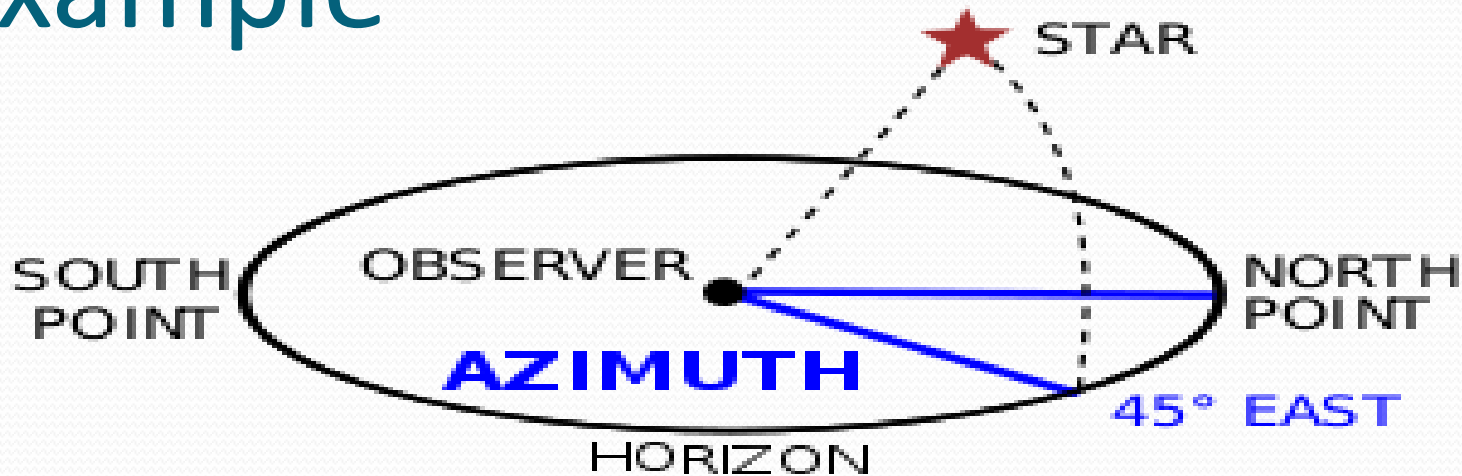# Azimuth, Azimuth Angel

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Prepared by Abdulla Erraoush

The Word "Azimuth"

☐ **The word azimuth is originated from Arabic (السمت) ،meaning „The direction" is an angular measurement in a spherical coordinate system.**

☐ **Definition of Azimuth:**

☐ **The vector from an observer (origin) to a point of interest is projected perpendicularly onto a reference plane; the angle between the projected vector and a reference vector on the reference plane is called the azimuth. Azimuth is usually measured in degrees (°).**

☐ **Application of Azimuth:**

☐ **The concept is used in many practical applications including navigation, astronomy, engineering, mapping, mining and artillery**

Example

 An example of an azimuth is the measurement of the position of a star in the sky.

