The Pleroman Calendar

Initial Proposal for Technical and Scholarly Review

The Pleroman Calendar is a proposed thirteen-month solar civil calendar designed around astronomical year boundaries, uniform month structure, continuous seven-day weeks, and direct seasonal alignment.

The calendar begins each year at the March equinox. The astronomical equinox is calculated using established astronomical methods and assigned to a canonical civil date using UT1 at the Greenwich meridian. That date becomes March 1 and New Year's Day for the Pleroman year.

The calendar retains the familiar civil year number. The Pleroman year beginning at the March equinox in 2026 is therefore Year 2026.

Calendar Structure

The Pleroman year consists of thirteen months:

1. March
2. April
3. May
4. June
5. July
6. August
7. September
8. October
9. November
10. December
11. January
12. February
13. Telara

March through February each contain exactly 28 days.

This produces:

$12 \times 28 = 336$ days

The final month, Telara, contains the remaining days required to reach the next March-equinox year boundary.

A 365-day year therefore contains:

$336 + 29 = 365$ days

A 366-day year contains:

336 + 30 = 366 days

There is no independent leap-year formula. The length of Telara is determined by the actual interval between successive astronomical year boundaries.

The normal seven-day week remains uninterrupted. Every day belongs to both a month and a weekday. No “blank,” “year,” or non-weekday days are introduced.

Design Objectives

The Pleroman Calendar was developed around several specific objectives:

- maintain direct alignment with the seasonal year;
- preserve the uninterrupted seven-day week;
- create a highly regular monthly structure;
- concentrate annual irregularity in one predictable location;
- retain familiar civil year numbering;
- restore September, October, November, and December to their etymological positions as Months 7 through 10;
- ensure that every valid date can be deterministically converted to and from conventional civil dates;
- avoid an independently calculated leap-year cycle when the astronomical year boundary can be determined directly.

The system is intended as a civil calendar rather than a replacement for astronomical timekeeping itself.

Why the Structure Is Different

Most of the irregularity found in the current Gregorian month structure is eliminated.

Twelve of the thirteen Pleroman months contain exactly four weeks. Because 28 is evenly divisible by seven, the weekday pattern for Days 1 through 28 is identical in every month within a given year.

Telara serves as the completion month. Its 29th day completes an ordinary 365-day year, while its 30th day provides the additional day when the astronomical year boundary requires a 366-day civil interval.

This keeps all annual residual days inside an ordinary named month and preserves continuous weekday sequencing.

Astronomical Foundation

The March equinox serves as the defining year boundary.

The March equinox is already a consequential reference point in established civil-calendar history. Astronomically, it is the seasonal boundary that begins spring in the Northern Hemisphere and autumn in the Southern Hemisphere. The Gregorian reform itself was undertaken in part because the Julian calendar had allowed the astronomical March equinox to drift away from the March 21 reference used in ecclesiastical Easter reckoning. The reform corrected the accumulated seasonal drift and revised the leap-year rule so the civil calendar would remain closely synchronized with the seasonal year.[1][2] The Pleroman Calendar uses the same astronomical phenomenon in a different way: rather than using an arithmetic leap cycle to keep the equinox near a conventional calendar date, it makes the actual March equinox the annual year-boundary event.

The intended calculation chain is:

astronomical ephemeris or accepted equinox algorithm
→ equinox instant
→ conversion to UT1
→ Greenwich UT1 civil date
→ Pleroman March 1

UT1 is used for canonical year-boundary assignment because it reflects the Earth's rotational orientation rather than relying solely on an administratively maintained atomic civil-time scale.

Ordinary Pleroman dates continue to function as normal civil dates and roll over at local midnight.

Equinoxes and solstices are calculated astronomically and are not assigned predetermined Pleroman dates.

Current Validation

The calendar has been implemented as a functioning interactive calendar and date-conversion system.

Initial computational testing has shown:

- only 365- and 366-day Pleroman years within the tested range;
- Telara consequently containing only 29 or 30 days;
- uninterrupted weekday progression;
- consistent 28-day structure for Months 1 through 12;
- one-to-one date correspondence;
- successful forward and reverse date conversion;
- no requirement for a separate arithmetic leap-year rule.

A formal technical specification (v0.1) has been drafted, with expanded validation and independent review still in progress.

Relationship to Existing Calendar Reform

The Pleroman Calendar does not claim that thirteen-month calendars, equinox-based calendars, or regularized month structures are individually new ideas.

