

The solar-lunar calendar of Calderas

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rp-f.com

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Petroglyphs in Panama

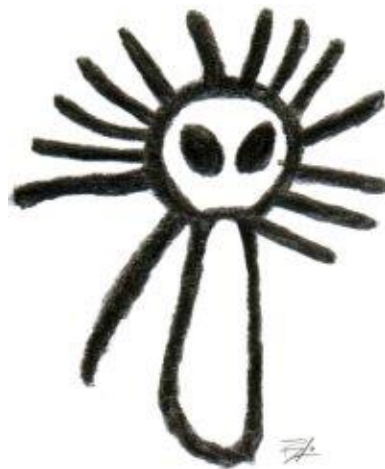
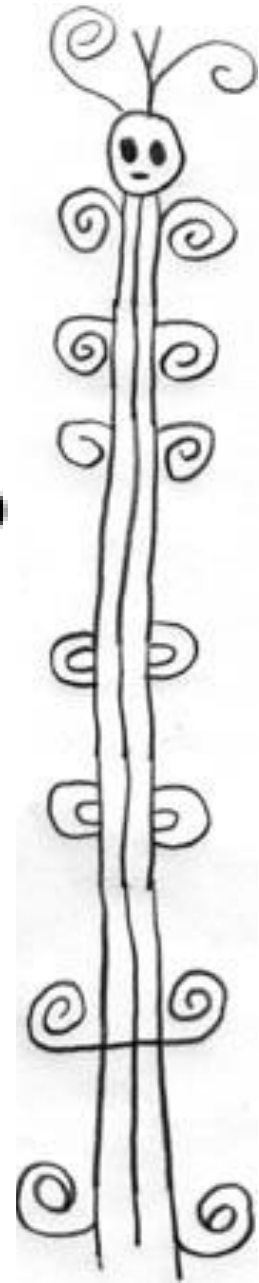
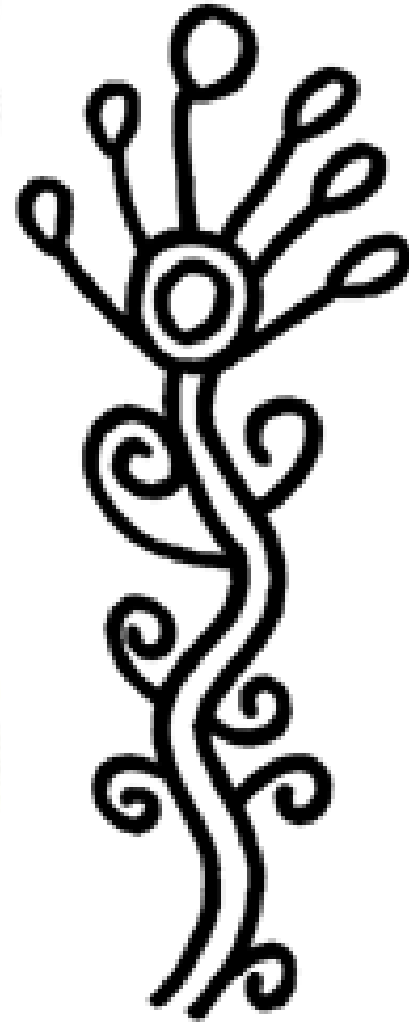
Pet·ro·glyph: *n.* a drawing or painting on rock, esp. one made by a member of a prehistoric people. Also called petrograph.

Webster's New Universal Unabridged Dictionary.

Many Panamanian petroglyphs are still unregistered.

Examples:

- Polanco
- Los Olivos



Piedra Pintada: The painted stone

- One of the most famous set of petroglyphs in Panama.
- 45 minutes from David City
- Calderas>Boquete>Chiriqui
- GPS (datum WSG84):
8°39.373N 82°22.057W
378 meters above sea level
- A inverted sketch of its West face appears in "Panorama of Panama's Petroglyphs" (1961) by Neville & Eva Harte.



“Face of the Sun”?