 The star is the point of interest, the reference plane is the horizon or the surface of the sea, and the reference vector points to the north. The azimuth is the angle between the north point and the perpendicular projection of the star down onto the horizon.
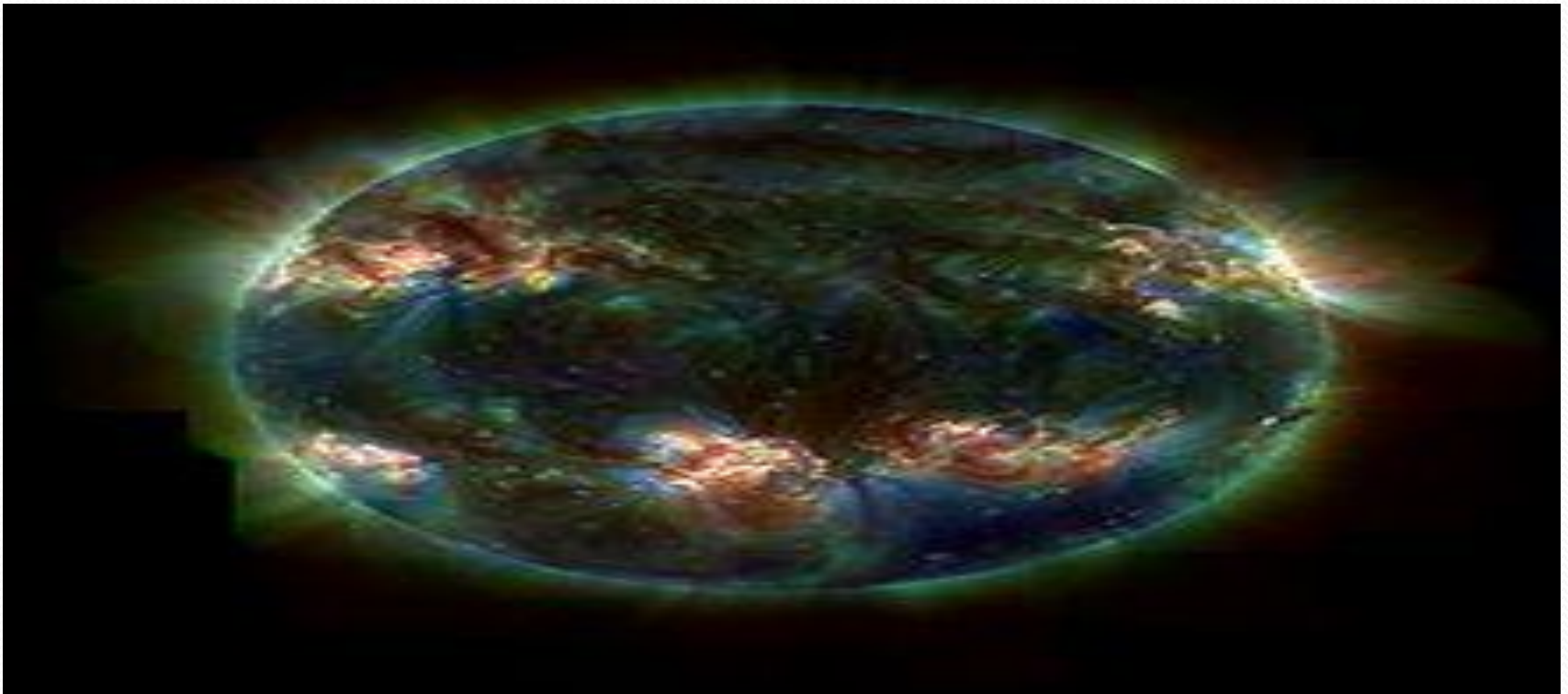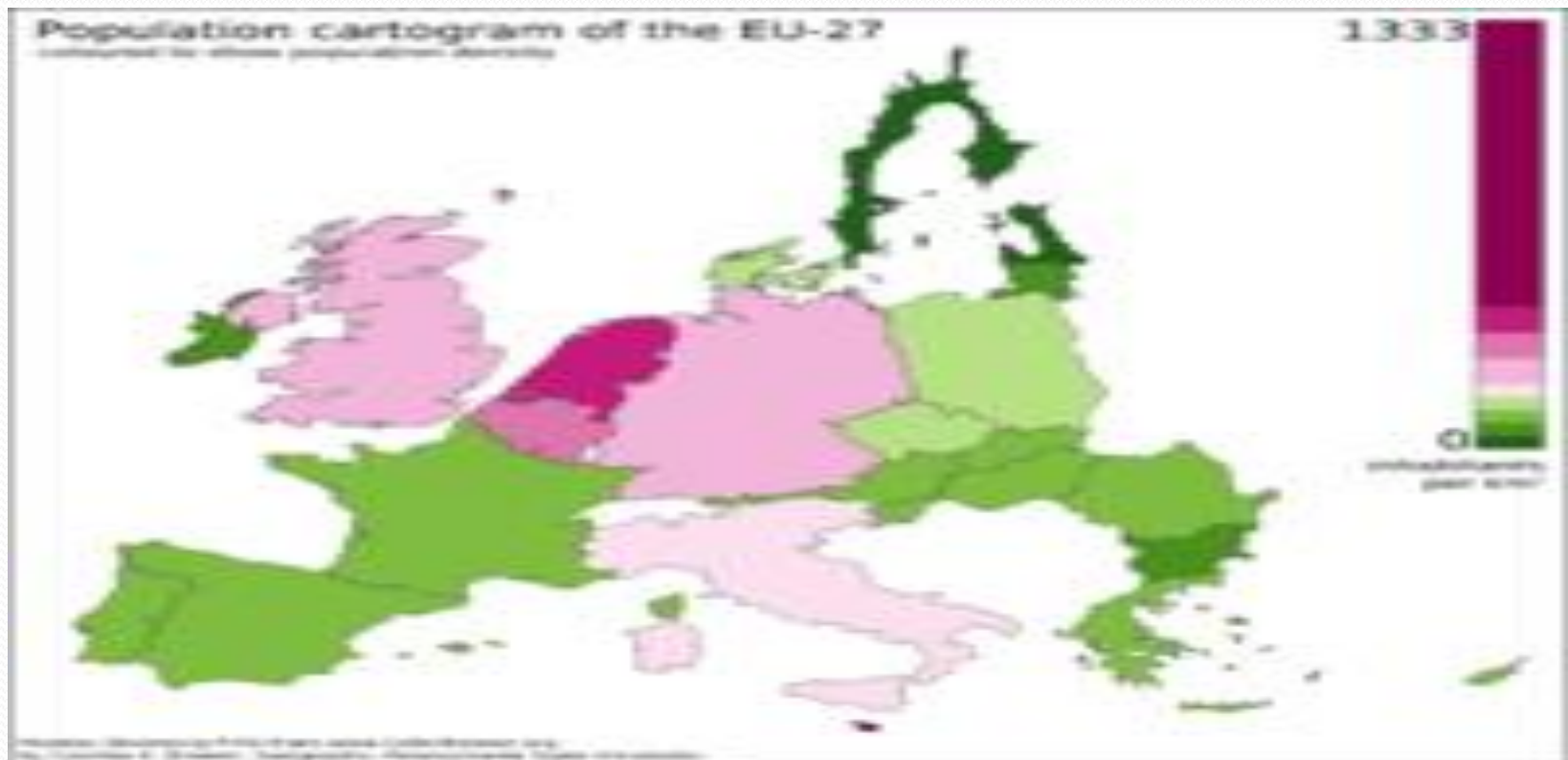
Application of Azimuth:

