

Relativity

Twinkle, twinkle little star

How I wonder where you are

“1.75 seconds of arc from where I seem to be

For

$$ds^2 = \left(1 - \frac{2GM}{R} \right) dt^2 - \left(1 + \frac{2GM}{R} \right) dr^2 - r^2 d\theta^2 - r^2 \sin^2\theta d\phi^2$$

Source Unknown

Relativity

Frame of Reference - A set of coordinate axes in terms of which position or movement may be specified or with reference to which physical laws may be mathematically stated. Also called **reference frame**.

Relativity – the study of the laws of physics in reference frames which are moving with respect to one another.



Relativity

Relativity – the study of the laws of physics in reference frames which are moving with respect to one another.

Two cases:

Case 1 (special case): reference frames move at a constant velocity with respect to each other.

Case 2 (general case): reference frames accelerate with respect to each other.