Jitter of Dual Uncorrelated Cycles, an Educational Example from Karl Palmen

Add a day if year is divisible by 4. Remove a day if year is divisible by 125. Cycle = 4 \times 125 = 500 years

Jitter due to adding a day every 4 years = 0.75 days.
Jitter due to removing a day every 125 years = 0.992 days.
Total jitter = 1.742 days.
Simple addition is valid because these cycles are uncorrelated.

Year (mean year of \(365 \pm \frac{121}{500}\) days = 365.242 days = mean southward equinoctial year)