Historical calendar systems and reform proposals provide precedent for several of these design choices independently. Those precedents do not establish the Pleroman Calendar as preferable; they show that its major components have recognizable roots in calendrical practice rather than depending on novel astronomical assumptions.

Historical and Scientific Precedents

March-equinox relevance to Gregorian reform. The Gregorian calendar was created in part to correct accumulated drift of the March equinox under the Julian calendar and to restore the seasonal relationship used in Easter reckoning. Pleroman therefore elevates an astronomical reference point that already played a central role in the development of the present international civil calendar.[1][2]

Equinox-defined New Year. The Jalali and Solar Hijri calendar traditions provide an established precedent for using the vernal equinox to determine the beginning of a civil year. The Solar Hijri calendar became Iran's official calendar by law in 1925 and remains a modern example of an equinox-centered solar calendar.[3]

Astronomically anchored reform calendars. The French Republican Calendar was established with an epoch on the autumnal equinox and allowed its year to correspond to an astronomical seasonal boundary rather than a permanently fixed Gregorian date. Although its structure and social purpose differ substantially from Pleroman, it demonstrates historical precedent for defining a civil calendar around an equinox.[4]

Thirteen 28-day months. Moses B. Cotsworth's International Fixed Calendar proposed thirteen months of exactly 28 days and attracted serious business and institutional interest in the early twentieth century, including advocacy by George Eastman. Pleroman shares the regular four-week-month concept but differs by keeping the annual residual day or days inside Telara and preserving an uninterrupted seven-day weekday sequence.[5]

March-first month order. A March-first year also has historical precedent in the early Roman calendar. The surviving names September, October, November, and December reflect their original positions as the seventh through tenth months of a year that began in March. Pleroman's month order therefore restores the ordinal relationship preserved in those names rather than inventing a new numerical interpretation.[6]

None of these precedents is identical to the Pleroman Calendar. The proposal concerns the specific architecture produced by combining these historically established ideas with its own year-boundary, month-length, weekday-continuity, and residual-day rules.

The proposal instead concerns the particular combination of:

- an astronomically determined March-equinox New Year;
- thirteen named months;
- twelve uniform 28-day months;
- a variable 29- or 30-day terminal month;
- uninterrupted seven-day weeks;
- no days outside the month structure;
- no days outside the weekday cycle;
- retention of familiar civil year numbering;
- and direct derivation of annual length from successive astronomical boundaries.

The purpose of technical review is not to assume that this arrangement is superior, but to determine whether it is astronomically sound, mathematically consistent, reproducible, and practically defensible as an alternative civil-calendar architecture.

Request for Review

The project is now seeking technical and scholarly criticism.

Reviewers are specifically invited to examine:

- the astronomical definition of the March-equinox year boundary;
- use of UT1 for canonical civil-date assignment;
- long-range equinox calculation and uncertainty;
- year-boundary edge cases;
- conversion mathematics;
- weekday continuity;
- historical calendar precedents;
- civil-time implications;
- and any structural contradiction or failure not yet identified.

The goal is not simply to advocate for a new calendar.

The immediate goal is to determine whether the Pleroman Calendar can withstand rigorous independent examination.

If its underlying rules are flawed, those flaws should be identified.

If they are sound, the next stage will be formal publication of the complete technical specification, reference implementation, validation data, and reproducible conversion methods.

Selected Sources and Precedents

[1] U.S. Naval Observatory, Astronomical Applications Department. "*Introduction to Calendars*." https://aa.usno.navy.mil/faq/calendars

[2] U.S. Naval Observatory, Astronomical Applications Department. "*Leap Years*." https://aa.usno.navy.mil/faq/leap_years

[3] Encyclopaedia Iranica. "*Calendars ii. In the Islamic Period*." Discussion of the Jalali and Solar Hijri calendars and the vernal-equinox New Year. https://www.iranicaonline.org/articles/calendars/calendars-ii-in-the-islamic-period/

[4] Nachum Dershowitz and Edward M. Reingold. "*The French Revolutionary Calendar*," in Calendrical Calculations, Cambridge University Press. https://doi.org/10.1017/CBO9781107051119.020

[5] TIME. "*Business & Finance: New Calendar Progress*." November 21, 1927. Contemporary account of George Eastman's advocacy of Cotsworth's thirteen-month, 28-day calendar. https://time.com/archive/6777134/business-finance-new-calendar-progress/

[6] Douglas Harper, Online Etymology Dictionary. "*September*." Historical etymology of the March-first Roman calendar and the ordinal month names. https://www.etymonline.com/word/September