-19	00:00:00.000	37.0000	-116.0000
US	1970-12-03	00:00:00.000	37.0000	-116.0000
USSR	1970-12-12	07:00:59.800	43.8500	54.8000
US	1970-12-16	00:00:00.000	37.0000	-116.0000
US	1970-12-16	16:00:00.100	37.1002	-116.0079
US	1970-12-16	16:00:00.200	37.1429	-116.0340
USSR	1970-12-17	07:01:00.000	49.7456	78.0992

US	1970-12-17	16:05:00.200	37.1291	-116.0830
US	1970-12-18	15:30:00.200	37.1731	-116.0989
USSR	1970-12-23	07:00:59.800	44.0250	54.9330
USSR	1971-01-29	05:03:00.000	49.8053	78.1686
USSR	1971-03-22	00:00:00.000	50.0000	78.0000
USSR	1971-03-22	04:33:00.300	49.7985	78.1090
USSR	1971-03-23	06:59:58.400	61.4000	56.2000
USSR	1971-04-09	02:33:00.000	49.8322	78.0386
USSR	1971-04-25	03:32:59.900	49.7685	78.0339
USSR	1971-05-25	04:03:00.400	49.8016	78.1388
france	1971-06-05	19:15:00.000	-22.0000	-139.0000
USSR	1971-06-06	04:02:59.700	49.9754	77.6603
france	1971-06-12	19:14:57.300	-23.8000	-137.2000
USSR	1971-06-19	04:04:00.100	49.9690	77.6408
USSR	1971-06-30	03:56:59.800	49.9460	78.9805
USSR	1971-07-02	17:00:01.100	67.2830	63.4670
france	1971-07-04	21:30:00.000	-22.0000	-139.0000
US	1971-07-09	00:00:00.000	37.0000	-116.0000
USSR	1971-07-10	17:00:01.400	64.1670	55.2670
US	1971-07-21	00:00:00.000	37.0000	-116.0000
US	1971-08-04	00:00:00.000	37.0000	-116.0000
US	1971-08-05	00:00:00.000	37.0000	-116.0000
US	1971-08-06	00:00:00.000	37.0000	-116.0000
france	1971-08-08	18:30:00.000	-22.0000	-139.0000
france	1971-08-14	19:00:00.800	-21.8230	-138.9760
US	1971-08-18	14:00:00.000	37.0572	-116.0363
USSR	1971-09-19	11:00:01.100	57.5080	42.6430
US	1971-09-22	00:00:00.000	37.0000	-116.0000
USSR	1971-09-27	05:59:55.800	73.3930	54.9200
US	1971-09-29	00:00:00.000	37.0000	-116.0000
US	1971-09-29	14:00:00.000	37.0110	-116.0073
US	1971-10-08	14:30:00.200	37.1138	-116.0373
US	1971-10-14	14:30:02.500	37.0300	-115.9900
US	1971-11-06	22:00:00.100	51.4719	179.1069
china	1971-11-18	06:00:00.000	41.5000	88.5000
US	1971-11-24	20:15:00.200	36.8792	-115.9347
USSR	1971-11-29	06:02:59.900	49.7434	78.0785
US	1971-11-30	15:45:03.200	37.0500	-116.1400
US	1971-12-14	00:00:00.000	37.0000	-116.0000
US	1971-12-14	00:00:00.000	37.0000	-116.0000
US	1971-12-14	21:09:59.200	37.1239	-116.0896
USSR	1971-12-15	07:53:59.800	49.8264	77.9973
USSR	1971-12-22	06:59:59.000	47.8970	48.1330
USSR	1971-12-30	00:00:00.000	50.0000	78.0000
USSR	1971-12-30	06:21:00.200	49.7600	78.0371
US	1972-01-05	00:00:00.000	37.0000	-116.0000
US	1972-02-03	00:00:00.000	37.0000	-116.0000
USSR	1972-02-10	05:03:00.000	50.0243	78.8781
US	1972-02-17	00:00:00.000	37.0000	-116.0000
USSR	1972-03-10	04:56:59.800	49.7453	78.1197
US	1972-03-23	00:00:00.000	37.0000	-116.0000
USSR	1972-03-28	04:22:00.100	49.7331	78.0757
US	1972-03-30	21:00:03.700	36.9200	-116.0500
USSR	1972-04-11	06:00:01.900	37.3500	62.0500
USSR	1972-04-20	00:00:00.000	50.0000	78.0000
USSR	1972-06-07	00:00:00.000	50.0000	78.0000
USSR	1972-06-07	01:28:00.000	49.8268	78.1155
france	1972-06-25	19:00:00.000	-22.0000	-139.0000
US	1972-06-28	00:00:00.000	37.0000	-116.0000
US	1972-06-28	00:00:00.000	37.0000	-116.0000
US	1972-06-28	16:30:04.100	37.1300	-116.1000

france	1972-06-30	18:30:00.000	-22.0000	-139.0000
USSR	1972-07-06	01:03:00.000	49.7375	78.1101
USSR	1972-07-09	07:00:01.300	49.8000	35.4000
US	1972-07-20	17:16:00.200	37.2145	-116.1834
US	1972-07-25	13:30:03.000	37.0000	-116.2000
USSR	1972-07-27	00:00:00.000	73.0000	55.0000
france	1972-07-27	18:40:00.000	-22.0000	-139.0000
US	1972-08-09	00:00:00.000	37.0000	-116.0000
USSR	1972-08-16	03:16:59.800	49.7655	78.0588
USSR	1972-08-20	03:00:00.000	49.4000	48.1420
USSR	1972-08-26	03:46:59.700	49.9820	77.7166
USSR	1972-08-28	05:59:56.900	73.3880	54.8470
USSR	1972-09-02	08:56:59.900	49.9594	77.6409
USSR	1972-09-04	07:00:00.000	67.7500	33.1000
USSR	1972-09-21	09:00:00.300	52.1180	52.0680
US	1972-09-21	15:30:00.200	37.0821	-116.0383
US	1972-09-26	14:30:00.200	37.1214	-116.0857
USSR	1972-10-03	09:00:00.200	46.8530	44.9380
USSR	1972-11-02	01:27:00.200	49.9270	78.8173
US	1972-11-09	00:00:00.000	37.0000	-116.0000
