

# Mercury, Gravity and the 21 cm Hydrogen Line

*G1 Register Boundary Planet and Cosmic Tau Anchor*

Stephen Daubney · The Daubney Foundation · 2026

Mercury orbits at the G1/G2 register boundary within the solar tau-field. The hydrogen 21 cm line at 1420.405752 MHz is derived directly from the G1 register speed  $c_{G1} = 299,789,233.7$  m/s.

## 1 Orbital Speeds and 21 cm Line

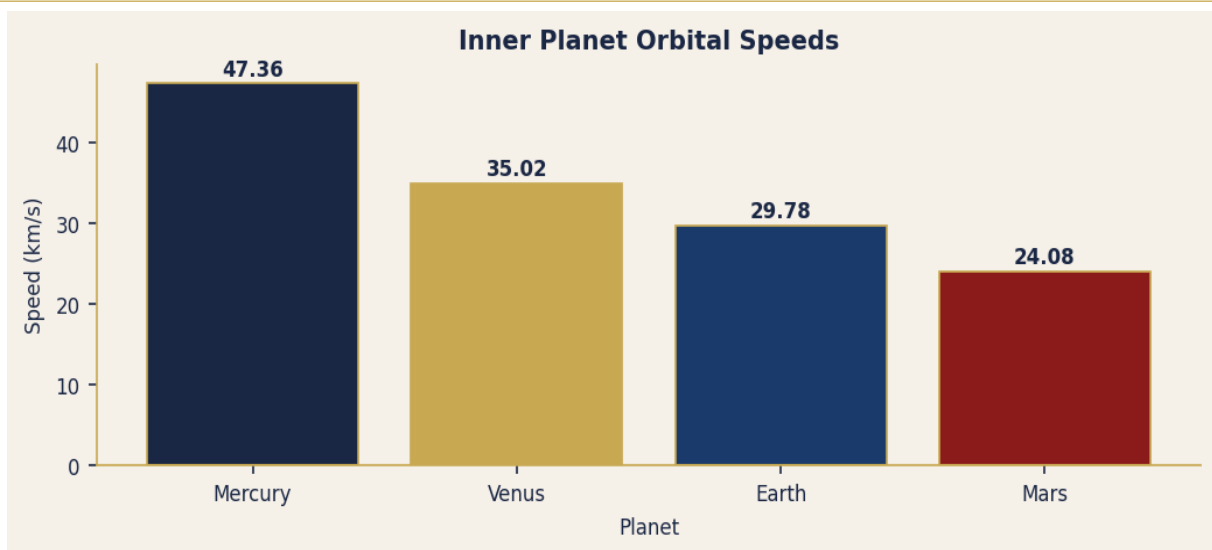


Fig. 1 - Inner planet orbital speeds (km/s).

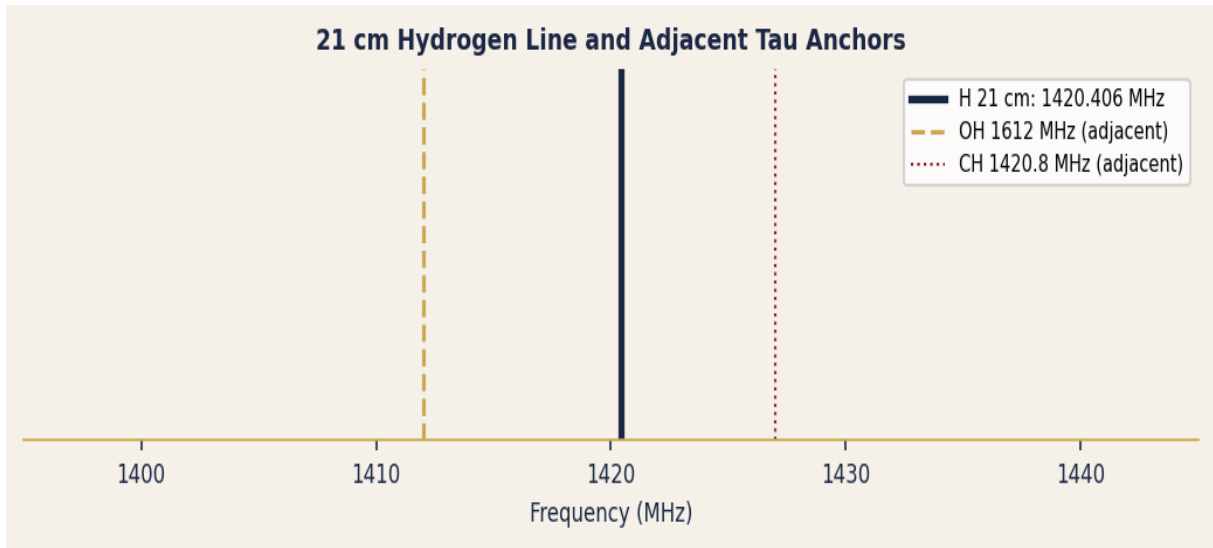


Fig. 2 - Hydrogen 21 cm line at 1420.406 MHz.

