

Fig.2.1 Map of Mercury position at the time of 39 large earthquakes ($M > 8.4$)
Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system), The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet, the Julian calendar at the time of the earthquake and Coordinated Universal Time (UTC).

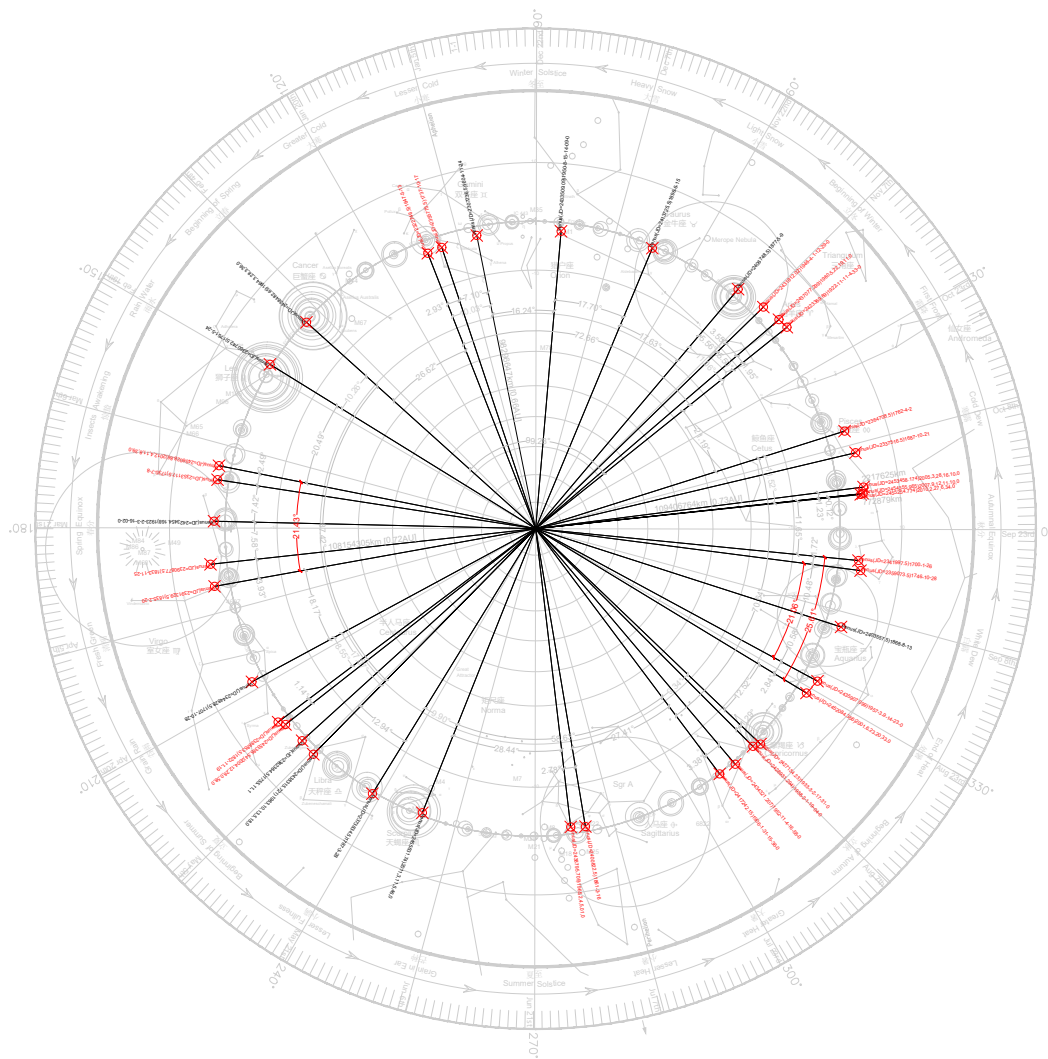


Fig.2.2 Map of Venus position at the time of 39 large earthquakes ($M > 8.4$)
 Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system),
 The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet,
 the Julian calendar at the time of the earthquake and Coordinated Universal Time (UTC).

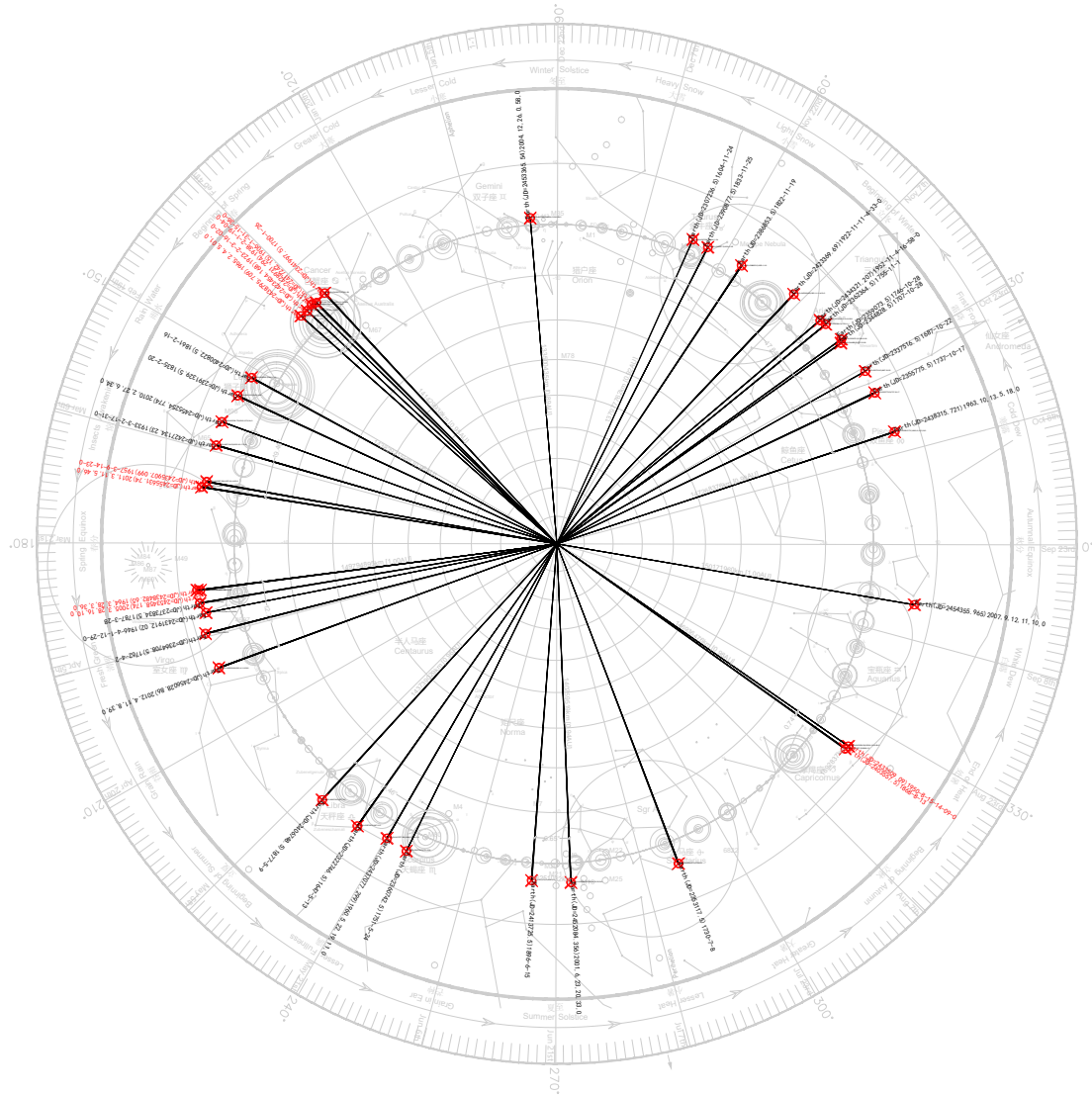


Fig.2.3 Map of the Earth's position at the time of the occurrence of 39 large earthquakes ($M > 8.4$) Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system), The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet, the Julian calendar at the time of the earthquake and Coordinated Universal Time (UTC).

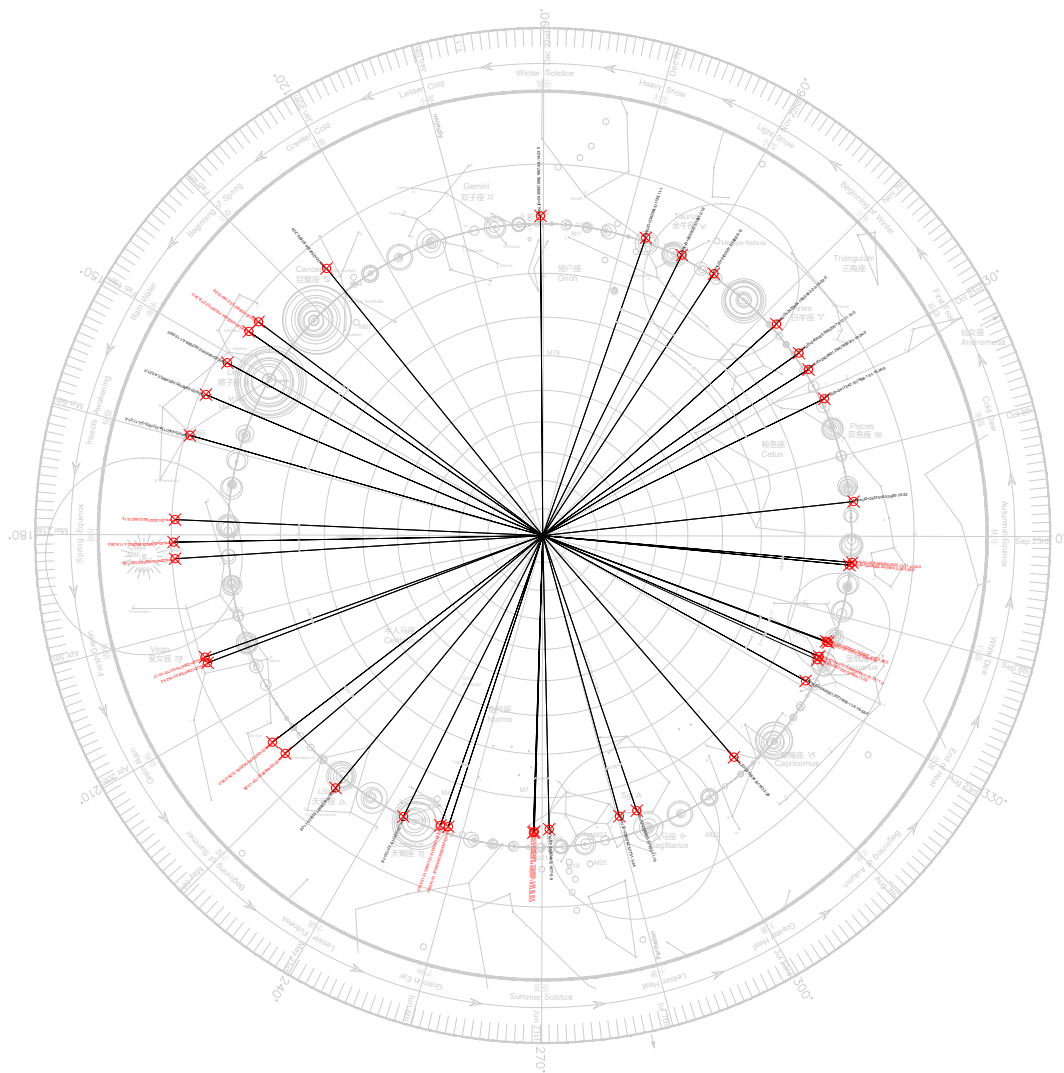


Fig.2.4 Map of Mars position at the time of 39 large earthquakes (M>8.4)
 Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system),
 The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet,
 the Julian calendar at the time of the earthquake and Coordinated Universal Time (UTC).