US	1972-11-09	00:00:00.000	37.0000	-116.0000
US	1972-11-17	00:00:00.000	37.0000	-116.0000
USSR	1972-11-24	09:00:00.000	51.9900	51.8670
USSR	1972-12-10	04:27:00.000	49.8194	78.0582
USSR	1972-12-10	04:27:10.000	50.0270	78.9956
US	1972-12-12	00:00:00.000	37.0000	-116.0000
US	1972-12-14	00:00:00.000	37.0000	-116.0000
US	1972-12-21	00:00:00.000	37.0000	-116.0000
US	1972-12-21	20:15:00.200	37.1399	-116.0833
USSR	1972-12-28	04:27:00.000	49.7392	78.1063
US	1973-02-14	00:00:00.000	37.0000	-116.0000
USSR	1973-02-16	05:03:00.000	49.8160	78.1160
US	1973-03-08	16:10:00.200	37.1036	-116.0267
US	1973-03-23	00:00:00.000	37.0000	-116.0000
US	1973-04-05	00:00:00.000	37.0000	-116.0000
USSR	1973-04-19	04:32:59.900	49.9840	77.6140
US	1973-04-25	22:25:00.000	37.0048	-116.0284
US	1973-04-26	00:00:00.000	37.0000	-116.0000
US	1973-04-26	17:15:00.200	37.1231	-116.0585
US	1973-05-09	00:00:00.000	37.0000	-116.0000
US	1973-05-17	16:00:00.100	39.7930	-108.3666
china	1973-06-27	03:59:46.300	40.7985	89.8091
US	1973-06-28	00:00:00.000	37.0000	-116.0000
US	1973-06-28	19:15:12.400	37.1484	-116.0859
USSR	1973-07-10	01:27:00.200	49.7920	78.0420
france	1973-07-21	18:00:00.000	-22.0000	-139.0000
USSR	1973-07-23	01:23:00.100	49.9660	78.8100
france	1973-07-28	23:00:00.000	-22.0000	-139.0000
USSR	1973-08-15	02:00:00.000	42.7750	67.4080
france	1973-08-18	18:15:00.000	-22.0000	-139.0000
france	1973-08-24	18:00:00.000	-22.0000	-139.0000
USSR	1973-08-28	03:00:00.000	50.5270	68.3230
france	1973-08-28	18:30:00.000	-22.0000	-139.0000
USSR	1973-09-12	06:59:54.800	73.3140	55.0560
USSR	1973-09-19	03:00:00.200	45.7580	67.8250
USSR	1973-09-20	00:00:00.000	50.0000	78.0000
USSR	1973-09-27	07:00:01.100	70.7310	53.8360
USSR	1973-09-30	05:00:00.400	51.6500	54.5500
US	1973-10-02	00:00:00.000	37.0000	-116.0000
US	1973-10-02	15:15:00.000	37.2000	-115.8000
US	1973-10-12	17:00:00.100	37.2004	-116.2032

USSR	1973-10-26	04:27:00.100	49.7530	78.1220
USSR	1973-10-26	05:59:59.500	53.6500	55.4000
USSR	1973-10-27	07:00:00.600	70.7800	54.0350
USSR	1973-11-04	03:57:00.000	50.0716	78.9362
US	1973-11-28	15:30:00.100	37.0110	-116.0245
US	1973-12-12	19:00:03.100	36.9300	-116.0300
US	1973-12-13	00:00:00.000	37.0000	-116.0000
USSR	1973-12-14	07:46:59.700	50.0540	78.9870
US	1973-12-19	00:00:00.000	37.0000	-116.0000
US	1973-12-19	00:00:00.000	37.0000	-116.0000
USSR	1973-12-31	04:03:00.000	49.7394	78.0863
US	1974-01-10	00:00:00.000	37.0000	-116.0000
USSR	1974-01-30	04:57:04.600	49.8450	78.0510
US	1974-02-27	17:00:00.100	37.1043	-116.0528
USSR	1974-02-28	00:00:00.000	50.0000	78.0000
US	1974-03-14	00:00:00.000	37.0000	-116.0000
US	1974-04-12	00:00:00.000	37.0000	-116.0000
USSR	1974-04-16	05:52:59.800	50.0390	78.9460
US	1974-04-23	00:00:00.000	37.0000	-116.0000
US	1974-05-01	00:00:00.000	37.0000	-116.0000
US	1974-05-08	00:00:00.000	37.0000	-116.0000
USSR	1974-05-16	03:03:00.100	49.7450	78.0530
india	1974-05-18	02:34:55.000	27.0950	71.7520
US	1974-05-22	14:14:59.900	37.0600	-116.1100
UK	1974-05-23	13:38:30.200	37.1245	-116.0789
USSR	1974-05-31	03:27:00.000	49.9530	78.8460
US	1974-06-06	14:40:00.500	36.9600	-116.0200
france	1974-06-16	17:30:00.000	-22.0000	-139.0000
china	1974-06-17	05:59:52.700	40.5180	89.6190
US	1974-06-19	16:00:00.100	37.2103	-116.2073
USSR	1974-06-25	03:57:00.200	49.8440	78.1110
france	1974-07-07	23:15:00.000	-22.0000	-139.0000
USSR	1974-07-08	06:00:00.000	53.7000	55.1000
USSR	1974-07-10	02:57:00.000	49.7720	78.0880
US	1974-07-10	16:00:00.100	37.0675	-116.0318
france	1974-07-17	17:00:00.000	-22.0000	-139.0000
US	1974-07-18	14:00:01.200	37.0900	-116.0500
france	1974-07-25	17:30:00.000	-22.0000	-139.0000
USSR	1974-08-14	15:00:00.200	68.9030	75.8230
france	1974-08-15	00:30:00.000	-22.0000	-139.0000
USSR	1974-08-29	09:59:56.200	73.3970	54.9050
USSR	1974-08-29	15:00:00.400	67.0850	62.6250
USSR	1974-09-13	03:03:00.000	49.7750	78.0360
USSR	1974-10-02	01:00:01.100	66.1000	112.6500
USSR	1974-10-16	06:33:00.100	49.9850	78.8960
US	1974-11-02	00:00:00.000	37.0000	-116.0000