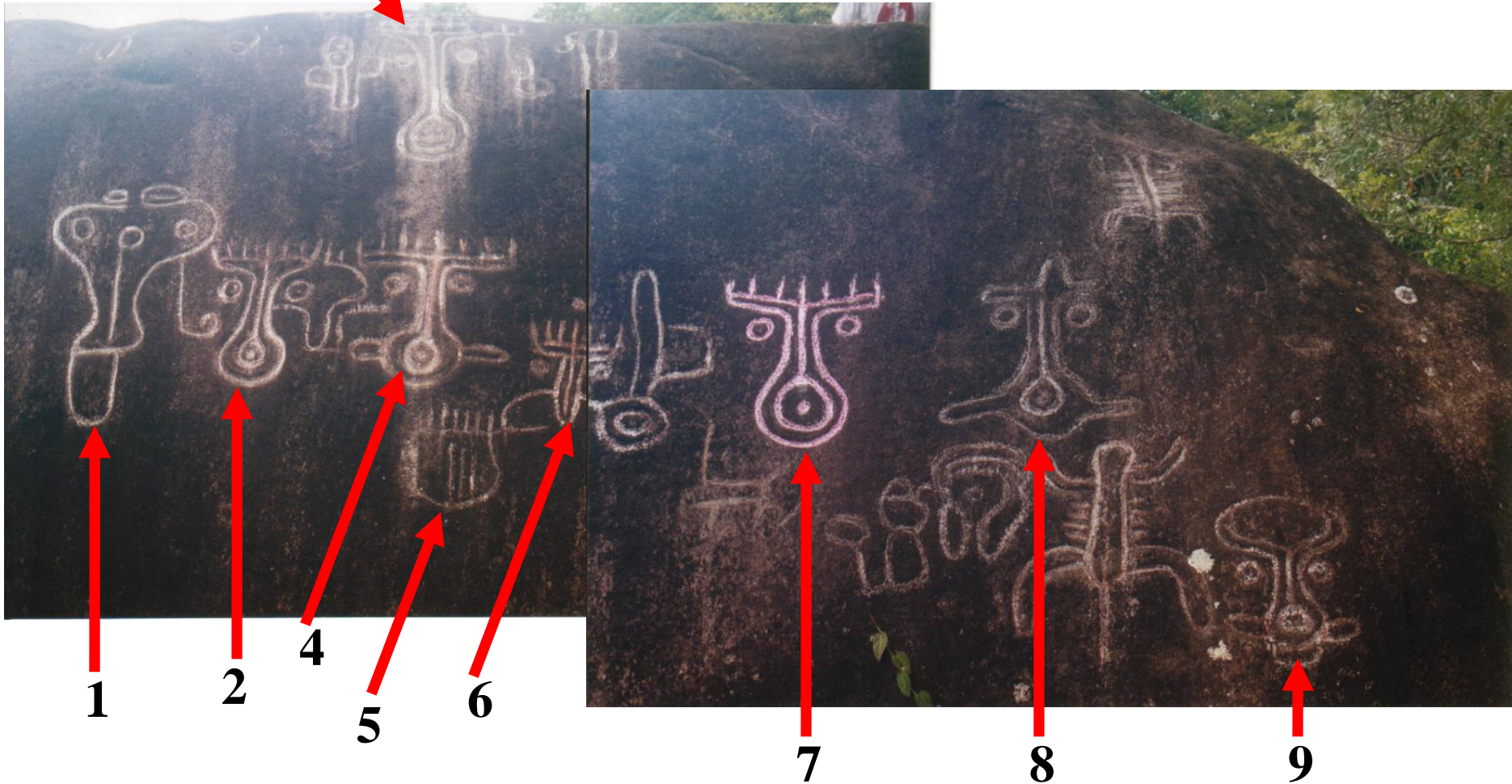


- Carved in the West face of the stone
- Central line points to the East
- Displays some human traits: eyes, mouth, ears.
- Displays some sun-like traits: circular shape, lines give glowing appearance.
- Maybe it states the purpose of the following carvings?

Nine T-shaped figures in the face

In my opinion, this is a sequence of nine trial-&-error attempts to build a solar-lunar calendar.

3



Is this glyph a solar-lunar calendar?