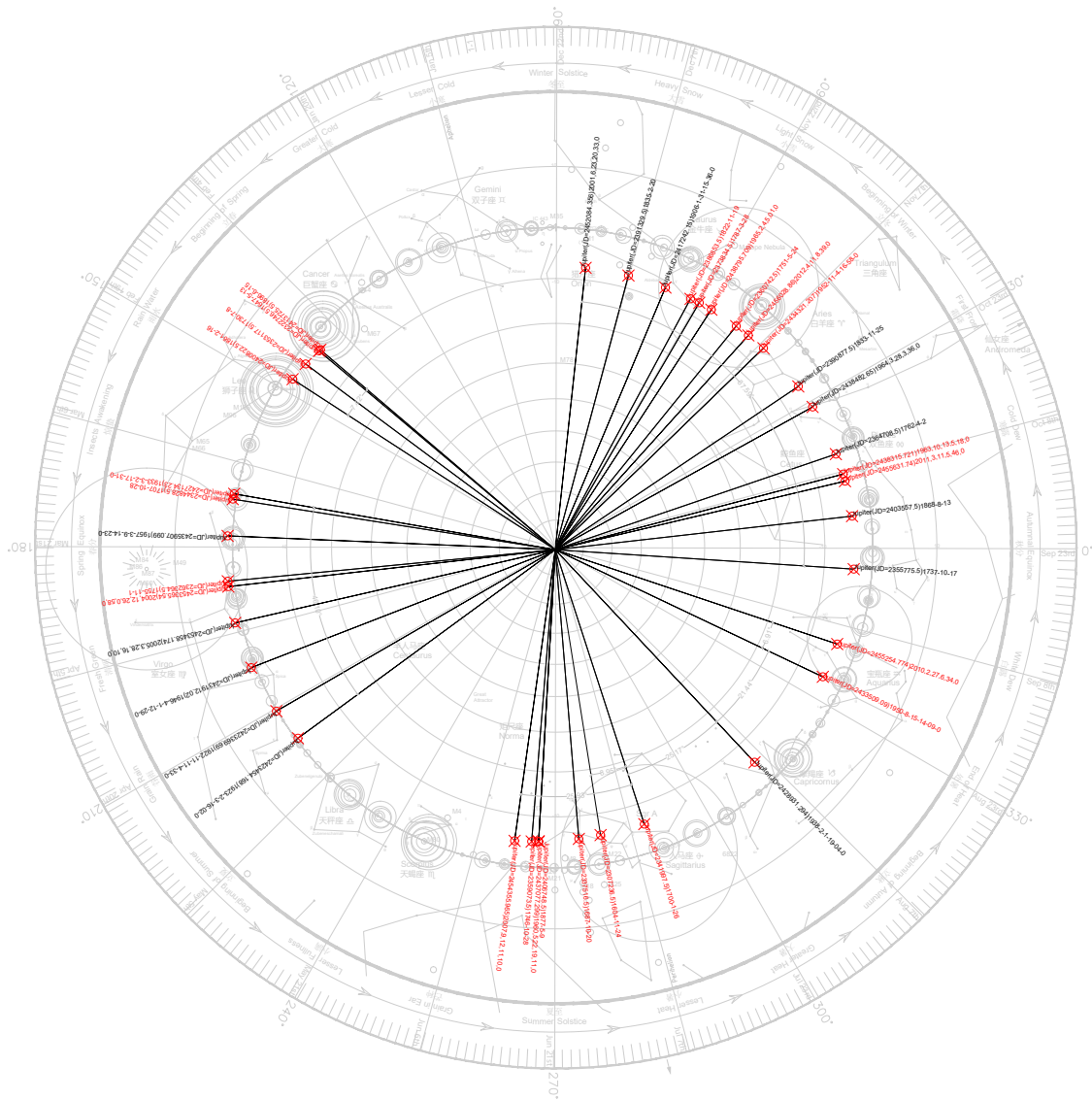


Fig.2.5 Map of Jupiter's position at the time of 39 large earthquakes ($M > 8.4$)
 Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system),
 The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet, the Julian
 calendar at the time of the earthquake and Coordinated Universal Time (UTC).

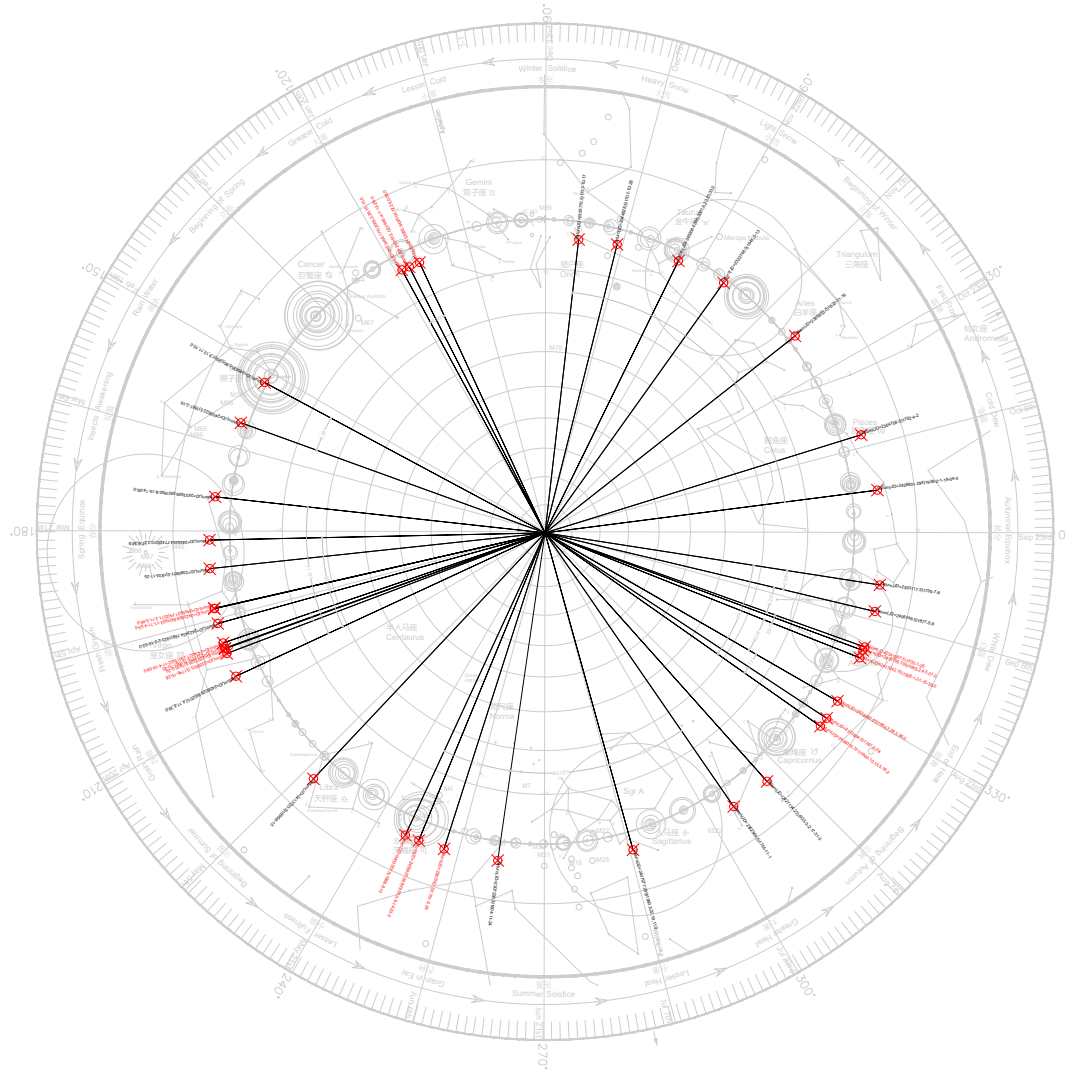


Fig.2.6 Map of Saturn's position at the time of the occurrence of 39 large earthquakes ($M > 8.4$) Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system), The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet, the Julian calendar at the time of the earthquake and Coordinated Universal Time (UTC).

