



THE GLOBE PROGRAM



ENSO Cycle and the Southern Thailand Disasters explained with Astrometeorology

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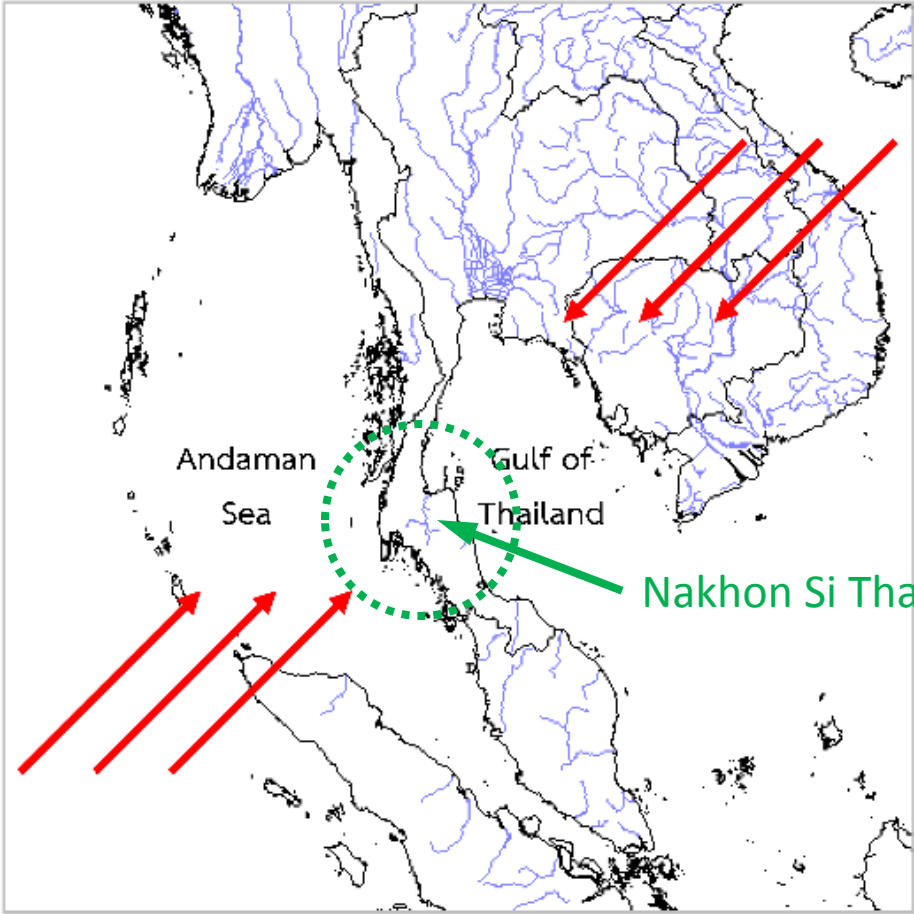
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2017

Southern Thailand's NE and SW Monsoon

Longitude: 90°E to 110°E

Latitude: 0° to 20°N



Northeast Monsoon
Winter
October-January

Southwest Monsoon
Rainy Season
June-September

Nakhon Si Thammarat Province

(Source: Coastlines/boundaries from GHSSH and rivers from WDBII)

NST Major Flood during Dec 2016 to Jan 2017



Weather Monitoring and Disaster Warning System

05 Dec 2016 05:00 PM  06:21 AM  06:01 PM 



Kiriwong, Nakhon Si Thammarat 

23.4°C  0.0 / 16.0 • calm
 139 mm  0.0 km/h
05 Dec 2016 05:00 PM  0.0 mb/h % 99 %

