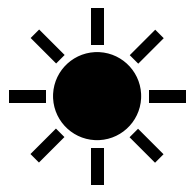









As Earth spins around its axis, the Sun  and other immobile celestial bodies 

appear to move across the sky. 

By registering the moment a fixed star  passes a location's meridian  (longitude) every day

and comparing that observation 

with a super-consistent  time standard – like **International Atomic Time (TAI)** – 

astronomers  can determine:

1. the ***exact length of each solar day***, and, by extension,

2. the ***precise speed of the Earth's rotation***. 

Universal Time reflects the average duration of that time span.