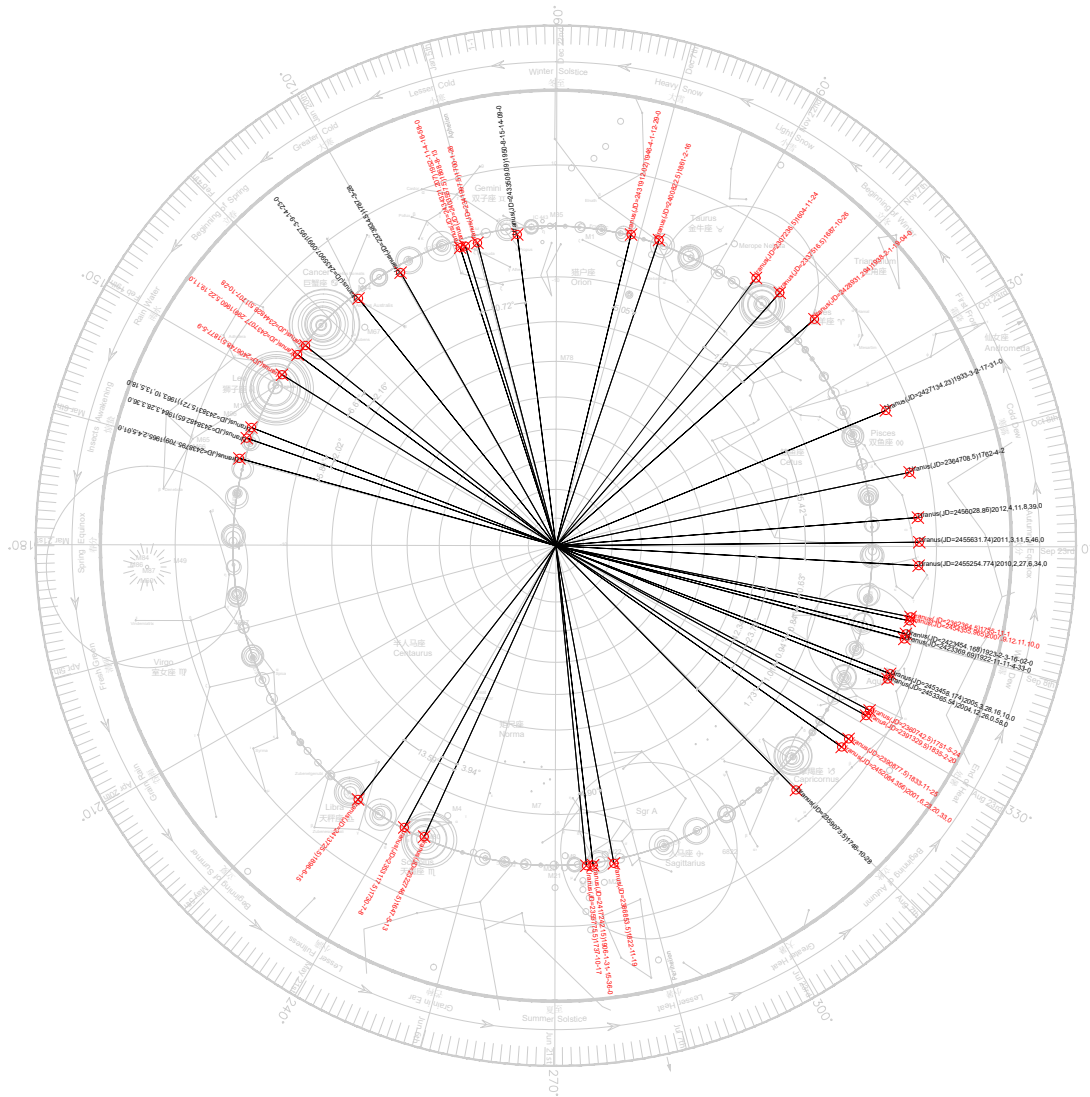


Fig.2.7 Map of Uranus position at the time of 39 large earthquakes ($M > 8.4$)
 Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system),
 The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet, the Julian
 calendar at the time of the earthquake and Coordinated Universal Time (UTC).

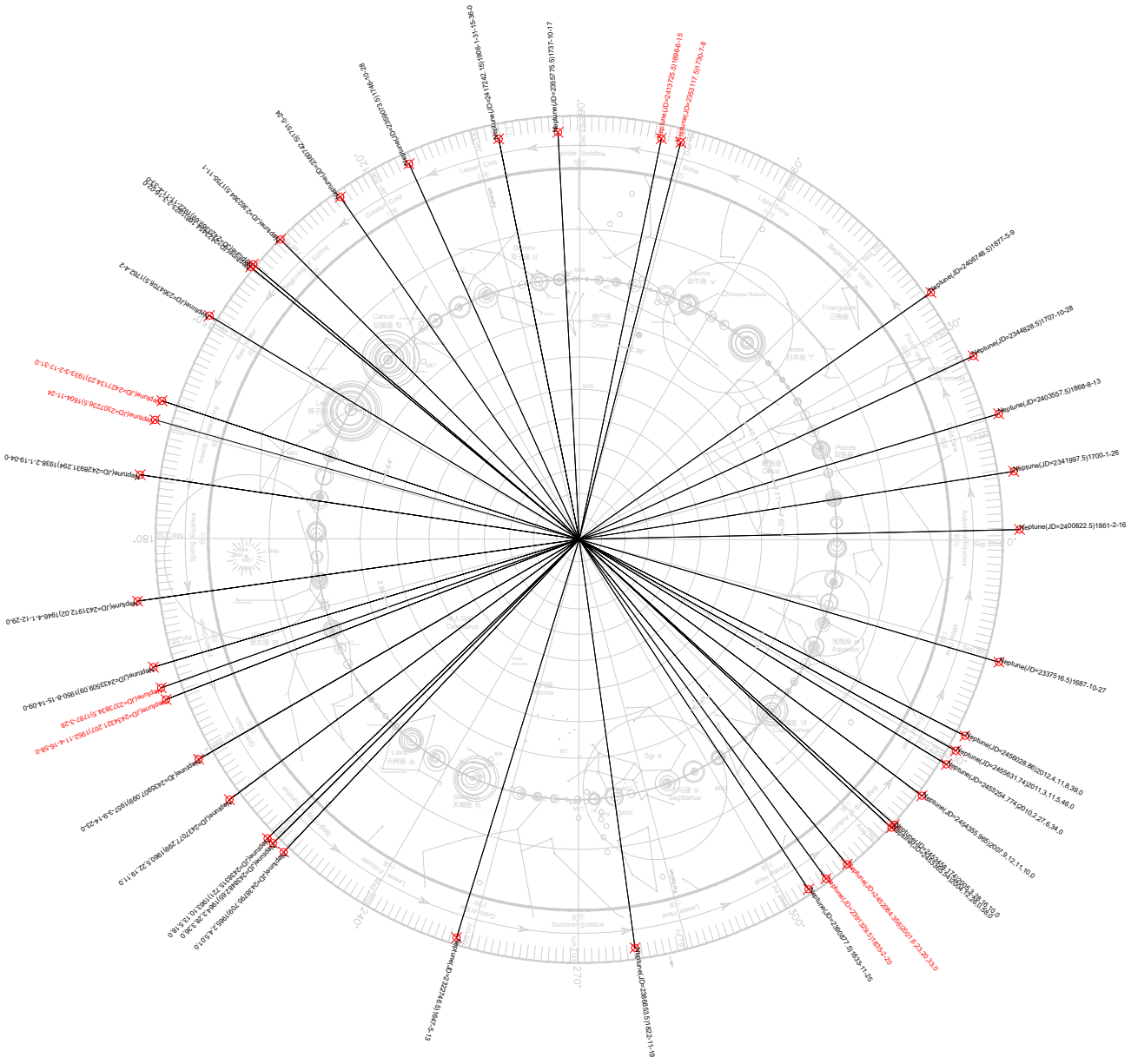


Fig.2.8 Map of Neptune position at the time of 39 large earthquakes (M>8.4)
 Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system), The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet, the Julian calendar at the time of the earthquake and Coordinated Universal Time (UTC).

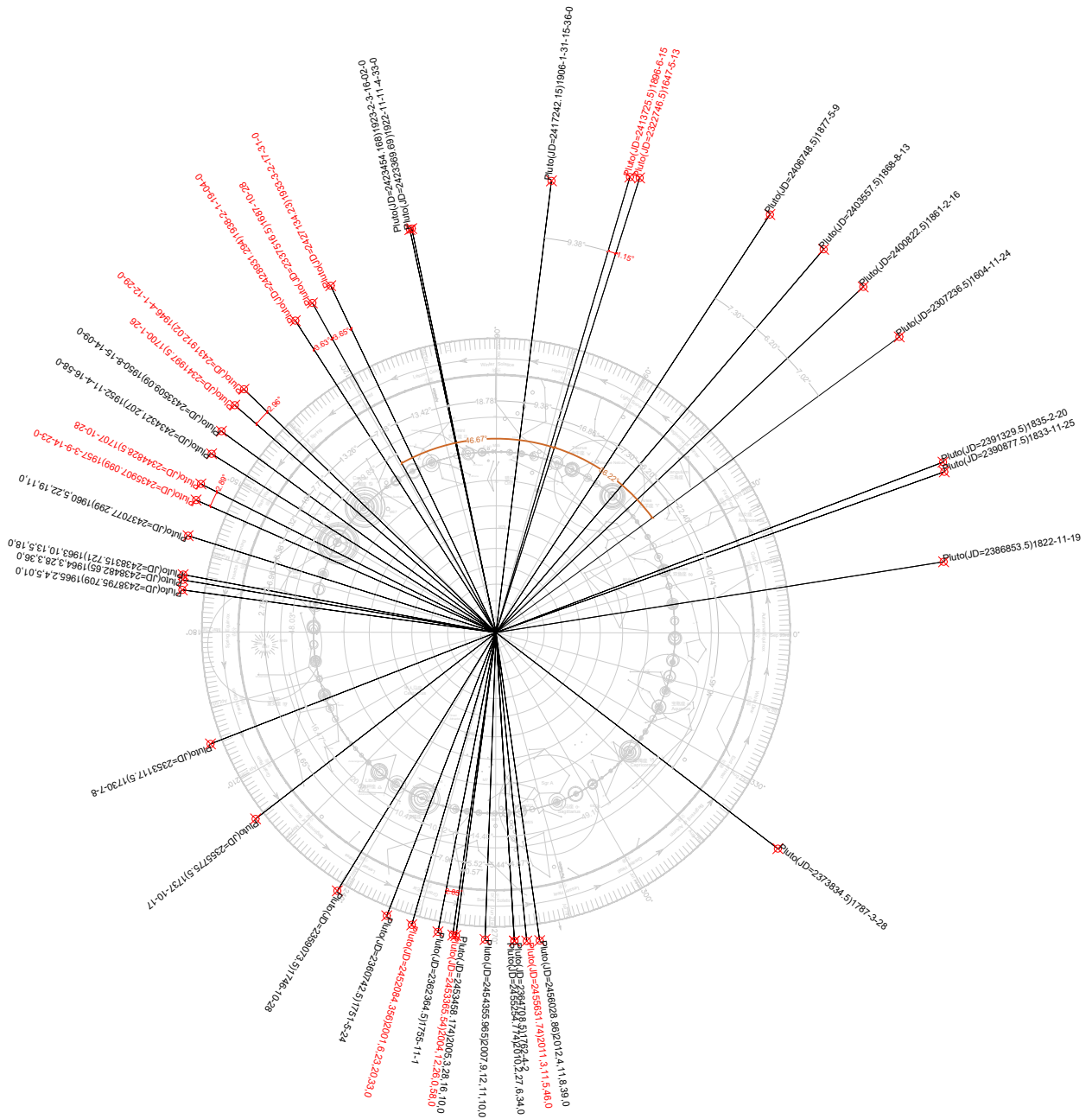


Fig.2.9 Map of Pluto position at the time of 39 large earthquakes (M>8.4)
 Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system),
 The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet, the Julian
 calendar at the time of the earthquake and Coordinated Universal Time (UTC).