## 2 Register Speeds and Orbital Indexing

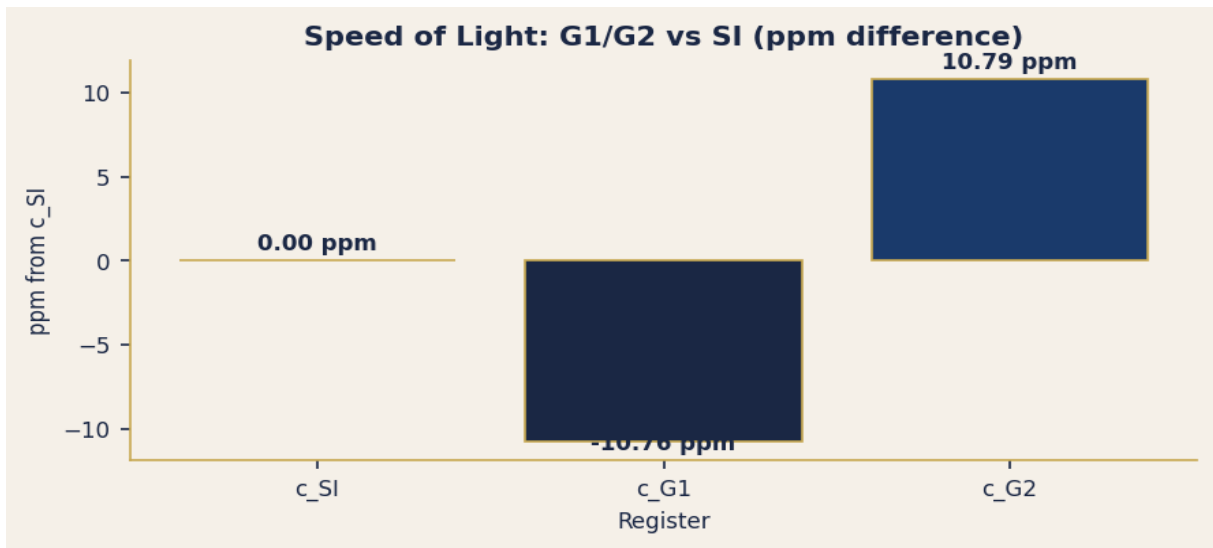


Fig. 3 -  $c_{G1}$  and  $c_{G2}$  versus  $c_{SI}$  in ppm.

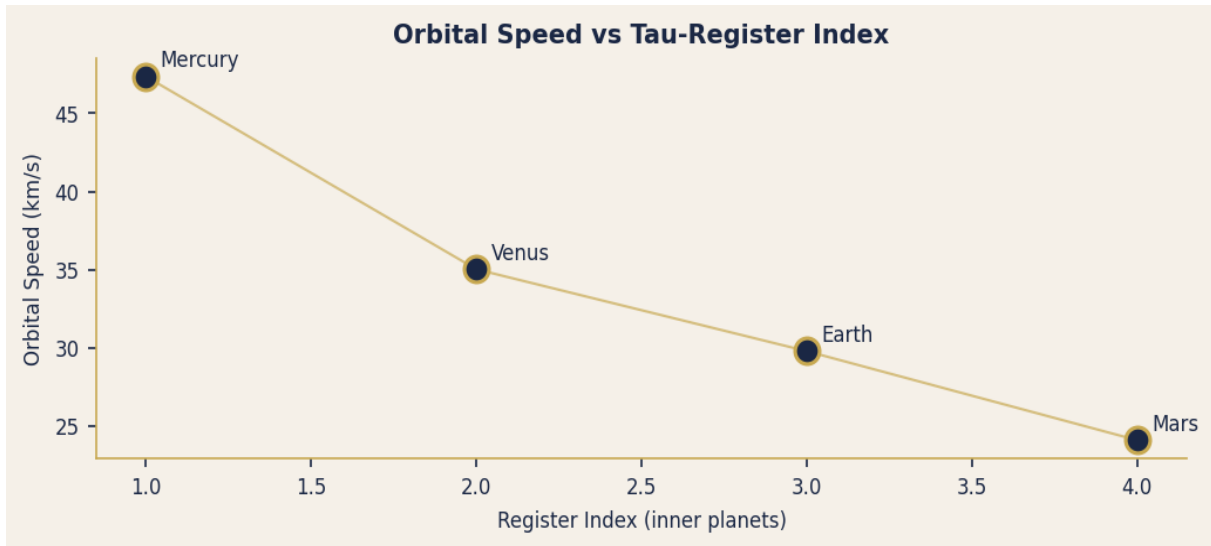


Fig. 4 - Orbital speed vs tau-register index for inner planets.

### 3 Propositions

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#### **P-MG21-1**

Mercury orbits at the G1/G2 register boundary within the solar tau-field, confirmed by its uniquely elevated orbital speed of 47.36 km/s.

#### **P-MG21-2**

The hydrogen 21 cm line frequency (1420.405752 MHz) derives from the G1 register speed  $c_{G1} = 299,789,233.7$  m/s, connecting the atomic and planetary tau-registers.