USSR	1974-11-02	05:00:00.000	70.8100	53.9100
US	1974-11-26	00:00:00.000	37.0000	-116.0000
USSR	1974-11-28	05:57:00.000	50.0000	78.0000
USSR	1974-12-07	05:59:59.000	49.9000	77.6500
USSR	1974-12-16	06:23:00.100	49.7870	78.0920
USSR	1974-12-16	06:41:00.300	49.8580	78.0530
US	1974-12-16	17:30:00.400	36.8800	-115.9700
USSR	1974-12-27	05:46:59.400	49.9490	79.0110
US	1975-02-06	00:00:00.000	37.0000	-116.0000
US	1975-02-06	00:00:00.000	37.0000	-116.0000
US	1975-02-19	00:00:00.000	37.0000	-116.0000
USSR	1975-02-20	00:00:00.000	50.0000	78.0000
USSR	1975-02-20	05:33:00.000	49.7810	78.0190
US	1975-02-28	15:15:00.100	37.1062	-116.0563
US	1975-03-07	15:00:00.200	37.1340	-116.0842

USSR	1975-03-11	05:43:00.100	49.7400	78.1020
US	1975-04-05	19:45:00.200	37.1879	-116.2139
US	1975-04-24	14:10:00.200	37.1157	-116.0874
USSR	1975-04-25	05:00:00.000	47.9090	47.9120
USSR	1975-04-27	05:36:59.700	49.9550	78.9260
US	1975-04-30	15:00:00.100	37.1089	-116.0288
US	1975-05-14	14:00:00.200	37.2208	-116.4742
US	1975-06-03	14:20:00.200	37.3401	-116.5229
US	1975-06-03	14:40:00.100	37.0948	-116.0361
USSR	1975-06-08	03:27:00.000	49.7570	78.0080
US	1975-06-11	00:00:00.000	37.0000	-116.0000
US	1975-06-18	00:00:00.000	37.0000	-116.0000
US	1975-06-19	13:00:00.100	37.3503	-116.3202
US	1975-06-26	12:30:00.200	37.2789	-116.3686
USSR	1975-06-30	03:26:59.900	50.0010	78.9960
USSR	1975-07-15	02:57:00.000	49.7914	78.0944
USSR	1975-08-07	03:57:00.100	49.8080	78.1200
USSR	1975-08-12	15:00:00.600	70.7630	126.9530
USSR	1975-08-23	08:59:58.300	73.3340	54.6820
US	1975-09-06	17:00:00.100	37.0236	-116.0291
USSR	1975-09-29	11:00:00.400	69.5780	90.3370
USSR	1975-10-05	04:27:00.000	49.7831	78.0867
USSR	1975-10-18	00:00:00.000	73.0000	55.0000
USSR	1975-10-18	08:59:59.400	70.8160	53.7530
USSR	1975-10-21	11:59:58.000	73.3070	55.0100
US	1975-10-24	17:11:26.100	37.2216	-116.1797
china	1975-10-27	00:59:58.200	41.3750	88.3260
US	1975-10-28	14:30:00.200	37.2901	-116.4115
US	1975-11-18	15:30:00.400	36.9900	-116.0400
USSR	1975-12-25	05:16:59.700	50.0510	78.8130
USSR	1976-01-15	04:47:00.000	49.8170	78.1610
US	1976-02-14	11:30:00.200	37.2426	-116.4202
US	1976-02-26	14:50:03.000	36.9000	-115.9900
US	1976-03-09	14:00:00.100	37.3100	-116.3642
US	1976-03-14	12:30:00.200	37.3060	-116.4715
USSR	1976-03-17	02:57:00.000	49.7556	78.0992
US	1976-03-17	14:15:00.100	37.2559	-116.3119
US	1976-03-17	14:45:00.100	37.1073	-116.0525
USSR	1976-03-29	07:00:00.200	47.8970	48.1330
USSR	1976-04-10	05:03:00.000	49.7550	78.0475
USSR	1976-04-21	04:58:00.200	49.7730	78.1090
USSR	1976-04-21	05:02:59.700	49.9060	78.8270
US	1976-05-12	19:50:00.200	37.2091	-116.2125
USSR	1976-05-19	02:57:00.200	49.7890	78.0190
US	1976-05-20	17:30:03.300	37.2700	-116.3300
USSR	1976-06-09	03:02:59.800	50.0020	79.0250
USSR	1976-07-04	02:56:59.900	49.9120	78.9080
USSR	1976-07-23	02:33:00.200	49.7740	78.0460
US	1976-07-27	20:30:00.100	37.0754	-116.0438
USSR	1976-07-29	05:00:00.500	47.8700	48.1500
USSR	1976-08-04	02:57:00.000	49.8700	77.7000
UK	1976-08-26	14:30:00.200	37.1250	-116.0820
USSR	1976-08-28	02:57:00.000	49.9790	78.9280
china	1976-09-26	06:00:00.000	41.5000	88.5000
USSR	1976-09-29	02:59:57.700	73.3600	54.8710
US	1976-10-06	00:00:00.000	37.0000	-116.0000
china	1976-10-17	04:59:58.800	41.7080	88.3700
USSR	1976-10-20	07:59:58.100	73.3980	54.8120
USSR	1976-10-30	04:57:00.200	49.8250	78.0220
USSR	1976-11-05	04:00:00.000	61.4580	112.8600
US	1976-11-10	00:00:00.000	37.0000	-116.0000

china	1976-11-17	06:00:12.700	40.6960	89.6270
USSR	1976-11-23	05:02:59.800	50.0130	78.9620
US	1976-11-23	15:15:00.200	37.1717	-116.0527
USSR	1976-12-07	00:00:00.000	50.0000	78.0000
USSR	1976-12-07	04:56:59.900	49.9270	78.8470
US	1976-12-08	14:49:30.100	37.0793	-116.0016
US	1976-12-21	00:00:00.000	37.0000	-116.0000
US	1976-12-21	15:09:00.200	37.1239	-116.0675
US	1976-12-28	18:00:00.100	37.1005	-116.0365
USSR	1976-12-30	03:57:00.300	49.7950	78.0300
US	1977-02-16	17:52:59.900	37.0000	-116.0700
US	1977-03-08	00:00:00.000	37.0000	-116.0000
USSR	1977-03-29	00:00:00.000	50.0000	78.0000