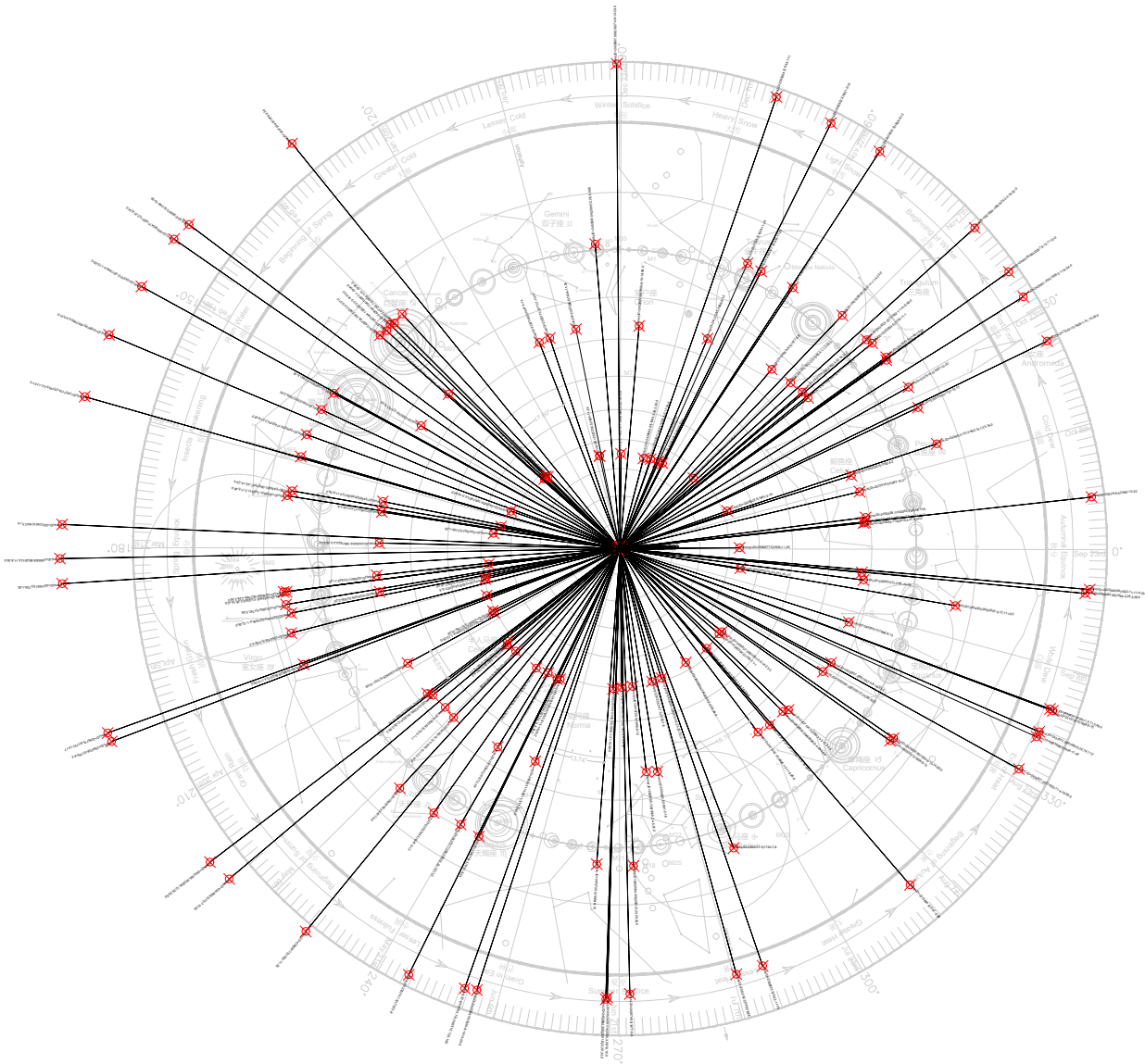


Fig.2.10 Map of Mercury, Venus, Earth, and Mars at the time of the 39 major earthquakes (M>8.4)
 Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system),
 The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet, the Julian
 calendar at the time of the earthquake and Coordinated Universal Time (UTC).

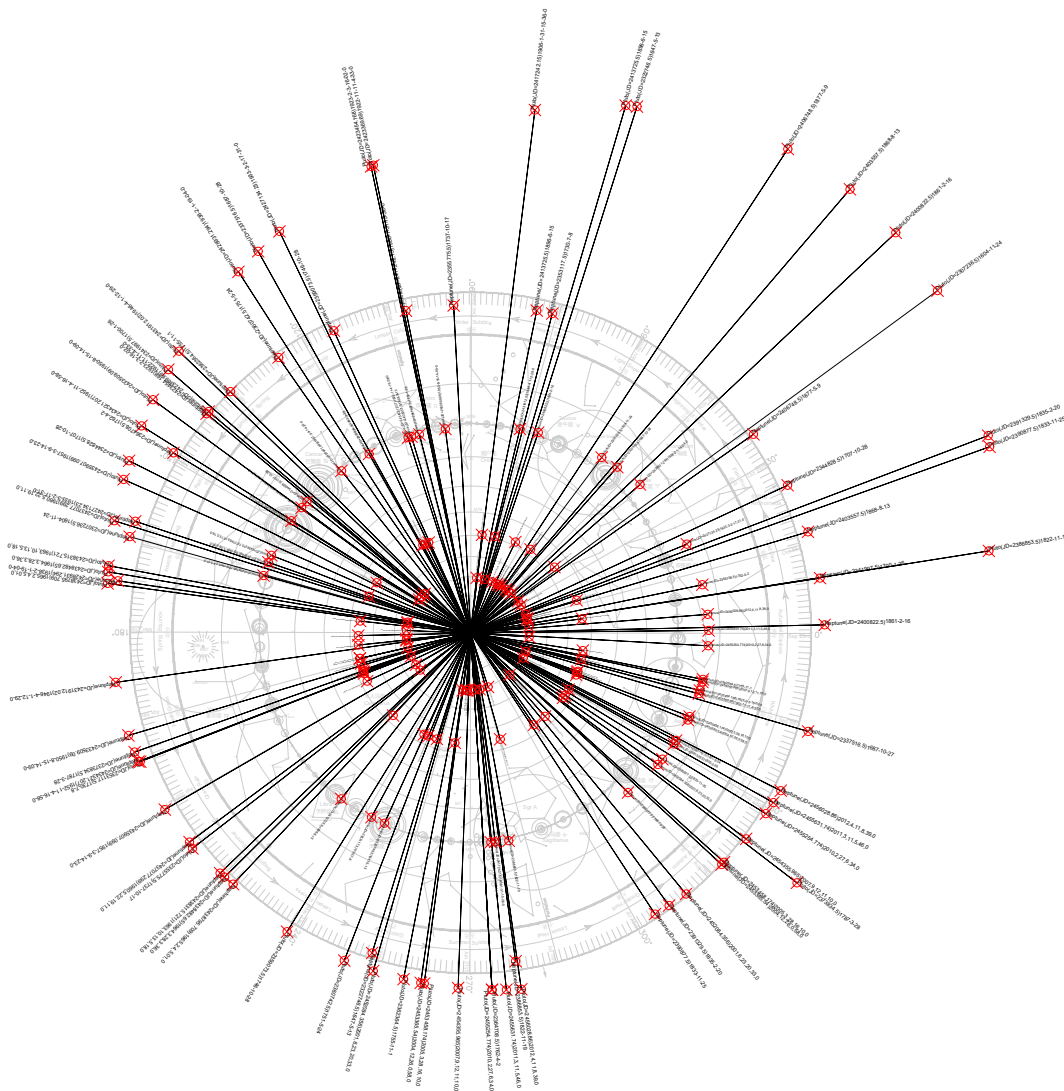


Fig.2.11 Map of Jupiter, Saturn, Uranus, Neptune, Pluto at the time of the 39 major earthquakes (M>8.4)
 Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system),
 The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet, the Julian
 calendar at the time of the earthquake and Coordinated Universal Time (UTC).

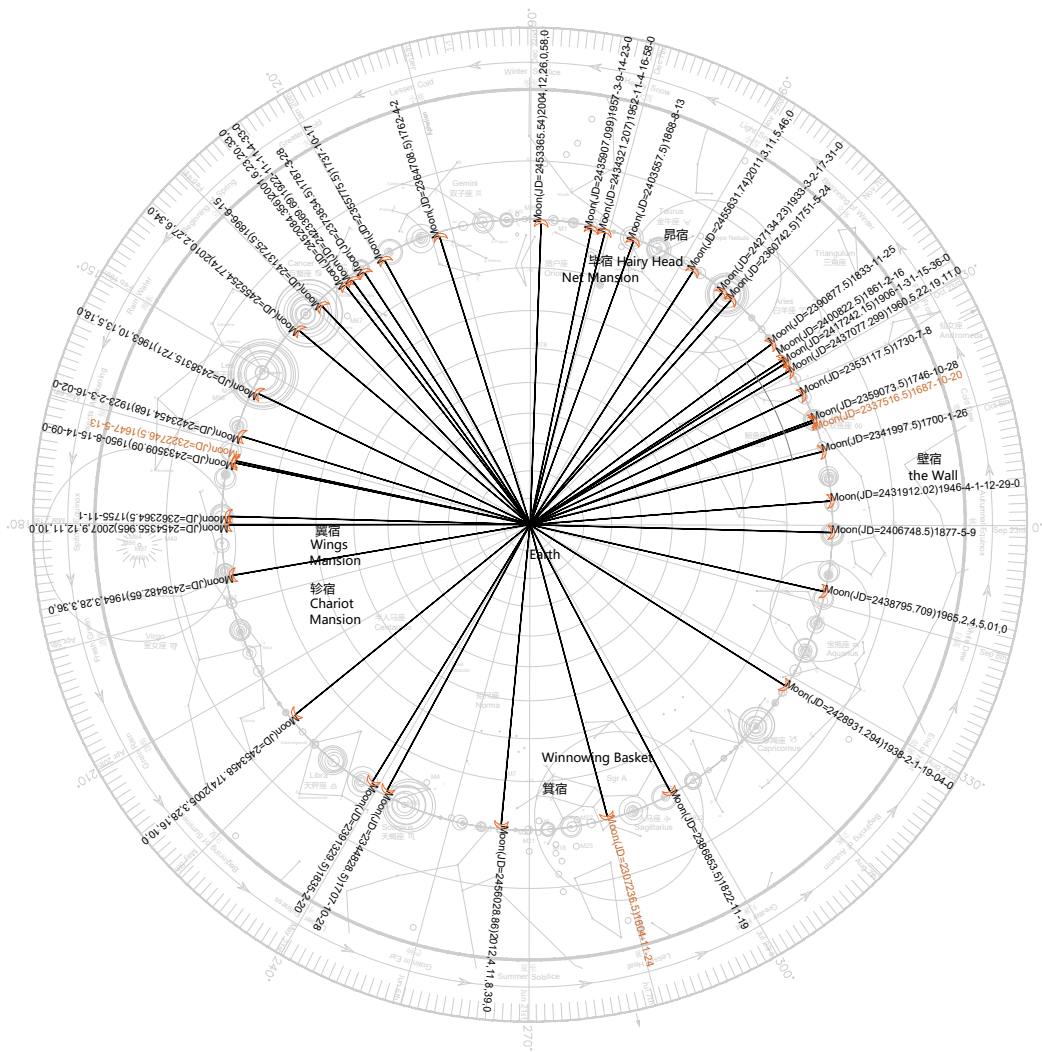


Fig.2.12 Map of Moon position at the time of 39 large earthquakes (M>8.4)

Planetary position coordinate data from JPL DE405, reference system using ICRS (International Celestial Reference system), The heart is the centroid of the solar system, the red dot is the planetary position point, labeled as the name of the planet, the Julian calendar at the time of the earthquake and Coordinated Universal Time (UTC).