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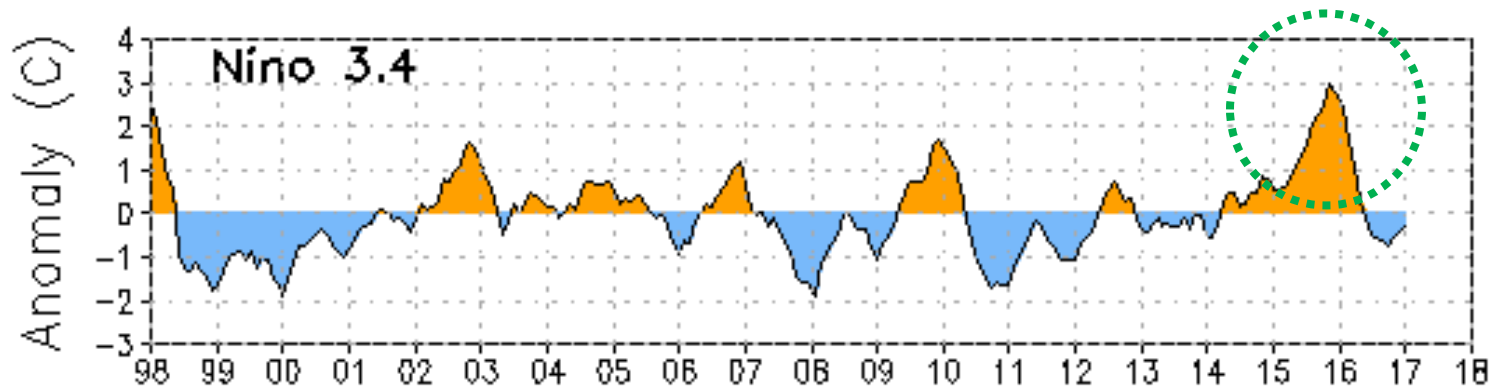
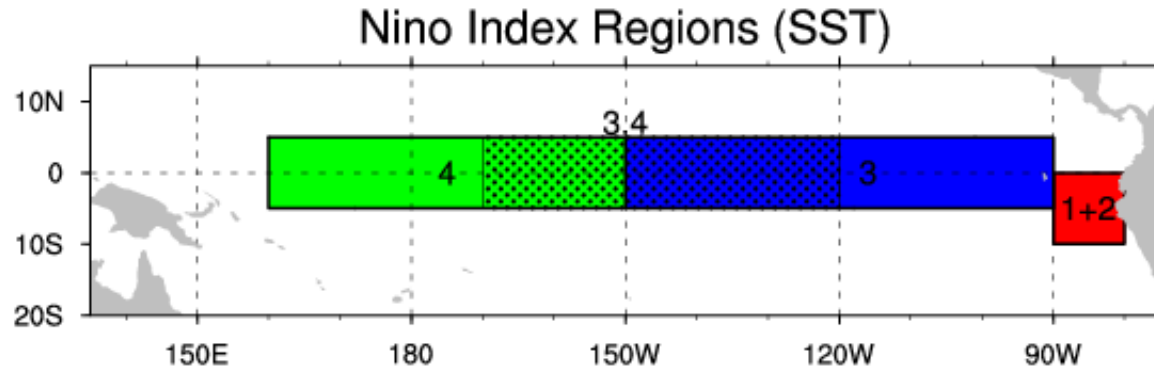