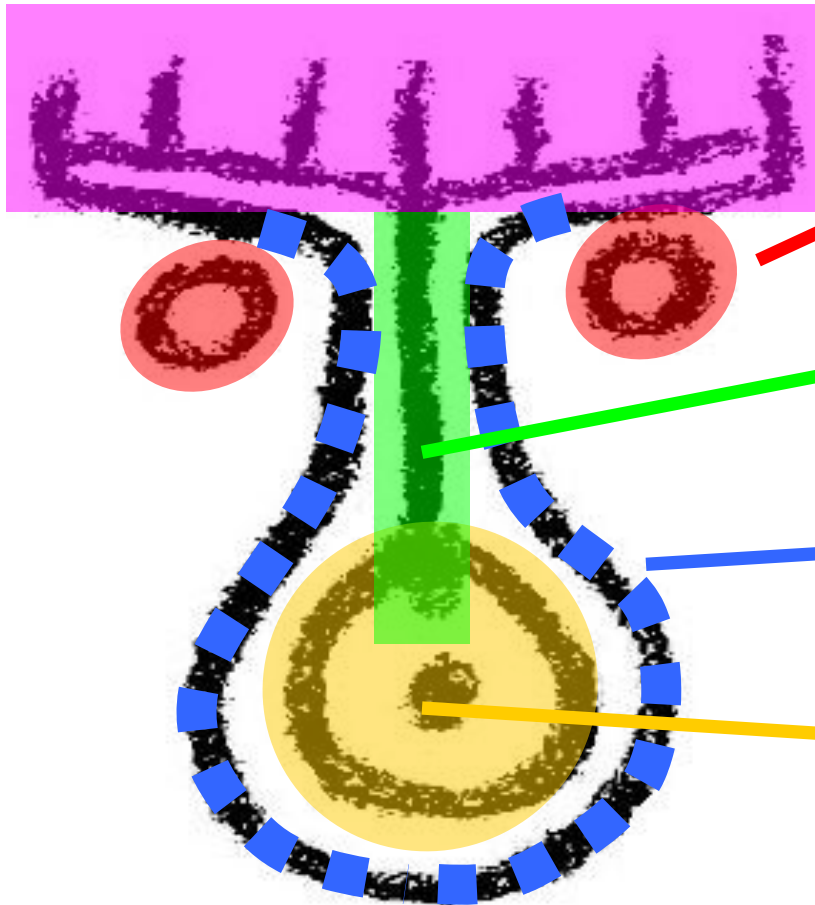
- The 7th “T” is the most symmetrical figure of all.
- Its carving is wider and deeper into the stone than most of the rest.
- It looks more like a “finished product”

In March 2000, I stated this glyph was a prehispanic solar-lunar calendar made by native panamanians.

Notice: The image looks tilted because of perspective. Actually it is symmetrical.

The five parts of the calendar

- Seven lunar lines for 12 moon-cycles in the year.