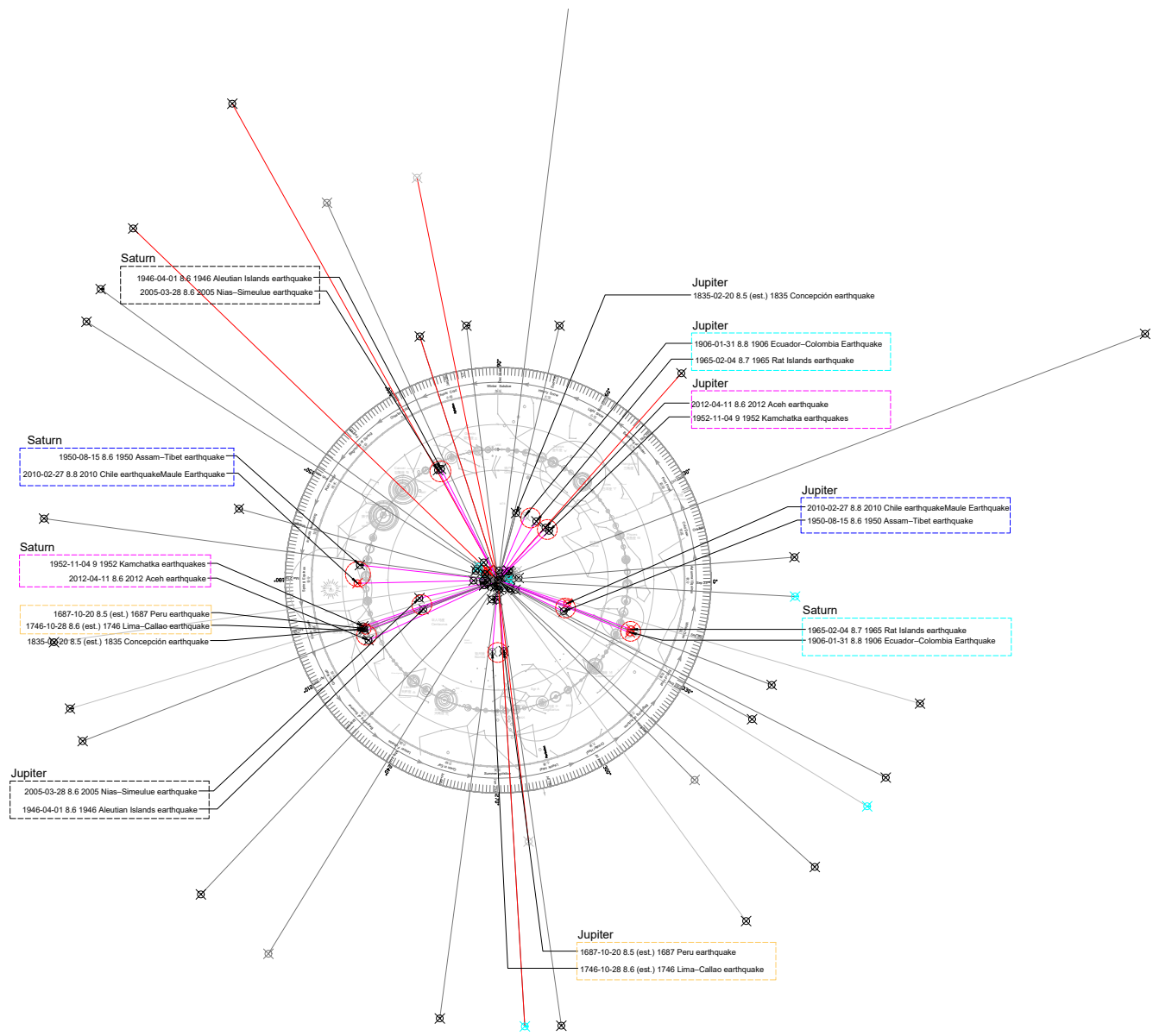


Fig.2.13 Earthquakes with a 59 year cycle

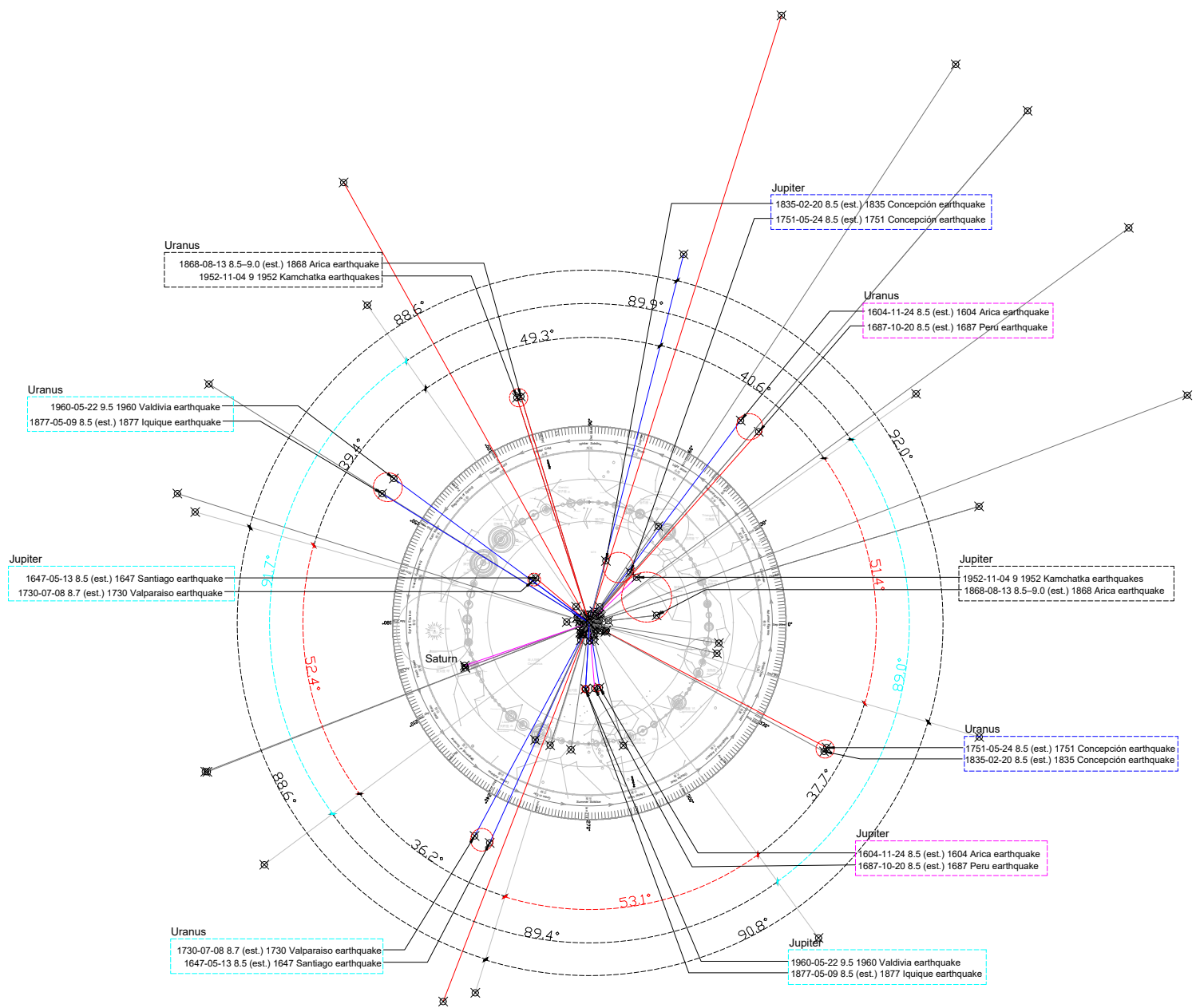
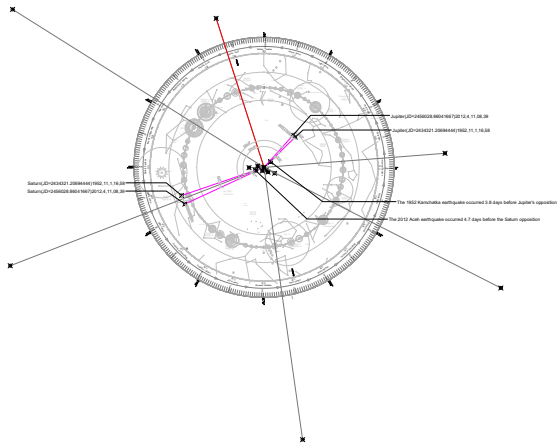
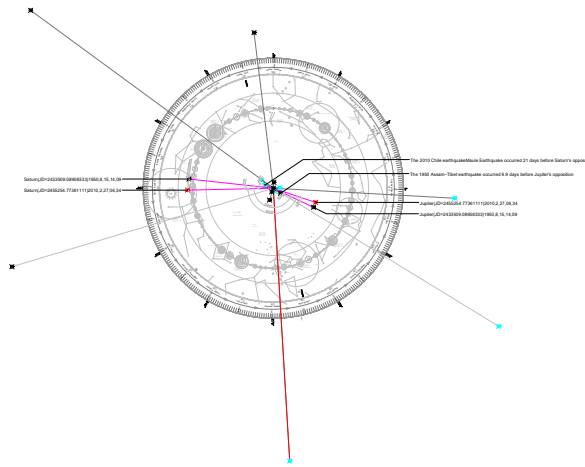


Fig.2.14 Earthquakes with a 83-84 year cycle



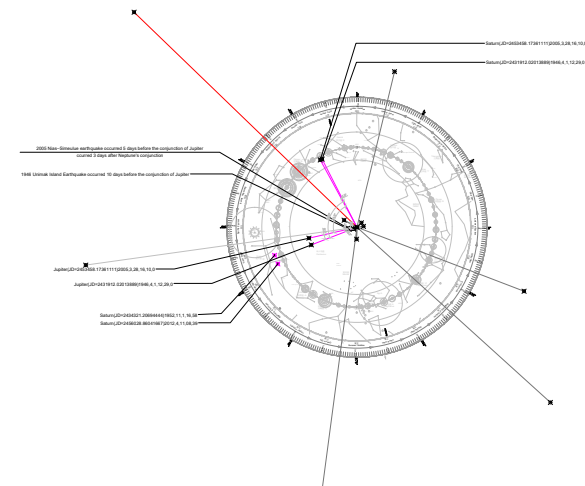
Earthquakes with a 59 year cycle-(1)

1952-11-04 9 1952 Kamchatka earthquakes
2012-04-11 8.5 2012 Aceh earthquake



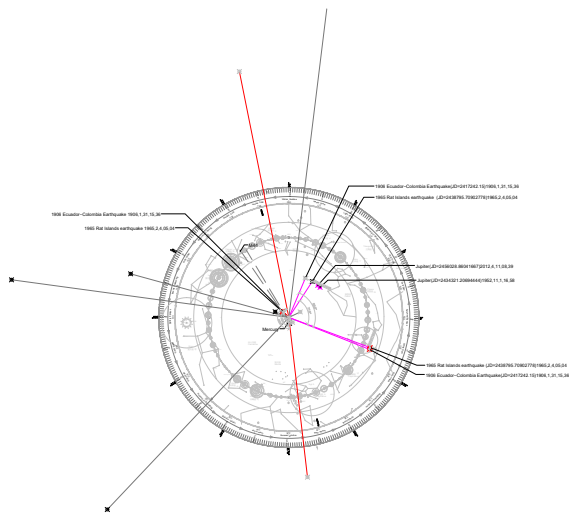
Earthquakes with a 59 year cycle-(2)