Kiriwong, Nakhon Si Thammarat 

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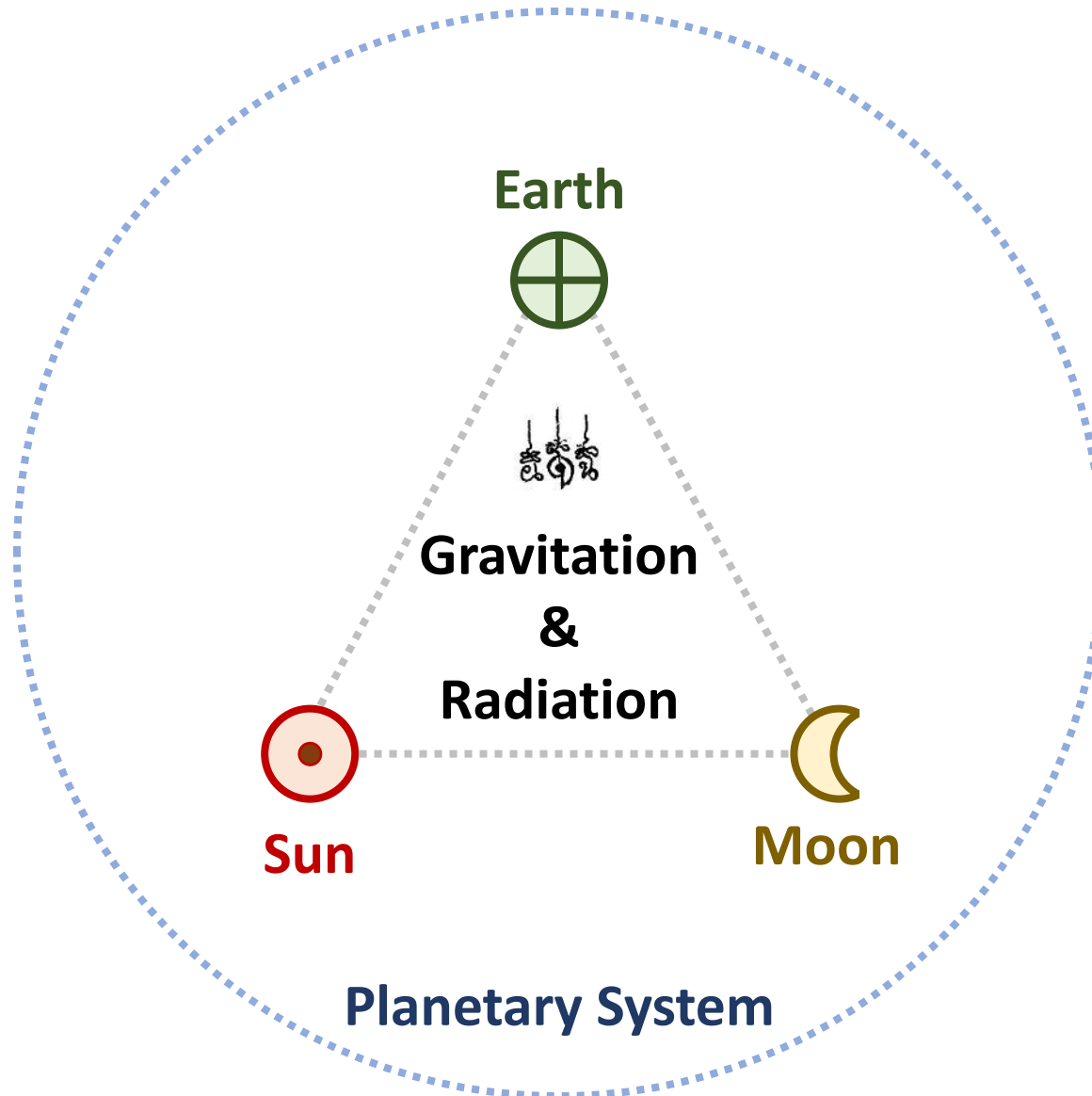
www.nakhonsiawesome.com