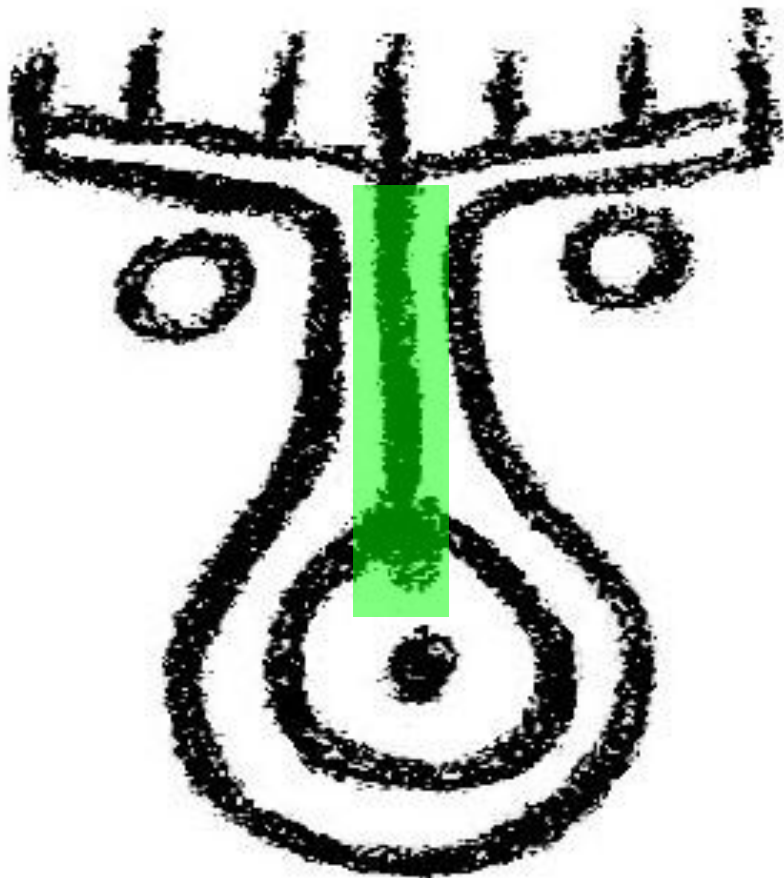


- The solstice Suns

- The East line

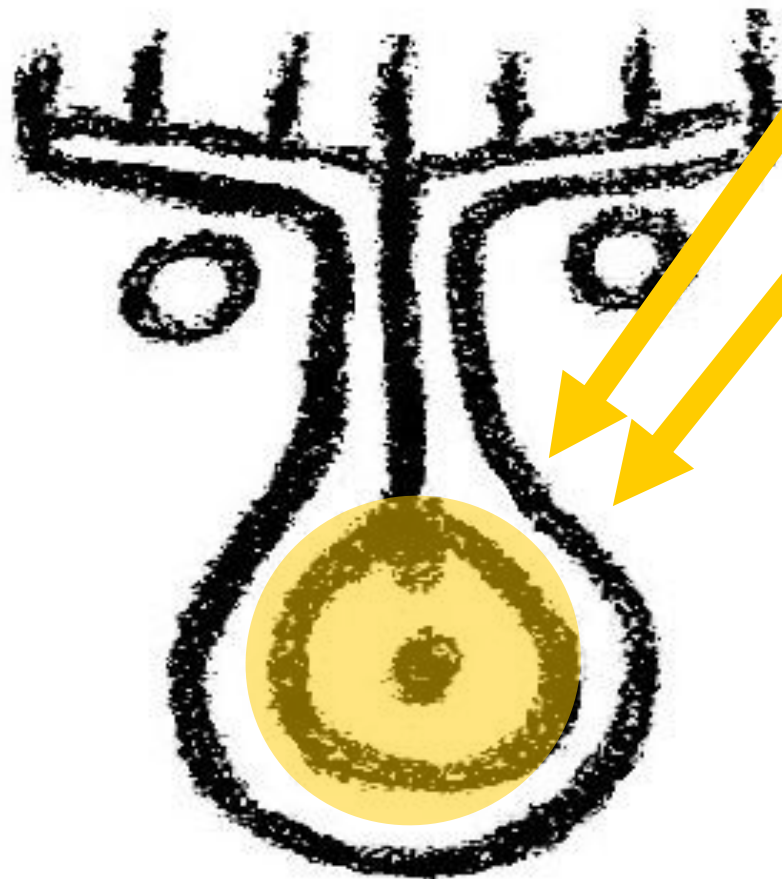
- The S-shaped path

- The equinox Sun



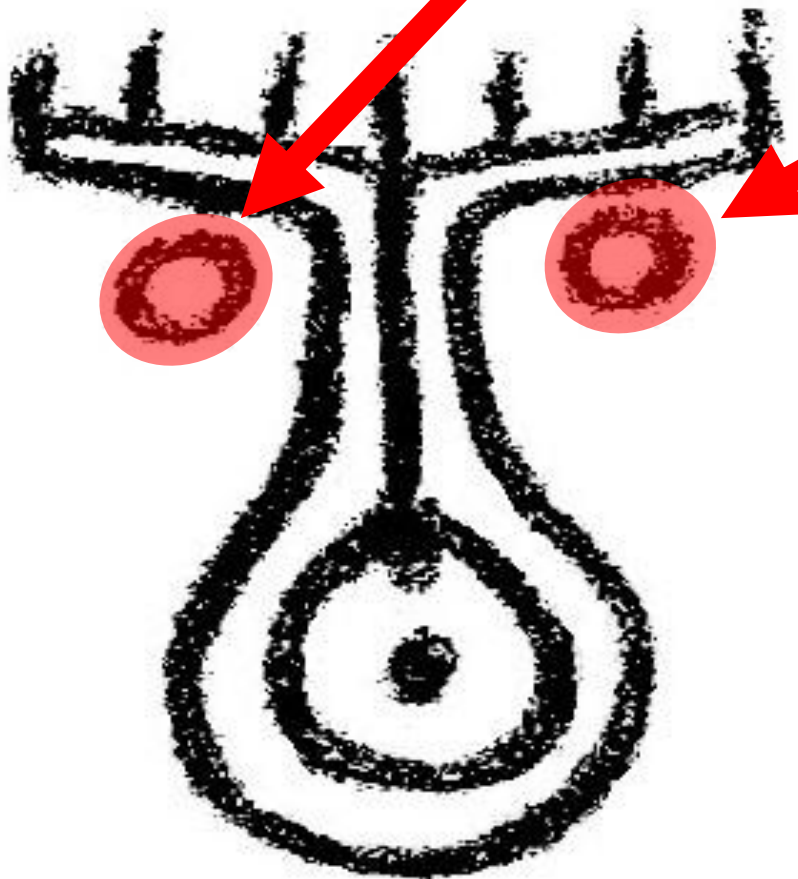
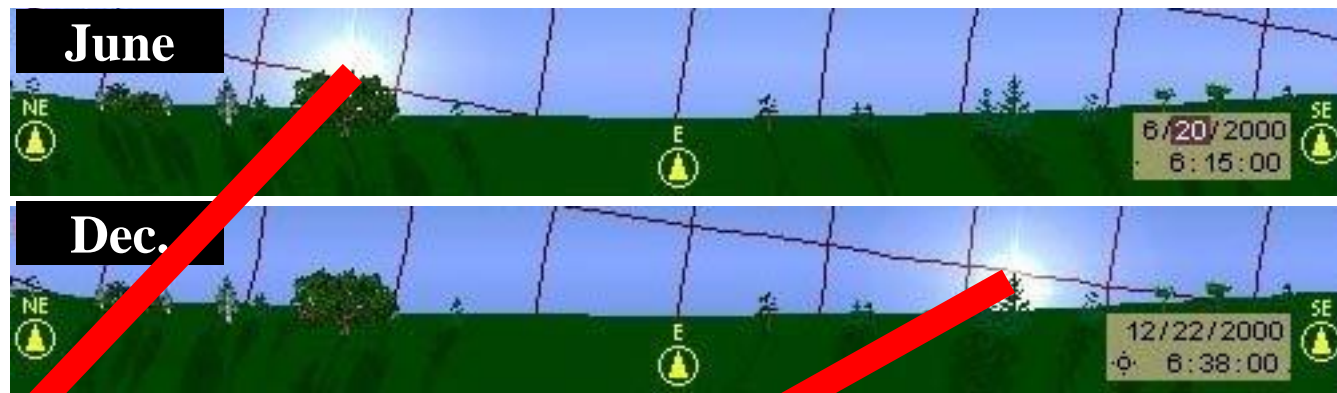
Part 1 of 5: The East line

This line points towards the East, establishing the point of reference for the workings of the solar-lunar calendar.



Part 2 of 5: The Equinox Sun

This circle with a point in the middle indicates the March equinox and the September equinox, when the sun rises exactly at the East.



Part 3 of 5: The Solstice Suns

These two circles indicate the June solstice and the December solstice, when the sun rises at its greatest northern and southern elongations with respect to the East (23°).