USSR	1977-03-29	03:57:00.000	49.7810	78.0420
US	1977-04-05	15:00:00.200	37.1202	-116.0623
USSR	1977-04-25	04:07:00.200	49.8110	78.1070
US	1977-04-27	15:00:00.100	37.0948	-116.0279
US	1977-05-25	17:00:00.100	37.0943	-116.0449
USSR	1977-05-29	02:57:00.000	49.9320	78.7740
US	1977-06-02	00:00:00.000	37.0000	-116.0000
USSR	1977-06-29	03:07:00.400	50.0330	78.8610
USSR	1977-07-30	01:57:00.100	49.7540	78.0570
USSR	1977-08-10	22:00:00.100	50.9550	110.9830
US	1977-08-16	15:49:00.300	37.1500	-116.0600
USSR	1977-08-17	04:27:00.000	49.8170	78.1280
US	1977-08-19	17:31:59.800	37.0100	-115.9600
US	1977-08-19	17:55:00.100	37.1100	-116.0545
USSR	1977-08-20	22:00:00.800	64.1080	99.5580
USSR	1977-09-01	02:59:58.000	73.3390	54.6190
USSR	1977-09-05	03:02:59.900	50.0480	78.9230
USSR	1977-09-10	16:00:00.200	57.2510	106.5510
US	1977-09-15	14:36:30.100	37.0328	-116.0431
US	1977-09-27	14:00:00.200	37.1512	-116.0676
USSR	1977-09-30	06:59:58.400	47.8970	48.1610
USSR	1977-10-09	10:59:58.100	73.4090	54.9270
USSR	1977-10-14	06:59:59.100	47.9090	47.9120
US	1977-10-26	14:15:00.100	37.0076	-116.0167
USSR	1977-10-29	03:07:00.000	49.8270	78.0910
USSR	1977-10-29	03:07:04.900	50.0680	78.9770
USSR	1977-10-30	06:59:59.100	47.9090	47.9120
US	1977-11-01	18:06:00.100	37.1878	-116.2130
US	1977-11-09	22:00:00.100	37.0721	-116.0500
USSR	1977-11-12	05:11:00.000	50.0522	78.8644
US	1977-11-17	19:30:00.100	37.0206	-116.0251
USSR	1977-11-27	03:57:00.000	49.7544	78.0503
USSR	1977-11-30	04:06:59.900	49.9660	78.8900
US	1977-12-14	15:00:02.600	36.9600	-116.0400
US	1977-12-14	15:30:00.200	37.1359	-116.0860
USSR	1977-12-26	00:00:00.000	50.0000	78.0000
USSR	1977-12-26	04:03:00.200	49.8430	78.0700
US	1978-02-13	21:53:00.200	37.1261	-116.0317
US	1978-02-23	17:00:00.200	37.1237	-116.0638
china	1978-03-15	05:00:00.000	41.5000	88.5000
US	1978-03-16	15:00:00.100	37.0100	-116.1000
USSR	1978-03-19	03:46:59.800	49.9450	77.7040
US	1978-03-23	00:00:00.000	37.0000	-116.0000
US	1978-03-23	16:30:00.200	37.1018	-116.0511
USSR	1978-03-26	03:57:00.000	49.7660	78.0080
US	1978-04-11	15:30:00.200	37.2996	-116.3267
UK	1978-04-11	17:45:00.100	37.2335	-116.3685
USSR	1978-04-22	03:07:00.000	49.7560	78.1400

US	1978-04-25	00:00:00.000	37.0000	-116.0000
US	1978-05-10	00:00:00.000	37.0878	-116.0526
USSR	1978-05-24	00:00:00.000	50.0000	78.0000
USSR	1978-05-29	04:56:59.900	49.7620	78.0920
US	1978-06-01	17:00:01.100	37.0000	-116.2500
USSR	1978-06-02	00:00:00.000	50.0000	78.0000
USSR	1978-06-11	02:57:00.100	49.9030	78.7910
USSR	1978-07-05	02:47:00.000	49.8960	78.8680
US	1978-07-07	13:59:59.500	37.0800	-116.0400
US	1978-07-12	17:00:00.100	37.0787	-116.0438
USSR	1978-07-28	02:46:59.900	49.7520	78.1000
USSR	1978-08-09	18:00:00.800	63.6780	125.5220
USSR	1978-08-10	07:59:57.900	73.2910	54.8830
USSR	1978-08-29	02:37:00.000	49.8070	78.1070
USSR	1978-08-29	02:37:08.800	50.0110	78.9760
US	1978-08-31	14:00:00.200	37.2759	-116.3573
USSR	1978-09-12	04:59:58.500	47.9090	47.9120
US	1978-09-13	15:15:00.200	37.2088	-116.2108
USSR	1978-09-15	02:36:59.900	49.9220	78.8760
USSR	1978-09-20	05:03:00.000	49.8480	78.2120
USSR	1978-09-21	15:00:00.200	66.5980	86.2100
US	1978-09-27	00:00:00.000	37.0000	-116.0000
USSR	1978-09-27	02:04:58.600	73.3490	54.6760
US	1978-09-27	17:00:00.100	37.0798	-116.0513
USSR	1978-10-08	00:00:00.000	61.5500	112.8500
china	1978-10-14	00:59:58.000	41.5230	88.7220
USSR	1978-10-15	05:37:00.100	49.7460	78.1210
USSR	1978-10-17	04:59:59.100	47.8500	48.1200
USSR	1978-10-17	14:00:00.200	63.1850	63.4320
USSR	1978-10-31	04:17:00.200	49.8030	78.0990
USSR	1978-11-04	05:05:59.800	50.0400	78.9410
UK	1978-11-18	19:00:00.200	37.1269	-116.0839
USSR	1978-11-29	04:33:00.200	49.8080	77.9990
USSR	1978-11-29	04:33:05.000	49.9590	78.8010
USSR	1978-11-30	07:59:59.100	47.9090	47.9120
USSR	1978-12-14	04:43:00.000	49.8050	78.1030
USSR	1978-12-18	07:59:58.500	47.8600	48.1600
USSR	1978-12-20	04:33:00.000	49.8500	78.0470
USSR	1979-01-10	08:00:00.000	47.9090	47.9120
USSR	1979-01-17	07:59:58.500	47.9200	48.1200