1950-08-15 8.8 1950 Assam-Tibet earthquake
2010-02-27 8.8 2010 Chile earthquake/Haiti Earthquake



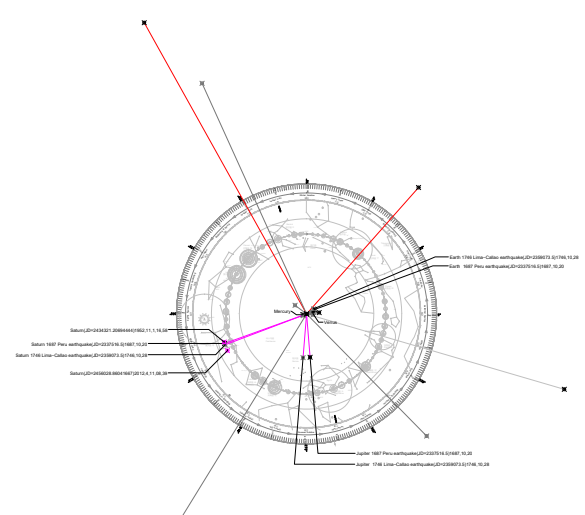
Earthquakes with a 59 year cycle-(3)

1946-04-01 8.6 1946 Aleutian Islands earthquake
2005-03-28 8.6 2005 Niue-Simulao earthquake



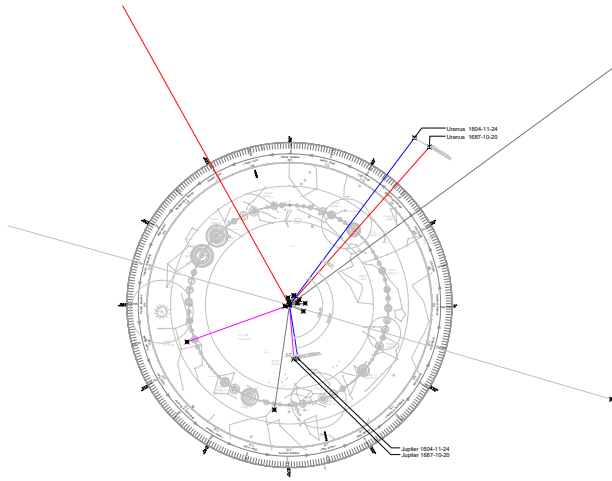
Earthquakes with a 59 year cycle-(4)

1998-01-31 8.8 1998 Ecuador-Colombia Earthquake
1980-02-04 8.7 1980 Rat Islands earthquake



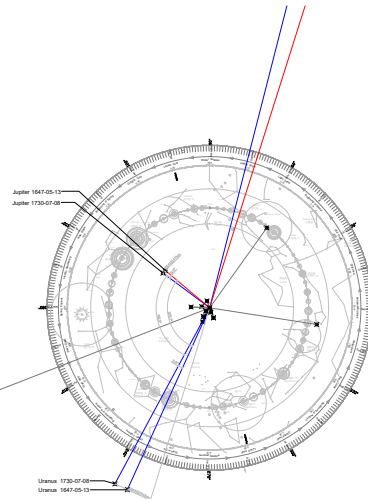
Earthquakes with a 59 year cycle-(5)

1687-10-20 8.5 (est.) 1687 Peru earthquake
1748-10-28 8.6 (est.) 1748 Lima-Callao earthquake



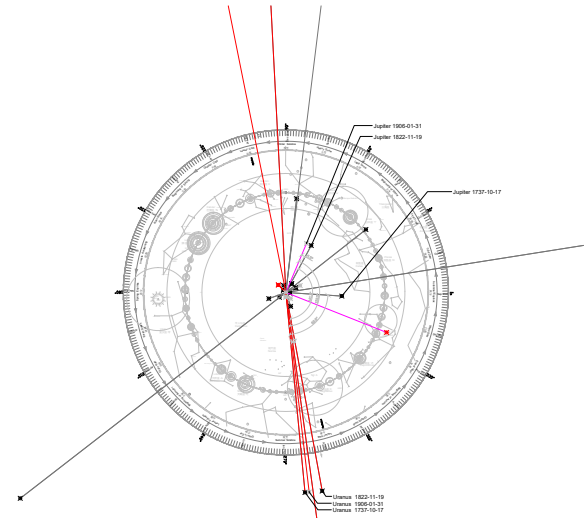
Earthquakes with a 83 year cycle-(1)

1604-11-24 8.5 (est.) 1604 Arica earthquake
1687-10-20 8.5 (est.) 1687 Peru earthquake



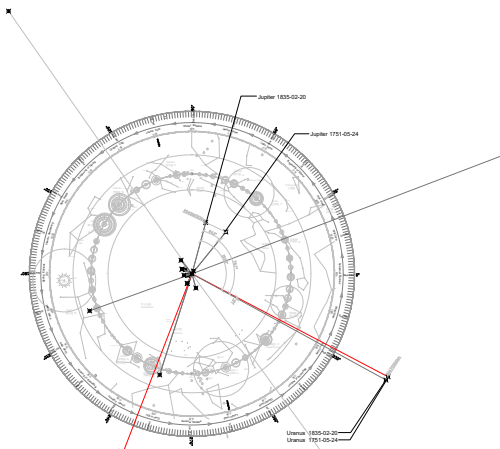
Earthquakes with a 83 year cycle-(2)

1647-05-13 8.5 (est.) 1647 Santiago earthquake
1730-07-08 8.7 (est.) 1730 Valparaiso earthquake



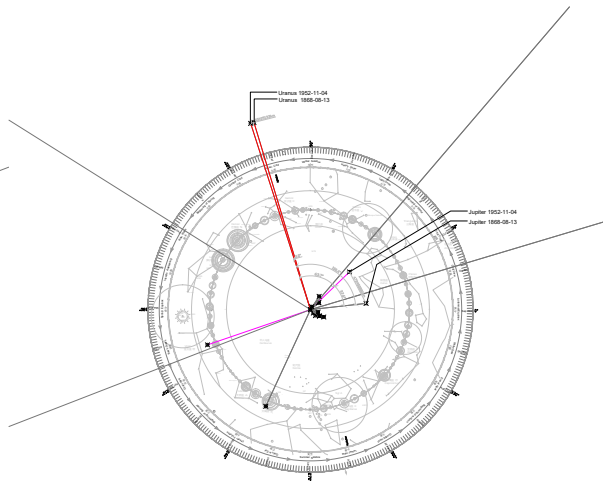
Earthquakes with a 83 year cycle-(3)

1906-01-31 8.8 1906 Ecuador-Colombia Earthquake
1822-11-19 8.5 (est.) 1822 Valparaiso earthquake
1737-10-17 8.5 (est.) 1737 Kamchatka earthquakes



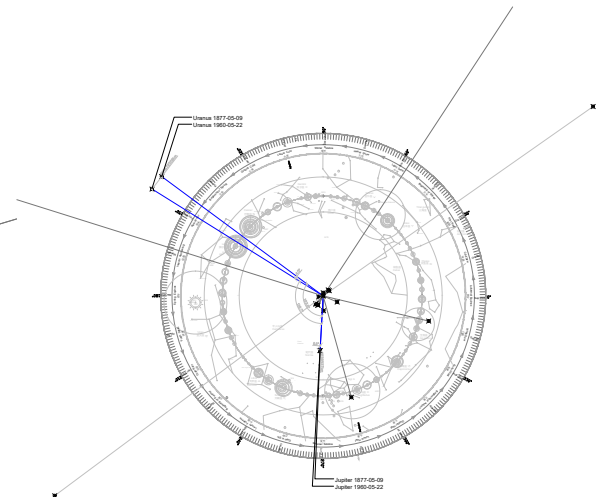
Earthquakes with a 83 year cycle-(4)

1751-05-24 8.5 (est.) 1751 Concepción earthquake
1835-02-20 8.5 (est.) 1835 Concepción earthquake



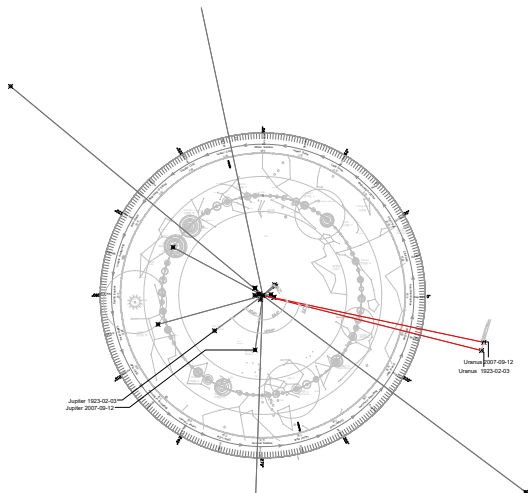
Earthquakes with a 83 year cycle-(5)

1868-08-13 8.5 - 9.0 (est.) 1868 Arica earthquake
1952-11-04 9 1952 Kamchatka earthquakes



Earthquakes with a 83 year cycle-(6)

1877-05-09 8.5 (est.) 1877 Iquique earthquake
1960-05-22 9.5 1960 Valdivia earthquake



Earthquakes with a 83 year cycle-(7)

