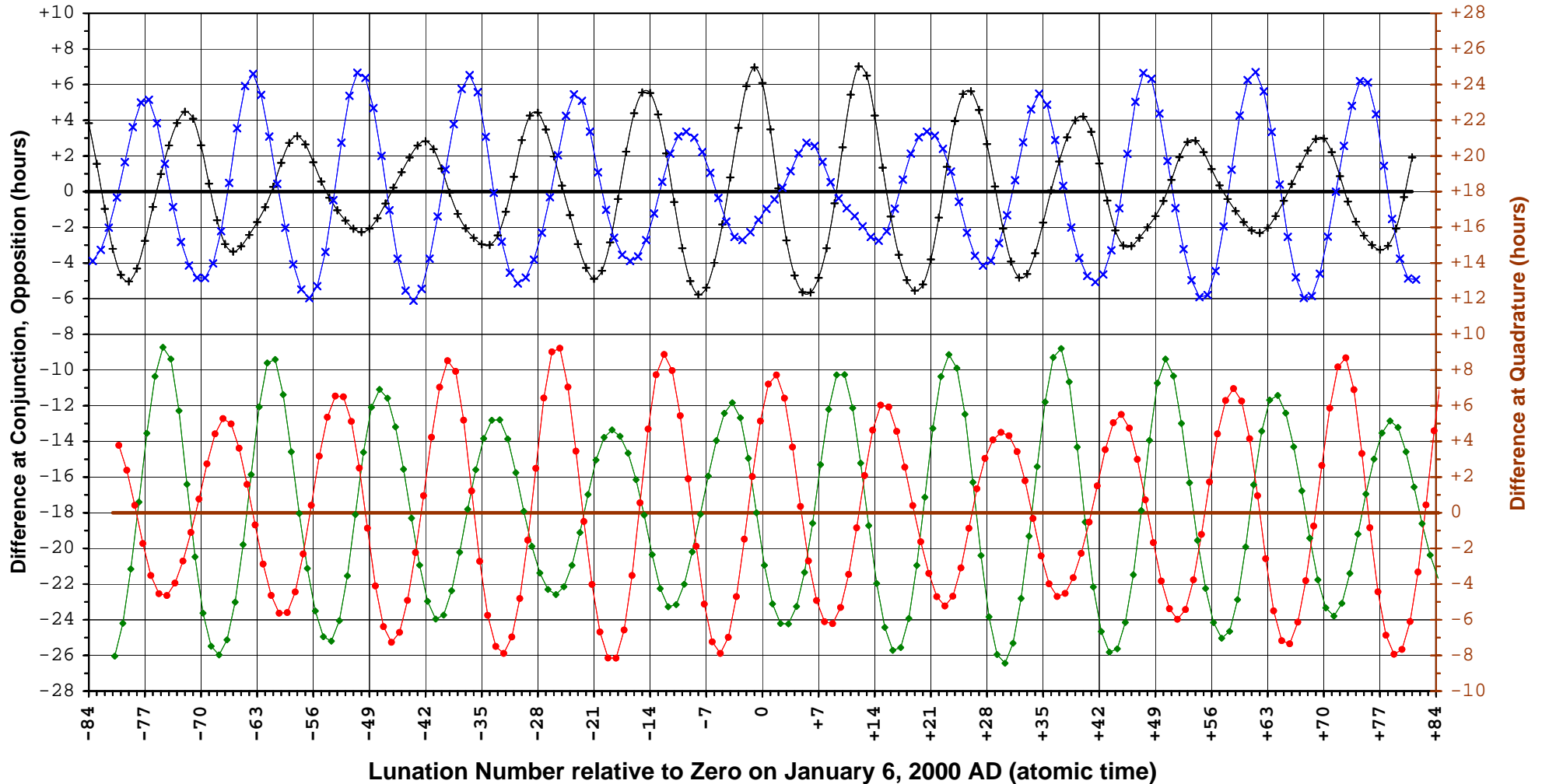


Lunar Cycle Duration at All Quarters minus the Mean Synodic Month (MSM)

Numerical integration by SOLEX 11 with automatic searching for each 90° lunar phase moment.

- +— **Conjunction (New Moon = 0°)**
- x— **Opposition (Full Moon = 180°)**
- ♦— **First Quadrature (1st Quarter = 90°)**
- **Last Quadrature (4th Quarter = 270°)**



The y-axes each span 38 hours, so it is apparent that the variations at quadratures have a range that is almost $4\frac{2}{3}$ hours greater.

The height of the tallest peaks is greater than the depth of the deepest valleys:

The absolute difference between the MSM and the longest lunations is about an hour greater than the shortest lunations.

When peaks are tallest the opposing valleys are shallowest.

When valleys are deepest the opposing peaks are shortest.