USSR	1979-02-01	04:13:00.200	50.1010	78.8630
USSR	1979-02-16	04:04:00.500	49.9740	77.6680
US	1979-03-14	18:30:00.100	37.0278	-116.0398
USSR	1979-03-23	00:00:00.000	50.0000	78.0000
USSR	1979-04-10	00:00:00.000	50.0000	78.0000
USSR	1979-05-06	03:17:00.100	49.7700	78.0080
US	1979-05-11	15:59:59.800	36.9600	-116.0100
USSR	1979-05-31	05:55:00.100	49.8300	78.0870
US	1979-06-11	14:00:00.200	37.2897	-116.4553
US	1979-06-20	15:00:13.500	37.1076	-116.0151
US	1979-06-28	14:44:00.200	37.1432	-116.0875
USSR	1979-07-07	03:46:59.800	50.0320	78.9890
USSR	1979-07-14	04:59:58.000	47.8800	48.1200
USSR	1979-07-18	00:00:00.000	50.0000	78.0000
USSR	1979-07-18	03:17:04.900	49.9190	77.8120
US	1979-08-03	15:07:30.200	37.0840	-116.0699
USSR	1979-08-04	03:56:59.600	49.9000	78.9000
US	1979-08-08	15:00:00.100	37.0147	-116.0080
USSR	1979-08-12	18:00:00.200	61.8030	122.4300
USSR	1979-08-18	02:51:59.600	49.9490	78.9370
UK	1979-08-29	15:08:00.200	37.1212	-116.0666

US	1979-09-06	15:00:00.100	37.0881	-116.0528
USSR	1979-09-06	18:00:00.300	64.1100	99.5620
US	1979-09-08	17:02:00.100	37.1550	-116.0382
china	1979-09-13	00:00:00.000	41.5000	88.5000
USSR	1979-09-16	09:00:00.000	48.2000	38.3000
USSR	1979-09-24	03:29:58.800	73.3430	54.6720
US	1979-09-26	15:00:00.100	37.2291	-116.3641
USSR	1979-09-27	04:13:00.000	49.7570	78.0970
USSR	1979-10-04	16:00:00.000	60.6750	71.4550
USSR	1979-10-07	21:00:00.200	61.8500	113.1000
USSR	1979-10-18	04:17:00.100	49.8290	78.1040
USSR	1979-10-18	07:09:58.800	73.3160	54.8160
USSR	1979-10-24	05:59:59.000	47.8500	48.1400
USSR	1979-10-28	03:16:59.500	49.9820	78.9960
US	1979-11-29	15:00:00.100	36.9940	-116.0241
USSR	1979-11-30	04:53:00.600	49.7810	78.1040
USSR	1979-12-02	04:37:00.000	49.9000	78.7930
US	1979-12-14	18:00:00.100	37.1374	-116.0631
USSR	1979-12-21	04:42:00.100	49.7950	78.1270
USSR	1979-12-23	04:56:59.900	49.9200	78.7530
US	1980-02-28	15:00:00.100	37.1265	-116.0885
US	1980-03-08	15:35:00.100	37.1799	-116.0831
USSR	1980-03-14	00:00:00.000	50.0000	78.0000
US	1980-04-03	14:00:00.100	37.1499	-116.0823
USSR	1980-04-04	05:32:59.800	50.0000	77.8230
USSR	1980-04-10	04:07:00.200	49.7960	78.0680
US	1980-04-16	20:00:00.100	37.1011	-116.0305
USSR	1980-04-25	03:57:00.000	49.9810	78.7560
UK	1980-04-26	17:00:00.100	37.2484	-116.4224
US	1980-05-02	18:46:30.100	37.0560	-116.0190
USSR	1980-05-22	03:57:00.100	49.7800	78.0370
US	1980-05-22	13:00:00.100	37.0031	-116.0314
USSR	1980-06-12	03:27:00.100	49.9860	78.9980
US	1980-06-12	17:15:00.100	37.2817	-116.4539
US	1980-06-24	15:10:00.100	37.0233	-116.0341
US	1980-07-25	19:05:00.100	37.2563	-116.4774
US	1980-07-31	18:19:00.100	37.0130	-116.0227
USSR	1980-09-14	02:42:41.600	49.9300	78.8010
USSR	1980-09-25	06:21:13.100	49.8260	78.0710
USSR	1980-10-08	06:00:00.300	46.7570	48.2750
USSR	1980-10-11	07:09:57.500	73.3360	54.9400
USSR	1980-10-12	03:34:16.600	49.9670	79.0260
china	1980-10-16	04:30:29.700	40.7190	89.6510
USSR	1980-10-23	03:57:11.000	49.7517	78.1317
UK	1980-10-24	19:15:00.100	37.0746	-115.9993
USSR	1980-11-01	13:00:00.400	60.8000	97.5500
USSR	1980-12-05	00:00:00.000	50.0000	78.0000
USSR	1980-12-05	04:17:16.000	49.7517	78.1317
USSR	1980-12-10	07:00:00.100	61.7500	66.7500
USSR	1980-12-14	03:47:08.900	49.9090	78.9320
UK	1980-12-17	15:10:00.100	37.3248	-116.3117
USSR	1980-12-26	04:07:09.300	49.8630	78.1190
USSR	1980-12-27	04:09:10.600	50.0630	78.9820
USSR	1981-03-25	00:00:00.000	50.0000	78.0000
USSR	1981-03-29	04:03:52.500	50.0110	78.9780
USSR	1981-04-22	01:17:13.800	49.8910	78.8110
US	1981-04-30	14:35:00.100	37.1773	-116.0848
USSR	1981-05-25	05:00:00.300	68.2000	53.5000
USSR	1981-05-27	03:58:14.800	49.9920	78.9790
US	1981-05-29	16:00:00.100	37.1019	-116.0041
USSR	1981-06-04	00:00:00.000	50.0000	78.0000

US	1981-06-06	18:00:00.100	37.3034	-116.3256
USSR	1981-06-30	01:57:15.300	49.7610	78.0710
US	1981-07-10	14:00:00.100	37.1286	-116.0338
US	1981-07-16	15:00:00.100	37.0887	-116.0194
USSR	1981-07-17	02:37:18.100	49.8000	78.1260
US	1981-08-05	13:41:00.100	37.1537	-116.0351
USSR	1981-08-14	02:27:15.200	49.7810	78.0770