1923-02-03 8.4 Kamchatka earthquake
 2007-09-12 8.4 Sumatra earthquakes

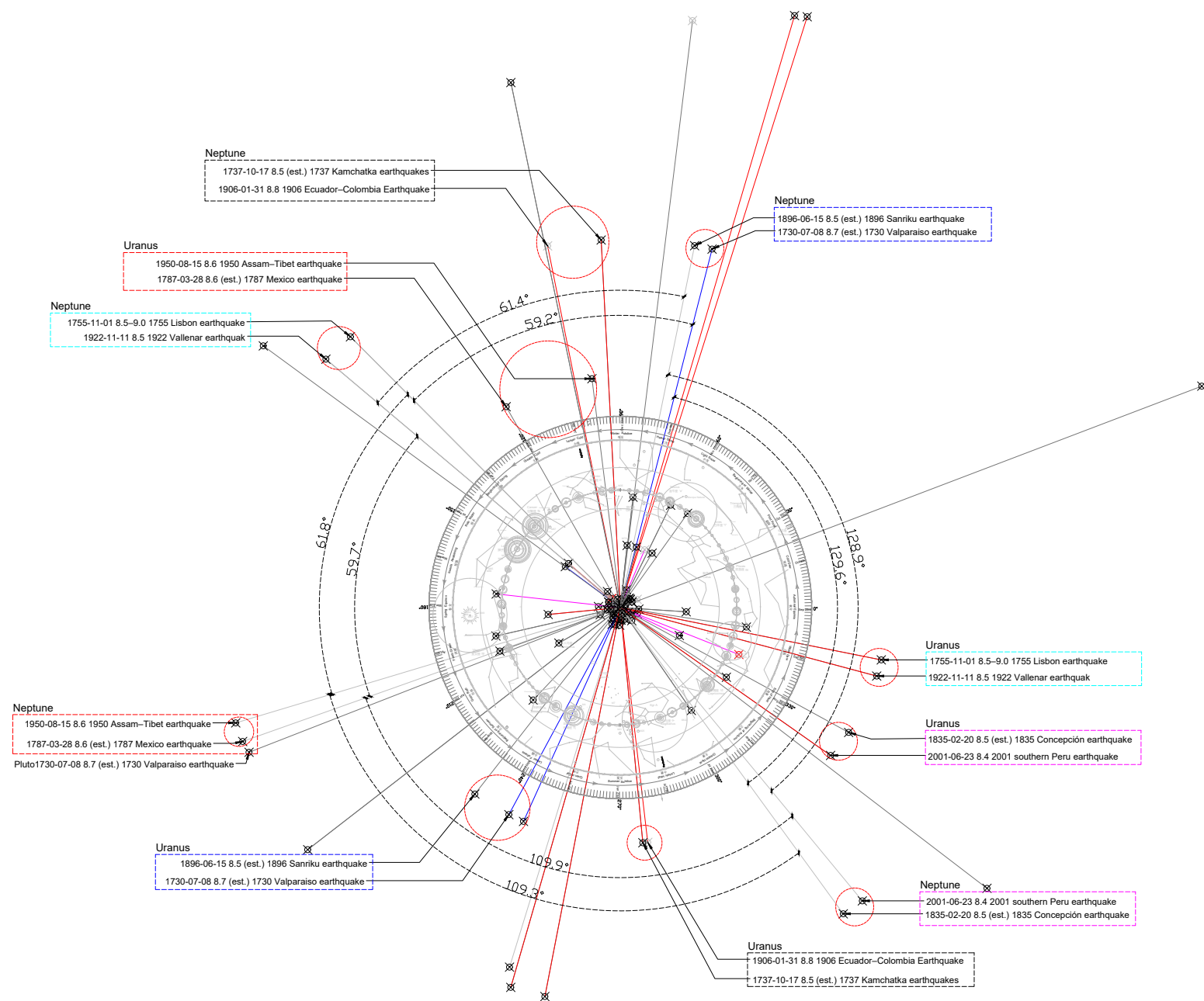


Fig.2.15 Earthquakes with a 166-167 year cycle

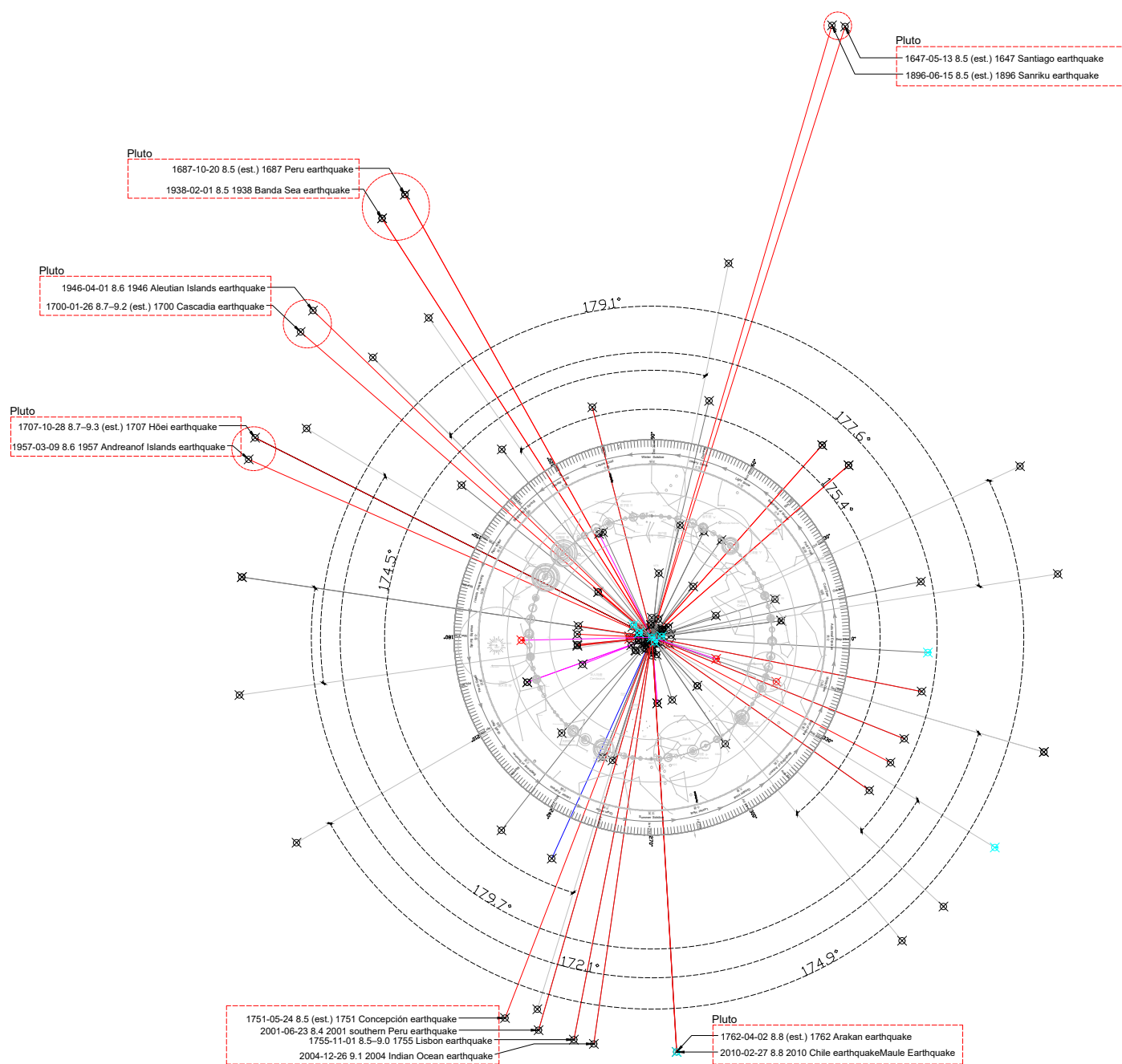
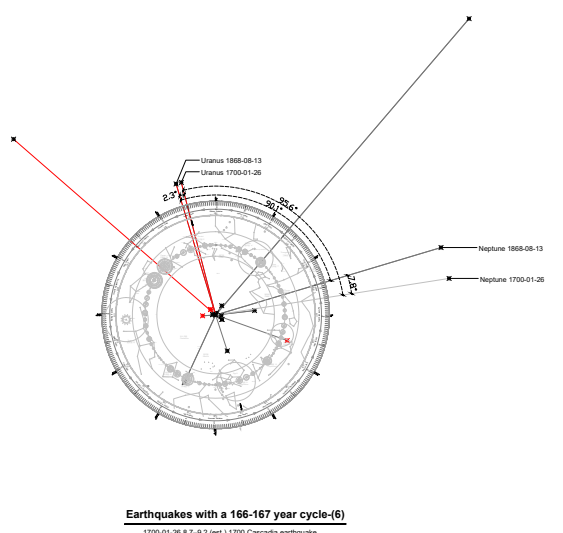
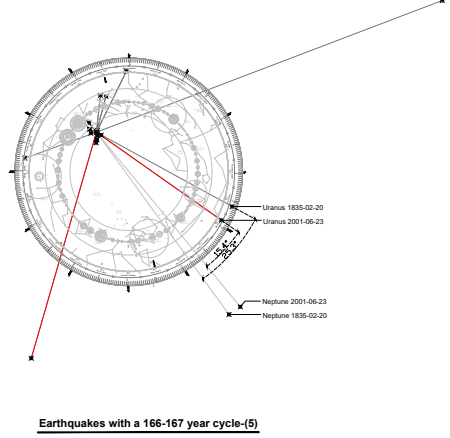
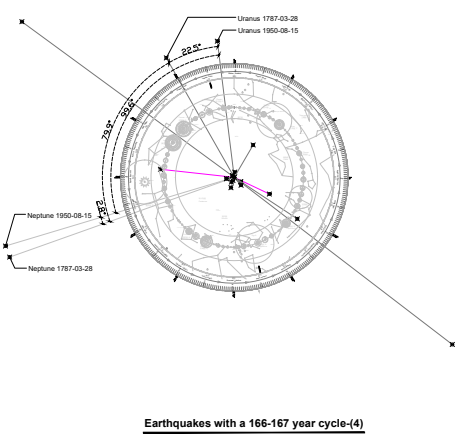
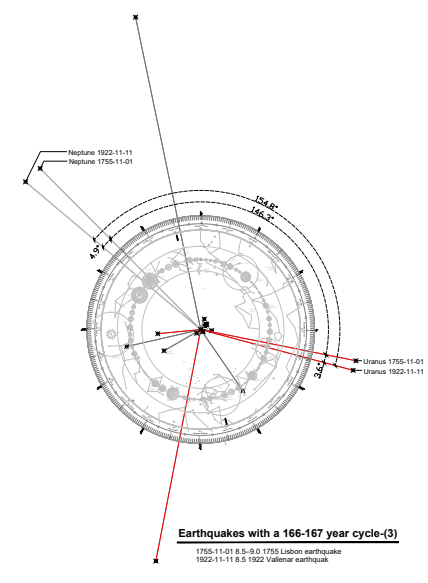
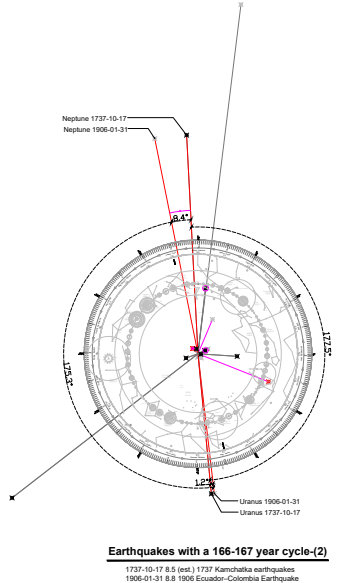
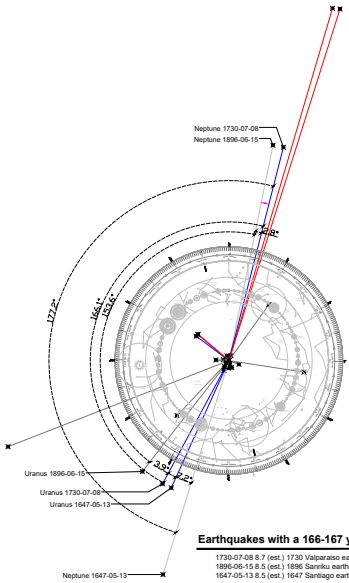
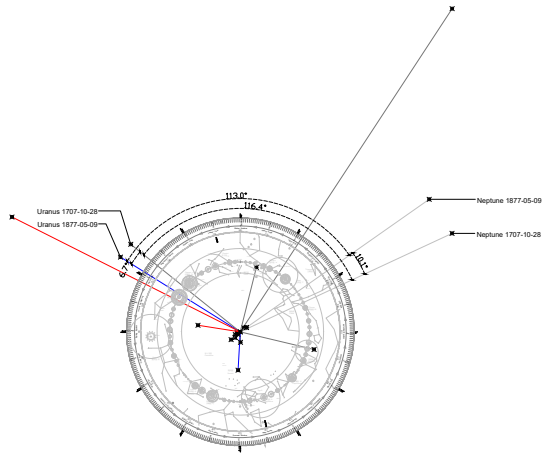


