

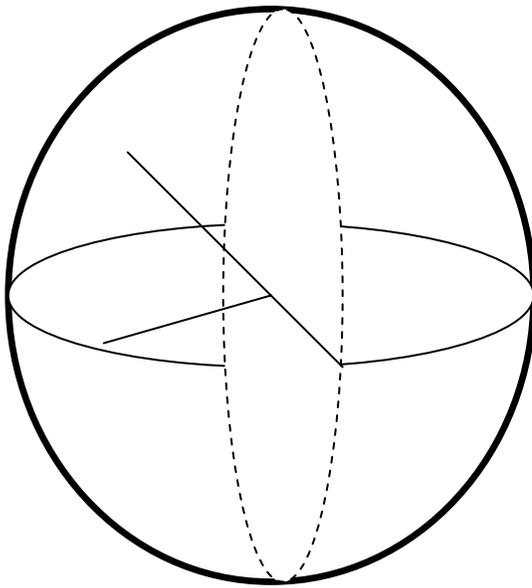
Latitude & longitude

All coordinate systems need:

1. A starting place (origin)
2. Units

Most reasonable way to locate on a sphere is to use angles.

All circles have 360°



Prime Meridian passes thru Royal Naval Obs. In Greenwich, Eng.
Est. 1884

Latitude = angular distance N & S from equator, from $0^\circ - 90^\circ$

- All lines of latitude are small circles except the equator.
- Also called “parallels”

Longitude = angular distance E & W from Prime Meridian, from $0^\circ - 180^\circ$

- All lines of longitude are Great Circles
- Also called “meridians”

$1^\circ = 68.7$ statue miles (110km)

Degrees of longitude get smaller near poles (depend on latitude)

$1^\circ = 60$ nautical miles $\therefore 1'$ (minute) = 1 nautical mile

[$\therefore 1$ nautical mile = 1.15 statue miles or 1.85 km]