Niño 3.4 Index



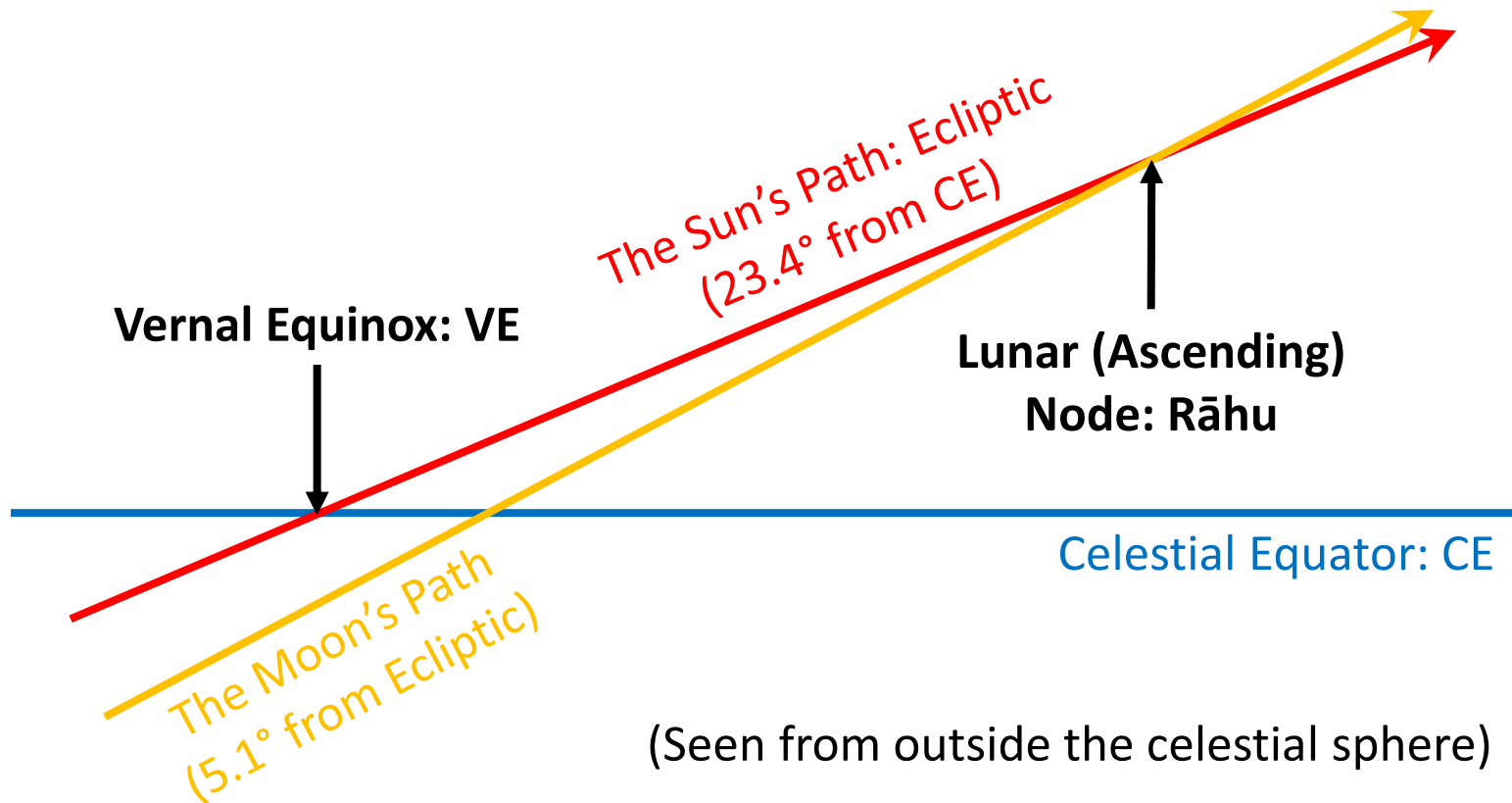
<http://www.cpc.ncep.noaa.gov/products/CDB/Tropics/figt5.gif>