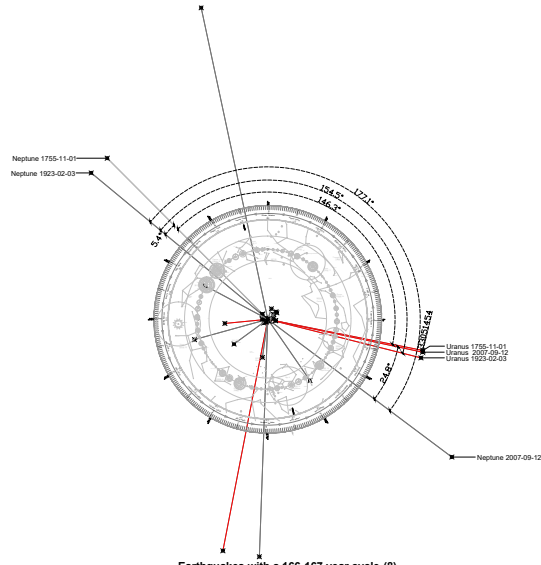
Fig.2.16 Earthquakes with a 250 year cycle





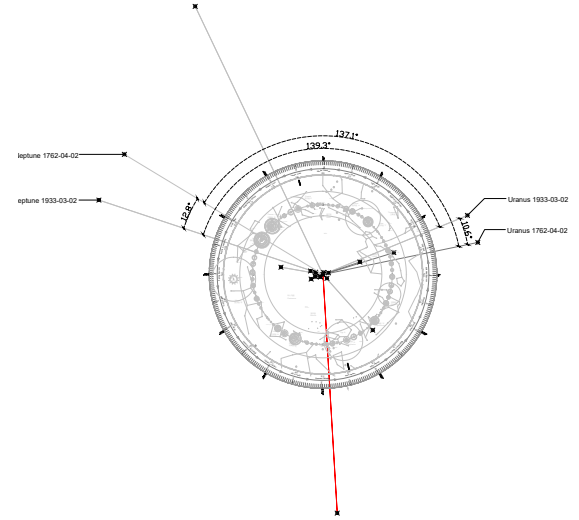
Earthquakes with a 166-167 year cycle-(7)

1707-10-28 8.7-9.3 (est.) 1707 Hilo earthquake
1877-05-09 8.5 (est.) 1877 Iquique earthquake



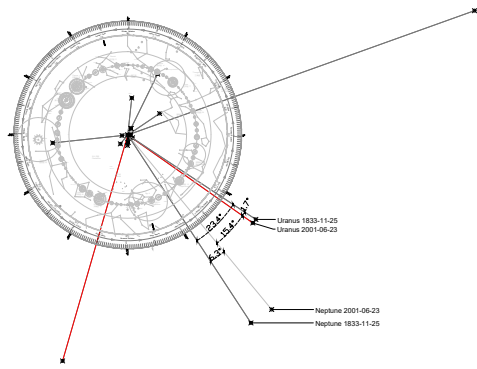
Earthquakes with a 166-167 year cycle-(8)

1755-11-01 8.5-9.0 1755 Lisbon earthquake
1923-02-03 8.4 1923 Kamchatka earthquake
2007-09-12 8.4 2007 Sumatra earthquakes



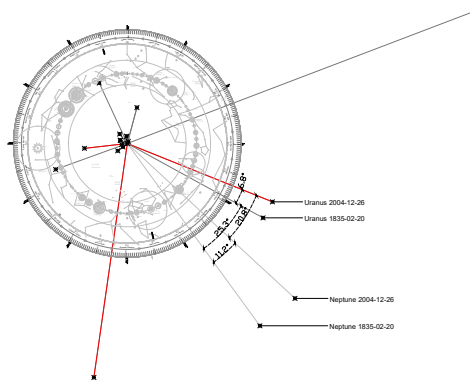
Earthquakes with a 166-167 year cycle-(9)

1762-04-02 8.8 (est.) 1762 Aitolon earthquake
1933-03-02 8.4 1933 Sanriku earthquake



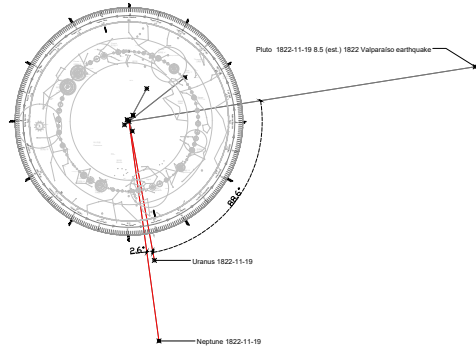
Earthquakes with a 166-167 year cycle-(10)

1833-11-25 8.8 (est.) 1833 Sumatra earthquake
2001-06-23 8.4 2001 southern Peru earthquake



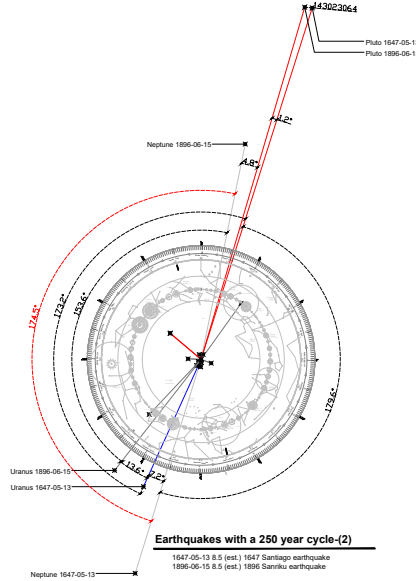
Earthquakes with a 166-167 year cycle-(11)

1835-02-20 8.5 (est.) 1835 Concepción earthquake
2004-12-26 9.1 2004 Indian Ocean earthquake



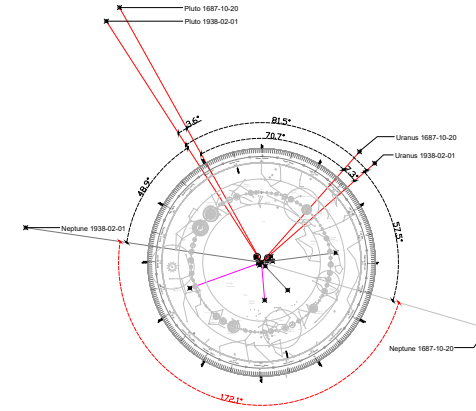
Earthquakes with a 250 year cycle-(1)

1776-12-16 8.3 (est.) 1810 Vidua earthquake (No drawings, outside the DE405 ephemeris)
1822-11-19 8.5 (est.) 1822 Valparaiso earthquake



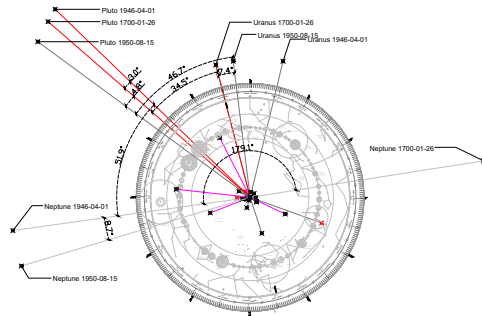
Earthquakes with a 250 year cycle-(2)

1847-05-13 8.5 (est.) 1847 Santiago earthquake
1896-06-15 8.5 (est.) 1896 Samriku earthquake



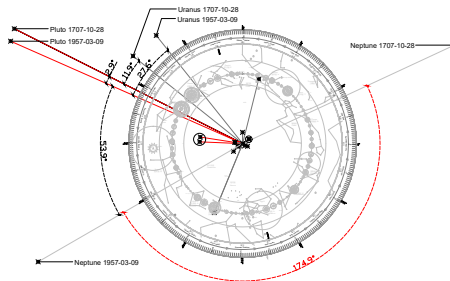
Earthquakes with a 250 year cycle-(3)

1687-10-29 8.5 (est.) 1687 Peru earthquake
1938-02-01 8.5 1938 Banda Sea earthquake



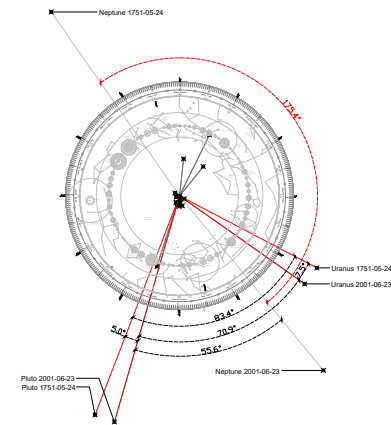
Earthquakes with a 250 year cycle-(4)

1700-01-28 8.7-8.2 (est.) 1700 Cascadia earthquake
1946-04-01 8.6 1946 Aleutian Islands earthquake
1950-08-15 8.6 1950 Assam-Tbet earthquake



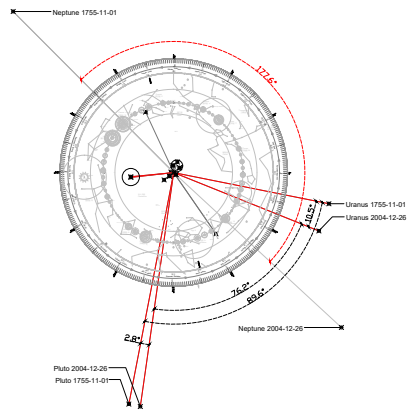
Earthquakes with a 250 year cycle-(5)

1707-10-28 8.7-9.3 (est.) 1707 Hoi earthquake
1957-03-09 8.6 1957 Andreanof Islands earthquake



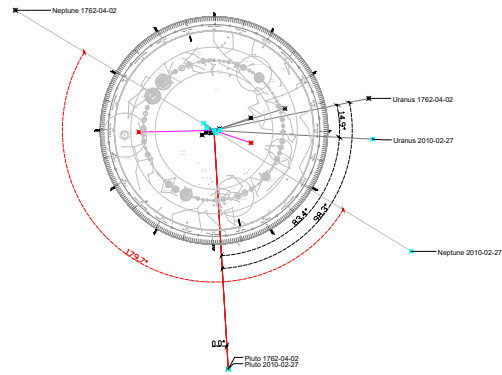
Earthquakes with a 250 year cycle-(6)

1751-05-24 8.5 (est.) 1751 Concepción earthquake
2001-06-23 8.4 2001 southern Peru earthquake



Earthquakes with a 250 year cycle-(7)

1755-11-01 8.5-9.0 1755 Lisbon earthquake
 2004-12-26 9.1 2004 Indian Ocean earthquake



Earthquakes with a 250 year cycle-(8)

1762-04-02 8.8 (est.) 1762 Arakan earthquake
 2010-02-27 8.8 2010 Chile earthquake/Maule Earthquake