June



In the horizon: 23°

In the calendar: 23°

Calculations

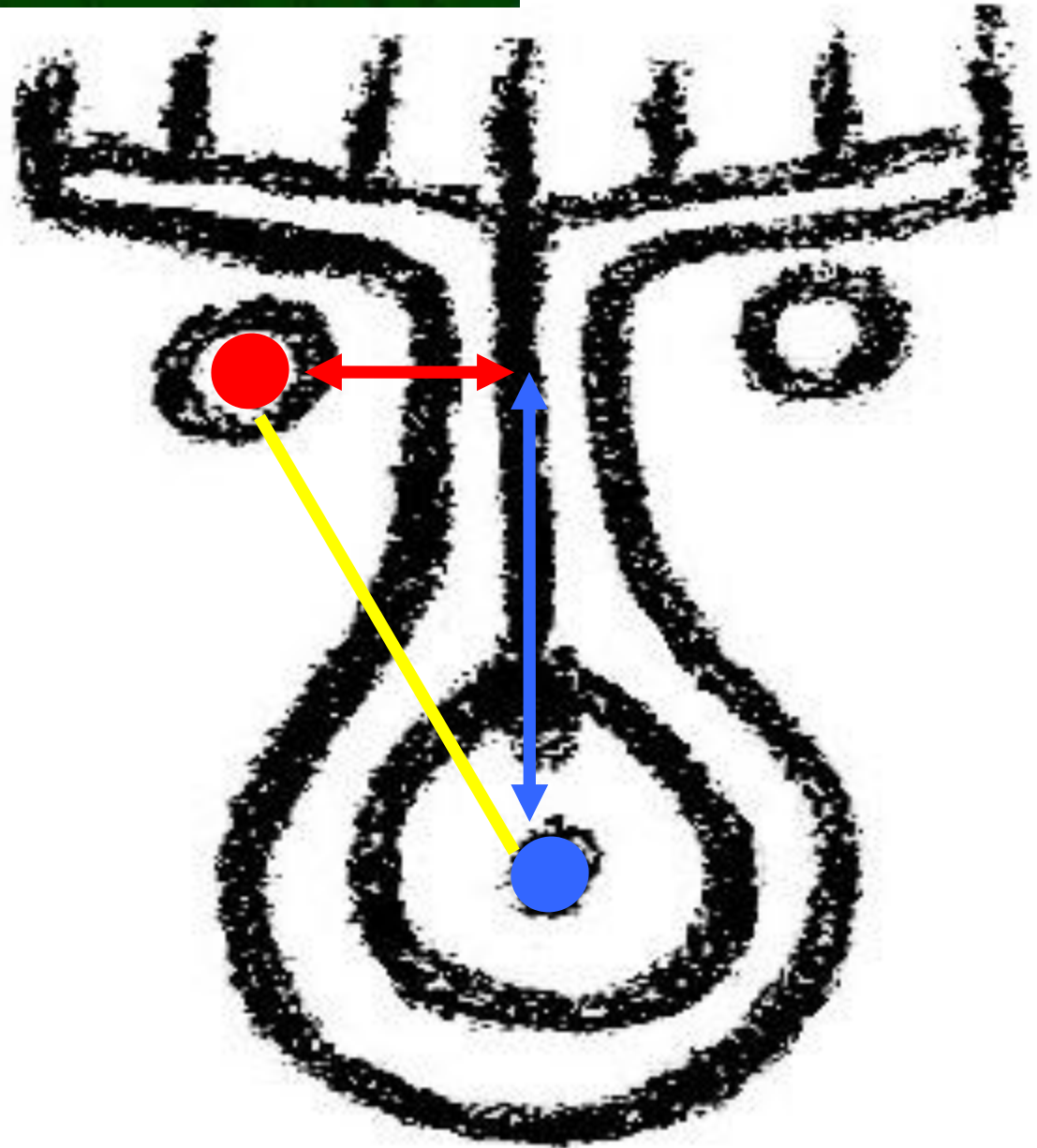
Blue line: 31.5 cm

Red line: 13.5 cm

Angle is calculated as:

$$\tan^{-1}(13.5/31.5) = 23^\circ$$

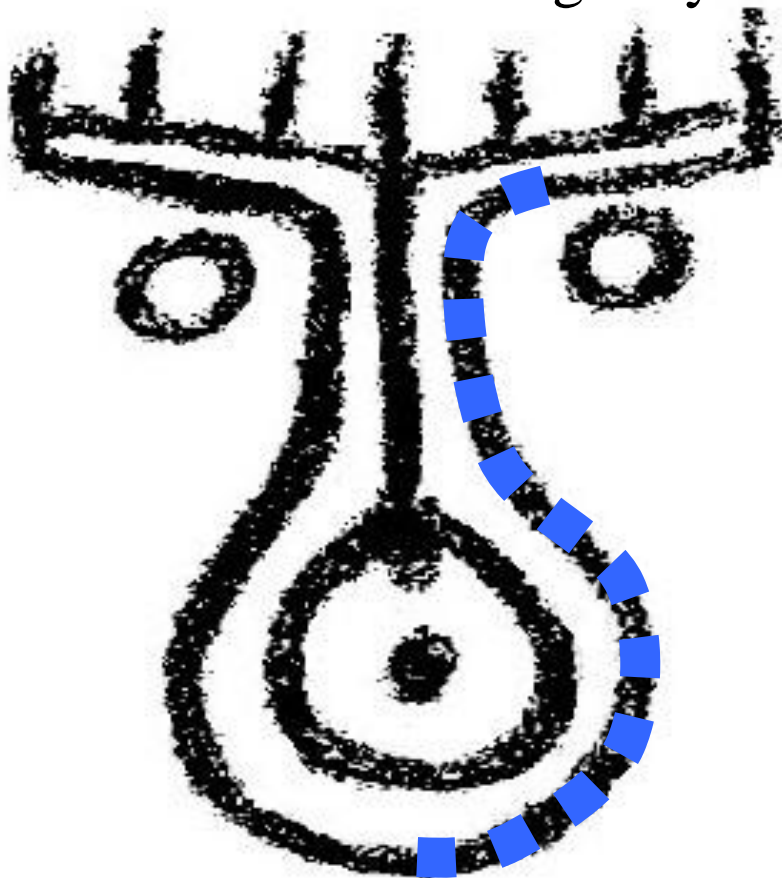
Can this be a coincidence?