US	1981-08-27	14:31:00.100	37.1604	-116.0665
USSR	1981-09-02	04:00:00.000	60.6000	55.7000
US	1981-09-04	15:00:00.100	37.0581	-116.0481
USSR	1981-09-13	02:17:20.800	49.9200	78.9110
US	1981-09-24	15:00:00.100	37.0085	-116.0238
USSR	1981-10-01	12:14:57.200	73.3040	54.8180
US	1981-10-01	19:00:00.100	37.0816	-116.0088
USSR	1981-10-16	00:00:00.000	50.0000	78.0000
USSR	1981-10-18	03:57:05.100	49.9270	78.8540
USSR	1981-10-22	14:00:00.400	63.8000	97.5500
US	1981-11-11	20:00:00.000	37.0763	-116.0685
UK	1981-11-12	15:00:00.100	37.1082	-116.0490
USSR	1981-11-20	04:57:05.100	49.7460	78.1200
USSR	1981-11-29	03:35:11.100	49.8980	78.8570
US	1981-12-03	15:00:00.100	37.1484	-116.0708
US	1981-12-16	21:05:00.100	37.1145	-116.1229
USSR	1981-12-22	04:31:05.300	49.8210	78.1070
USSR	1981-12-27	03:43:16.600	49.9300	78.7920
US	1982-01-28	16:00:00.100	37.0913	-116.0512
US	1982-02-12	14:55:00.100	37.2243	-116.4627
US	1982-02-12	15:25:00.100	37.3480	-116.3161
USSR	1982-02-19	03:56:13.400	49.8060	78.0290
US	1982-04-17	18:00:00.100	37.0168	-116.0099
USSR	1982-04-25	03:23:07.900	49.9120	78.9060
UK	1982-04-25	18:05:00.100	37.2558	-116.4224
US	1982-05-06	20:00:00.100	37.1168	-116.1269
US	1982-05-07	18:17:00.100	37.0691	-116.0455
US	1982-06-16	14:00:00.800	37.1142	-116.0166
US	1982-06-24	14:15:00.100	37.2362	-116.3702
USSR	1982-06-25	02:03:07.200	49.8010	78.0890
USSR	1982-07-04	01:17:16.700	49.9580	78.8000
US	1982-07-29	20:05:00.100	37.1023	-116.0750
USSR	1982-07-30	21:00:00.000	53.8000	104.1500
USSR	1982-08-23	02:43:06.700	49.7580	78.0440
USSR	1982-08-31	01:31:03.200	49.9260	78.7600
USSR	1982-09-04	18:00:00.100	69.2000	81.6500
USSR	1982-09-21	02:57:03.200	49.7850	78.1210
USSR	1982-09-25	18:00:00.200	64.3500	91.8000
USSR	1982-10-10	05:00:00.200	61.5500	112.8500
USSR	1982-10-11	07:14:58.600	73.3390	54.6080
USSR	1982-10-16	06:00:00.200	46.7590	48.2470
USSR	1982-10-16	06:05:00.100	46.7520	48.2580
USSR	1982-10-16	06:10:00.100	46.7660	48.2880
USSR	1982-10-16	06:15:00.200	46.7600	48.3000
US	1982-11-12	19:17:00.100	37.0237	-116.0321
USSR	1982-12-05	03:37:15.000	49.9240	78.8120
US	1982-12-10	15:20:00.100	37.0302	-116.0719
USSR	1982-12-25	04:23:08.400	49.7990	78.0370
USSR	1982-12-26	03:35:16.700	50.0780	78.9860
US	1983-02-11	16:00:00.100	37.0506	-116.0453
US	1983-02-17	17:00:00.100	37.1628	-116.0633
US	1983-03-26	20:20:00.100	37.3007	-116.4600
US	1983-04-14	19:05:00.100	37.0728	-116.0460
UK	1983-04-22	13:53:00.100	37.1115	-116.0224

US	1983-05-05	15:20:00.100	37.0123	-116.0892
US	1983-05-26	00:00:00.000	37.0000	-116.0000
US	1983-05-26	15:00:00.100	37.1029	-116.0057
US	1983-06-09	17:10:00.100	37.1576	-116.0892
USSR	1983-06-24	02:56:13.900	49.7570	78.0390
USSR	1983-07-10	04:00:00.000	51.3630	53.3060
USSR	1983-07-10	04:04:59.900	51.3670	53.3270
USSR	1983-07-10	04:09:59.900	51.3800	53.3400
US	1983-08-03	13:33:00.100	37.1190	-116.0889
US	1983-08-11	14:00:00.100	36.9977	-116.0027
USSR	1983-08-18	16:09:58.900	73.3540	54.9740
US	1983-08-27	14:00:00.300	37.2000	-116.0300
US	1983-09-01	14:00:00.100	37.2728	-116.3550
USSR	1983-09-11	06:33:13.100	49.8200	78.1180
US	1983-09-21	15:00:00.100	37.2097	-116.2093
US	1983-09-21	16:24:59.700	37.1130	-116.0430
US	1983-09-22	15:00:00.100	37.1056	-116.0494
USSR	1983-09-24	05:00:00.000	46.7830	48.3150
USSR	1983-09-24	05:05:00.000	46.7880	48.2970
USSR	1983-09-24	05:10:00.100	46.7670	48.3100
USSR	1983-09-24	05:15:00.100	46.7490	48.3030
USSR	1983-09-24	05:19:59.900	46.7540	48.2890
USSR	1983-09-24	05:25:00.000	46.7660	48.2740
USSR	1983-09-25	13:09:58.200	73.3280	54.5410
US	1983-09-29	00:00:00.000	37.0000	-116.0000
USSR	1983-10-06	01:47:09.100	49.9240	78.7610
USSR	1983-10-26	01:55:07.300	49.9120	78.8280
USSR	1983-11-02	04:18:54.000	49.7792	78.1247
USSR	1983-11-20	03:27:06.900	50.0550	78.9970
USSR	1983-11-29	00:00:00.000	50.0000	78.0000
USSR	1983-11-29	02:19:08.800	49.7390	78.1050
US	1983-12-09	16:00:00.400	36.9800	-116.0200
US	1983-12-16	18:30:00.100	37.1405	-116.0721
USSR	1983-12-26	04:29:09.300	49.8040	78.0980