Astronomy + Meteorology = Astrometeorology

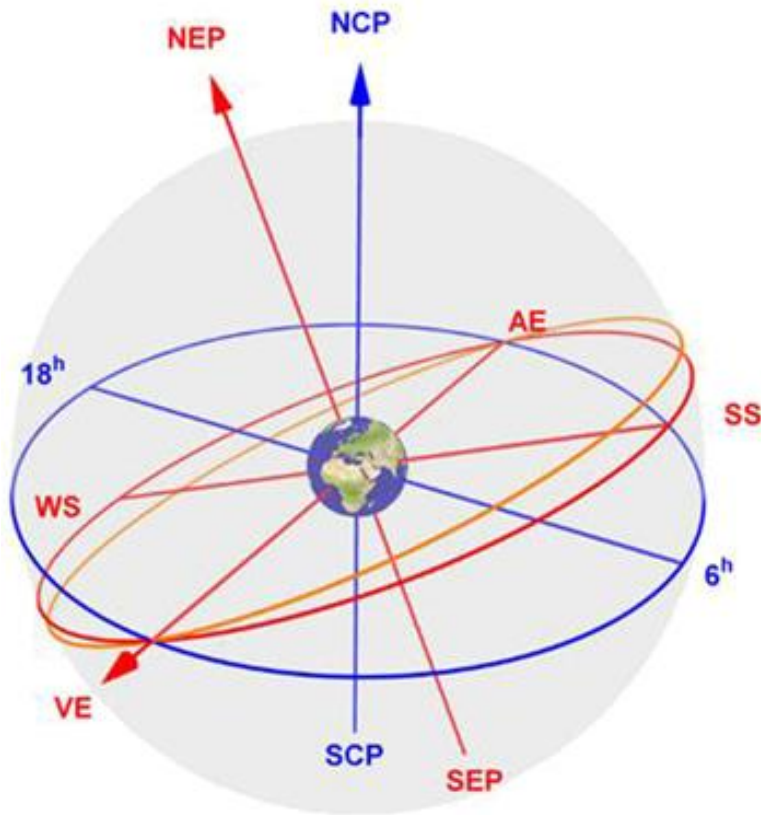


Rāhu = Lunar Ascending Node

VE moves westward (to the left) on CE every 25,800 years: **“General Precession”**
Rāhu also moves westward on ecliptic every 18.6 years: **“Nodal Precession”**