Part 4 of 5:

The S-shaped path

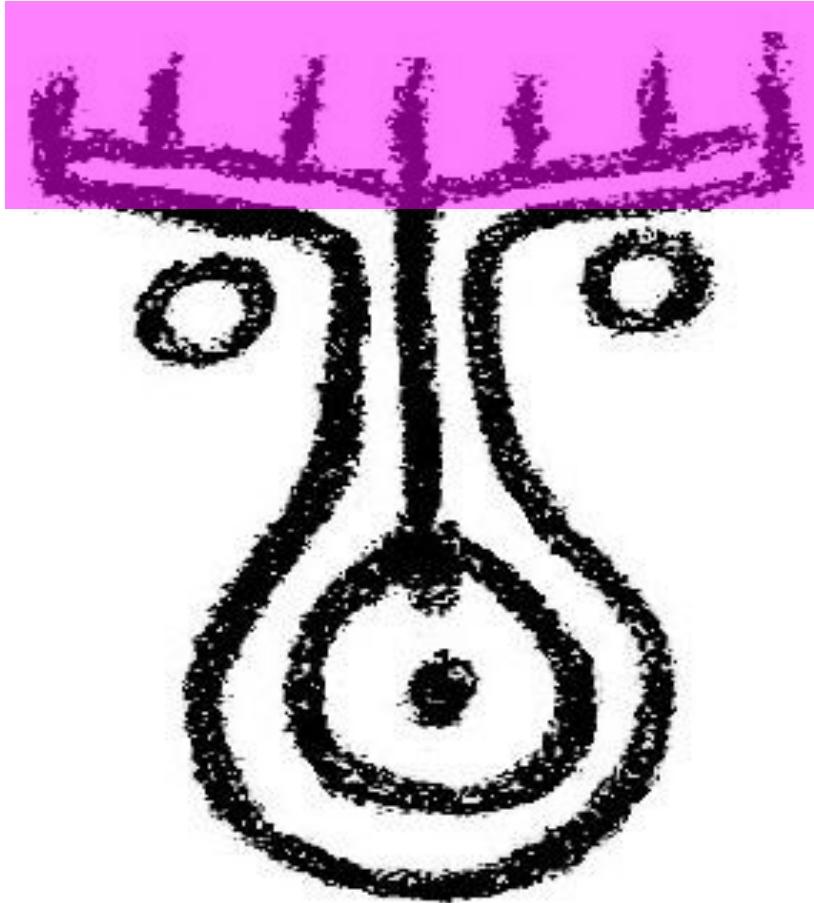
The path the Sun “follows” in the horizon, “spread” through time, resembles an imaginary S.



Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec
Jan
Feb
Mar



Part 5 of 5: Seven lunar lines for twelve lunations

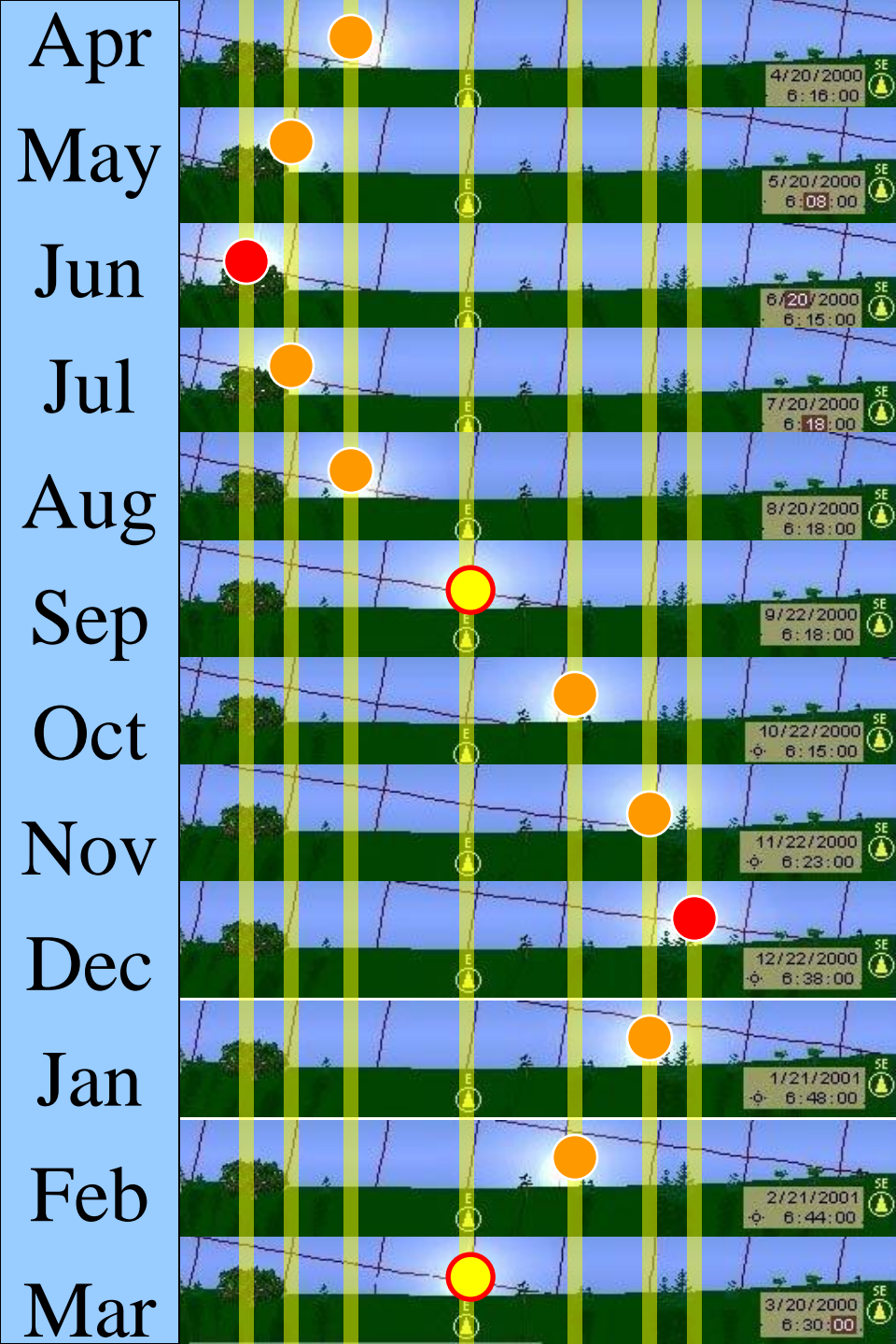


- A lunation (synodic month) is the time between two identical phases of the moon. It lasts ≈ 29.53 days.
- If each lunar line represents a lunation plus one day (except that before the vernal equinox, which represents only a lunation with no extra day), it is possible to use the calendar with a high precision:
 $(29.53 \times 10) + (11) = 365.4$
A sidereal year is 365.26 days.
Thus, the error is ≈ 0.2 days.
- We think the inventors of the calendar may have used it adding these compensation days. Another option is to continually “calibrate” their reading of the calendar by means of solstices and equinoxes.

How are 7 lines enough?

- As we show in the figure, seven lines are enough to count the 12 lunations of the year.
- Notice the middle line (4) rests over the East.
- Line 1 is used once (June).
- Line 7 is used once (Dec).
- Lines 2, 3, 4, 5 and 6 are used twice.

1 2 3 4 5 6 7



Frequently asked questions

- What is the use of the calendar?
 - A calendar can help agriculture-based people to identify the best time of the years to plant and harvest. Dates could also have a religious meaning.
- Are you sure this is a calendar?
 - Nobody can tell. However, the world-famous archaeoastronomer Anthony Aveni told me that what I claim is possible, but more study is required.
- What are those iguanas doing in the calendar?
 - Well, what are those Ferraris and girls in bikinis doing in our modern-day calendars? Nothing!