US	1984-01-31	15:30:00.100	37.1127	-116.1217
US	1984-02-15	17:00:00.100	37.2214	-116.1811
USSR	1984-02-19	03:57:05.900	49.8940	78.7450
USSR	1984-03-07	02:39:08.800	50.0490	78.9500
USSR	1984-03-29	05:19:10.700	49.9220	78.9490
USSR	1984-04-15	03:17:11.500	49.7490	78.1010
USSR	1984-04-25	01:09:06.000	49.9350	78.8670
UK	1984-05-01	19:05:00.100	37.1062	-116.0224
USSR	1984-05-26	03:13:14.900	49.9730	79.0000
USSR	1984-07-14	01:09:13.000	49.9010	78.8790
USSR	1984-07-21	02:59:59.800	51.3580	53.3190
USSR	1984-07-21	03:04:59.700	51.3710	53.3370
USSR	1984-07-21	03:09:59.900	51.3910	53.3510
US	1984-07-25	15:30:00.100	37.2678	-116.4106
US	1984-08-02	15:00:00.100	37.0171	-116.0076
USSR	1984-08-11	19:00:00.200	65.0500	55.1000
USSR	1984-08-25	19:00:00.300	61.9000	72.1000
USSR	1984-08-26	03:30:00.000	73.3260	54.7630
USSR	1984-08-27	06:00:00.100	67.7500	33.0000
USSR	1984-08-28	02:59:59.800	60.3000	57.1000
USSR	1984-08-28	03:04:59.900	60.7000	57.5000
US	1984-08-30	00:00:00.000	37.0000	-116.0000
US	1984-08-30	14:45:00.100	37.0898	-115.9980
USSR	1984-09-09	02:59:08.900	49.8090	78.0720
US	1984-09-13	00:00:00.000	37.0867	-116.0712
USSR	1984-09-17	21:00:00.000	55.8340	87.5260
US	1984-10-02	18:13:59.200	37.0800	-116.0000

USSR	1984-10-18	04:57:08.300	49.7750	78.1330
USSR	1984-10-25	06:29:58.100	73.3550	54.9900
USSR	1984-10-27	01:50:12.900	49.9250	78.7760
USSR	1984-10-27	06:00:00.100	46.9000	48.1500
USSR	1984-10-27	06:05:00.000	46.9500	48.1000
US	1984-11-10	16:40:00.100	37.0001	-116.0174
USSR	1984-11-23	03:55:07.500	49.8300	78.0730
USSR	1984-12-02	03:19:08.900	49.9930	79.0090
UK	1984-12-09	19:40:00.100	37.2701	-116.4976
US	1984-12-15	00:00:00.000	37.2811	-116.3054
USSR	1984-12-16	03:55:05.100	49.9300	78.8160
US	1984-12-20	16:20:00.200	36.9700	-116.0100
USSR	1984-12-28	03:50:13.100	49.8750	78.7000
USSR	1985-02-10	03:27:10.000	49.8930	78.7830
US	1985-03-15	16:31:00.100	37.0581	-116.0453
US	1985-03-23	18:30:00.100	37.1800	-116.0890
US	1985-04-02	20:00:00.100	37.0948	-116.0323
US	1985-04-06	23:15:00.100	37.2008	-116.2072
USSR	1985-04-25	00:57:09.000	49.9210	78.8990
US	1985-05-02	15:20:00.100	37.2534	-116.3252
US	1985-06-12	15:15:00.100	37.2479	-116.4891
US	1985-06-12	17:30:00.100	37.0883	-116.0839
USSR	1985-06-15	00:57:03.100	49.9030	78.8390
USSR	1985-06-18	04:00:00.100	60.6000	72.7000
US	1985-06-26	18:03:00.100	37.1241	-116.1220
USSR	1985-06-30	02:39:05.100	49.8570	78.6590
USSR	1985-07-11	02:57:02.000	49.7506	78.0492
USSR	1985-07-18	21:15:00.300	65.9940	41.0380
US	1985-07-25	14:00:00.100	37.2973	-116.4381
US	1985-08-14	00:00:00.000	37.0000	-116.0000
US	1985-08-17	16:25:00.100	37.0023	-116.0430
US	1985-09-27	14:15:00.100	37.0898	-116.0018
US	1985-10-09	00:00:00.000	37.0000	-116.0000
UK	1985-12-05	15:00:00.100	37.0533	-116.0454
US	1986-04-22	14:30:00.100	37.2641	-116.4402
US	1986-05-21	13:59:00.100	37.1250	-116.0604
US	1986-06-05	15:04:00.100	37.0983	-116.0155
UK	1986-06-25	00:00:00.000	37.2646	-116.4993
US	1986-07-17	21:00:00.100	37.2787	-116.3556
US	1986-07-24	15:05:00.100	37.1427	-116.0711
US	1986-09-04	00:00:00.000	37.0000	-116.0000
US	1986-09-11	14:57:00.100	37.0691	-116.0497
US	1986-09-30	22:30:00.100	37.3001	-116.3074
US	1986-10-16	19:25:00.100	37.2202	-116.4616
US	1986-11-14	16:00:00.100	37.1004	-116.0481
US	1986-12-13	17:50:05.100	37.2630	-116.4117
US	1987-02-03	15:20:00.100	37.1811	-116.0484
US	1987-02-11	16:45:00.100	37.0107	-116.0447
USSR	1987-02-26	04:58:24.300	49.8440	78.0880
USSR	1987-03-12	01:57:19.600	49.9290	78.8240
US	1987-03-18	18:28:00.100	37.2102	-116.2086
USSR	1987-04-03	00:00:00.000	50.0000	78.0000
USSR	1987-04-03	01:17:10.300	49.9100	78.7860
USSR	1987-04-17	01:03:07.100	49.8740	78.6630
US	1987-04-18	13:40:00.600	37.2479	-116.5091
USSR	1987-04-19	04:00:00.000	60.6000	57.2000
USSR	1987-04-19	04:05:00.000	60.8000	57.5000
US	1987-04-22	22:00:00.100	36.9831	-116.0046
US	1987-04-30	13:30:00.100	37.2330	-116.4231
USSR	1987-05-06	04:02:08.100	49.7770	77.9840
USSR	1987-06-06	02:37:09.300	49.8370	78.0650

US	1987-06-18	15:20:00.100	37.1936	-116.0350
