Electromagnetic nature of light

One of the first arguments towards the electromagnetic nature of light was the coincidence between speed of electromagnetic wave calculated by Maxwell and speed of light.

**Contruction of constanets**

![Diagram of Earth and Sun](image)

Let's imagine we forget all the laws of gravitation, but we can measure mass of the Sun and distance from Earth to the Sun,

\[ M = 5.98 \times 10^{24} \text{ kg} \]
\[ R = 1.5 \times 10^{11} \text{ m} \]

How can we calculate the duration of year?

Year is seconds, but we need to build it from M and R

\[ g = 6.7 \times 10^{-11} \text{ m/s}^2 \]

But what are the units?

\[ \frac{M \cdot m_c}{R^2} \cdot g = E \]

\[ E = m \cdot V^2 \]

\[ f = \frac{g}{V^2} \]

\[ T = \sqrt{\frac{R^3}{EM \cdot g}} \]

1. Roemer (Jupiter satellites)
2. Fizeau
3. Knichel-Walker \( \frac{1}{5 \Phi_{Po}} \)
4. Maxwell noticed \( c = \frac{1}{\sqrt{\varepsilon \mu}} \)
5. Mach
6. Michelson speed of light

other experiments.