

Applications of Coordinate Systems in Astronomy (1)

Geocentric equatorial coordinates

This is the standard coordinate system to describe the location of celestial objects. In this coordinate system the ‘origin’ moves with the earth through space. The location of stars, and other celestial objects, are described using angles α & δ and a distance ρ .

D. Teets. 2007. The Mathematics of “Go To” Telescopes. *The College Mathematics Journal*, **38**(3), 170–178.

Applications of Coordinate Systems in Astronomy (2)

Topocentric coordinates The ‘origin’ is located at the observer’s location.

“In this coordinate system, we can reasonably determine which way to point our telescope to locate a given object ((star)).”

Heliocentric ecliptic coordinate system Used to track the motion of planets relative to the earth.

A few pages of mathematics describes what Kepler spent a lifetime trying to understand!

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