US	1987-06-20	00:00:00.000	37.2200	-116.1778
USSR	1987-06-20	00:53:07.100	49.9270	78.7400
US	1987-06-30	16:05:00.100	36.9986	-116.0431
USSR	1987-07-07	00:00:00.000	61.5000	112.8500
UK	1987-07-16	19:00:00.100	37.1036	-116.0234
USSR	1987-07-17	01:17:09.200	49.7690	78.0350
USSR	1987-07-24	02:00:00.000	61.4500	112.8000
USSR	1987-08-02	00:58:09.200	49.8770	78.8730
USSR	1987-08-02	02:00:00.200	73.3260	54.6020
USSR	1987-08-12	01:30:00.500	61.4500	112.8000
US	1987-08-13	14:00:00.100	37.0610	-116.0453
USSR	1987-09-18	02:32:10.000	49.9760	78.0240
US	1987-09-24	15:00:00.100	37.2280	-116.3747
USSR	1987-10-03	15:15:00.000	47.6000	56.2000
USSR	1987-10-16	06:06:07.000	49.8020	78.1400
USSR	1987-11-15	03:31:09.100	49.8810	78.7530
USSR	1987-12-13	03:21:07.200	49.9570	78.7920
USSR	1987-12-20	02:55:09.100	49.7740	77.9750
USSR	1987-12-27	03:05:07.200	49.8670	78.7180
USSR	1988-02-06	04:19:09.100	49.7870	77.9750
USSR	1988-02-13	03:05:08.200	49.9320	78.8780
USSR	1988-04-03	01:33:08.100	49.9090	78.9180
USSR	1988-04-22	09:30:09.400	49.8240	78.1020
USSR	1988-05-04	00:57:09.100	49.9310	78.7410
USSR	1988-05-07	22:49:58.300	73.3140	54.5530
US	1988-06-02	13:00:00.100	37.2601	-116.4411
USSR	1988-06-14	02:27:09.000	50.0340	78.9640
US	1988-06-22	00:00:00.000	37.0000	-116.0000
US	1988-06-22	14:00:00.100	37.1662	-116.0722
US	1988-07-07	15:05:30.100	37.2524	-116.3767
US	1988-08-17	17:00:00.100	37.2972	-116.3065
USSR	1988-08-22	16:20:00.100	66.2800	78.4910
US	1988-08-23	18:29:59.700	36.9900	-116.0100
US	1988-08-30	18:00:00.100	37.0859	-116.0685
USSR	1988-09-06	16:19:59.900	61.3610	48.0920
USSR	1988-09-14	04:00:00.000	49.8788	78.8225
US	1988-10-13	14:00:00.100	37.0890	-116.0493
USSR	1988-10-18	03:40:09.200	49.8020	78.0020
US	1988-11-09	00:00:00.000	37.0000	-116.0000
USSR	1988-11-12	03:30:06.300	50.0480	78.9600
USSR	1988-11-23	03:57:09.000	49.7650	78.0290
USSR	1988-12-04	05:19:53.300	73.3660	55.0010
US	1988-12-09	00:00:00.000	37.0000	-116.0000
US	1988-12-10	20:30:00.100	37.1990	-116.2094
USSR	1988-12-17	04:18:09.200	49.8790	78.9240
USSR	1988-12-28	05:28:10.000	49.8011	78.0686
USSR	1989-01-22	03:57:09.000	49.9340	78.8150
US	1989-02-10	20:06:00.100	37.0768	-116.0006
USSR	1989-02-12	04:15:09.200	49.9110	78.7040
USSR	1989-02-17	04:01:09.200	49.8490	78.0640
US	1989-02-24	16:15:00.100	37.1285	-116.1220
US	1989-03-09	14:05:00.100	37.1428	-116.0669
US	1989-05-15	13:10:00.100	37.1076	-116.1209
US	1989-05-26	18:07:00.000	37.0859	-116.0551
US	1989-06-22	21:15:00.800	37.2829	-116.4123
US	1989-06-27	15:30:00.000	37.2755	-116.3536
USSR	1989-07-08	03:47:00.000	49.8690	78.7750
USSR	1989-09-02	04:16:59.900	50.0190	78.9980
US	1989-09-14	15:00:00.100	37.2359	-116.1629
USSR	1989-10-04	11:30:00.200	49.7510	78.0050

USSR	1989-10-19	09:49:59.800	49.9270	78.9270
US	1989-10-31	15:30:00.100	37.2631	-116.4907
US	1989-11-15	20:20:00.100	37.1065	-116.0134
UK	1989-12-08	15:00:00.100	37.2311	-116.4094
US	1989-12-20	00:00:00.000	37.0000	-116.0000
US	1990-07-25	15:00:00.100	37.2069	-116.2143
US	1990-09-20	00:00:00.000	37.0000	-116.0000
US	1990-09-27	00:00:00.000	37.0000	-116.0000
US	1990-10-12	17:30:00.100	37.2479	-116.4942
USSR	1990-10-24	14:57:58.500	73.3310	54.7570
UK	1990-11-14	19:17:00.700	37.2274	-116.3712
US	1991-03-08	21:02:45.100	37.1044	-116.0740
US	1991-04-04	19:00:00.000	37.2961	-116.3129
US	1991-04-16	15:30:00.100	37.2454	-116.4416
US	1991-08-15	16:00:00.000	37.0873	-116.0018
US	1991-09-14	19:00:00.000	37.2256	-116.4281
US	1991-09-19	16:30:00.100	37.2357	-116.1664
US	1991-10-18	19:12:00.000	37.0634	-116.0453
UK	1991-11-26	18:35:00.100	37.0965	-116.0696
US	1992-03-26	16:30:00.000	37.2725	-116.3598
US	1992-04-30	00:00:00.000	37.0000	-116.0000
US	1992-06-19	16:45:00.000	37.0054	-116.0101
US	1992-06-23	15:00:00.100	37.1239	-116.0312
US	1992-09-18	17:00:00.000	37.2069	-116.2099
US	1992-09-23	00:00:00.000	37.0000	-116.0000
india	1998-05-11	10:13:44.200	27.0780	71.7190
pakistan	1998-05-28	10:16:17.600	28.8300	64.9500
pakistan	1998-05-30	06:54:54.900	28.4900	63.7300