Rāhu-Avatāra Cycle = Lunar Standstill Cycle

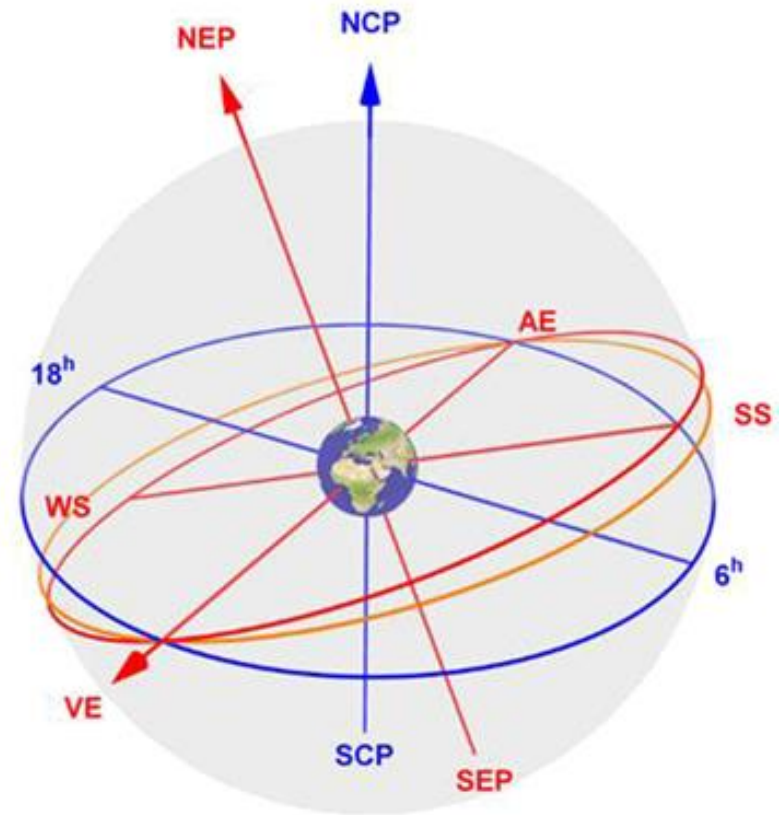


Major Lunar Standstill

Rāhu at Vernal Equinox

Max. Dec. = $\pm 28.5^\circ$

From 28.5°N to 28.5°S in 14 days



Minor Lunar Standstill

Rāhu at Autumnal Equinox

Max. Dec. = $\pm 18.5^\circ$

From 18.5°N to 18.5°S in 14 days

Rāhu and the Srivijaya Empire

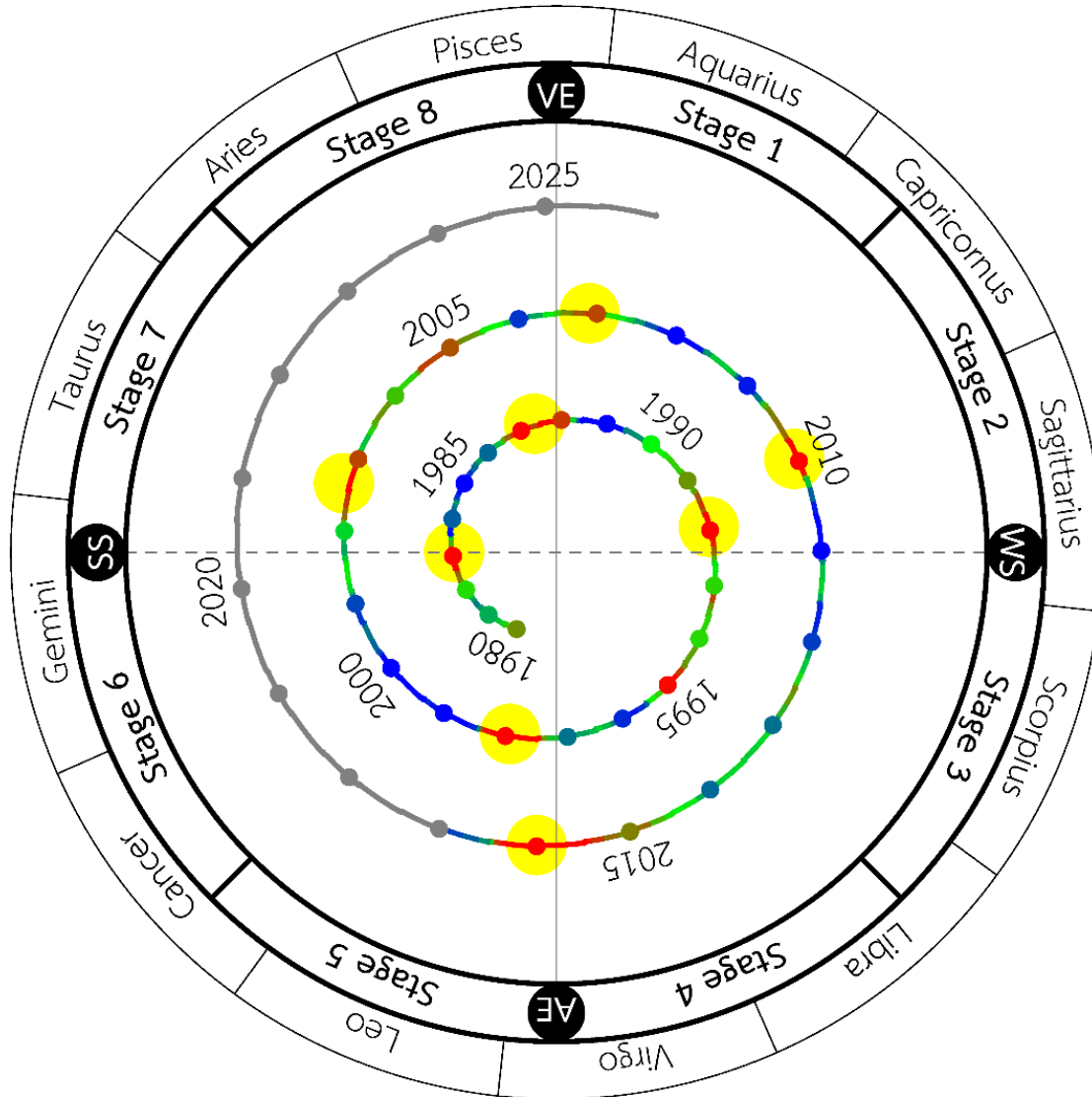


Rāhu in were symbolized with a giant swallowing the Sun or the Moon (up).

The sacred city pillar of Nakhon Si Thammarat was built and completed before the beginning of the new Rāhu-Avatāra cycle in 1988 in order to reduce the damage caused by natural disaster (right).



Rāhu-Avatāra Cycle triggers ENSO?



Rāhu-Avatāra cycle diagram shows positions of the Moon's ascending node at any given time as a spiral. Its color represents ENSO states obtained from the Niño 3.4 index, blue for La Niña with SST anomaly lower than -1°C , green for neutral state, and red for El Niño with SST anomaly higher than $+1^{\circ}\text{C}$. Inner ring shows 8 stages of Rāhu-Avatāra cycle, and outer ring shows 12 signs of the zodiac.

What's Next?

The Moon may partially plays important role in modulating and maintaining the strength of ENSO, by triggering the Pacific Ocean every about 4.65 years.

Is there something to do with the Walker circulation or the equatorial Pacific thermocline?

More observations to monitor these events and model simulations are require in order to confirm this hypothesis.

Let's keep finding!