Navigation

Application of Azimuth:

- Astronomy

Application of Azimuth:

- Mapping

Application of Azimuth:

- Artillery

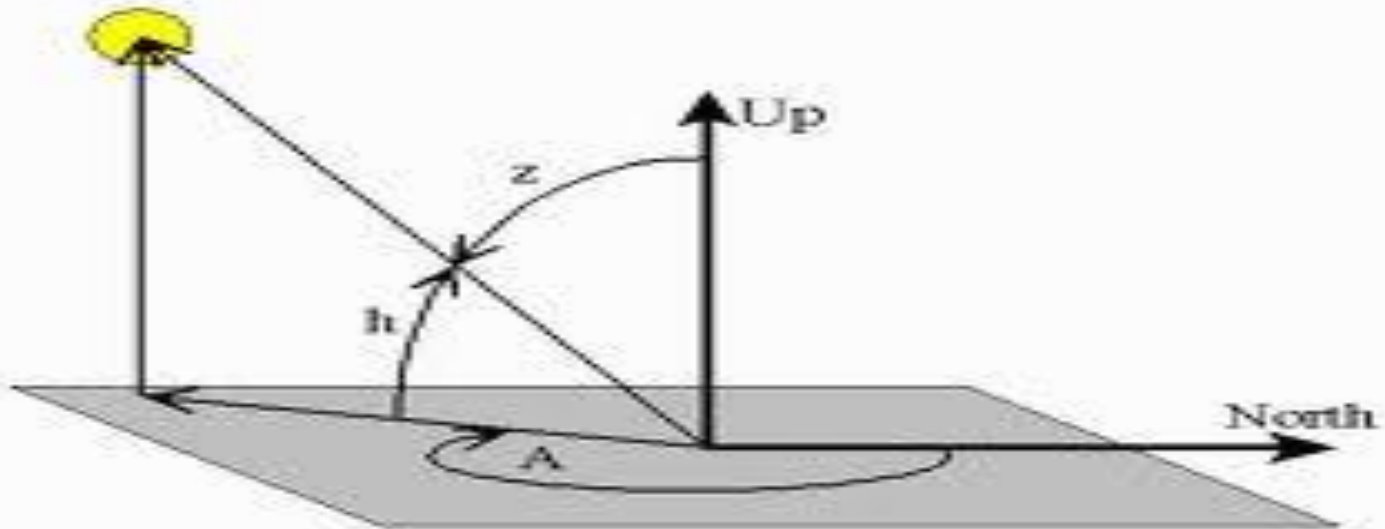# Application of Azimuth:

- Engineering ⟶ (HAVC)

Solar Azimuth Angel

- Definition:

The solar azimuth angle is the *azimuth angle of the sun*.

It is most often defined as the angle from due north in a clockwise direction.
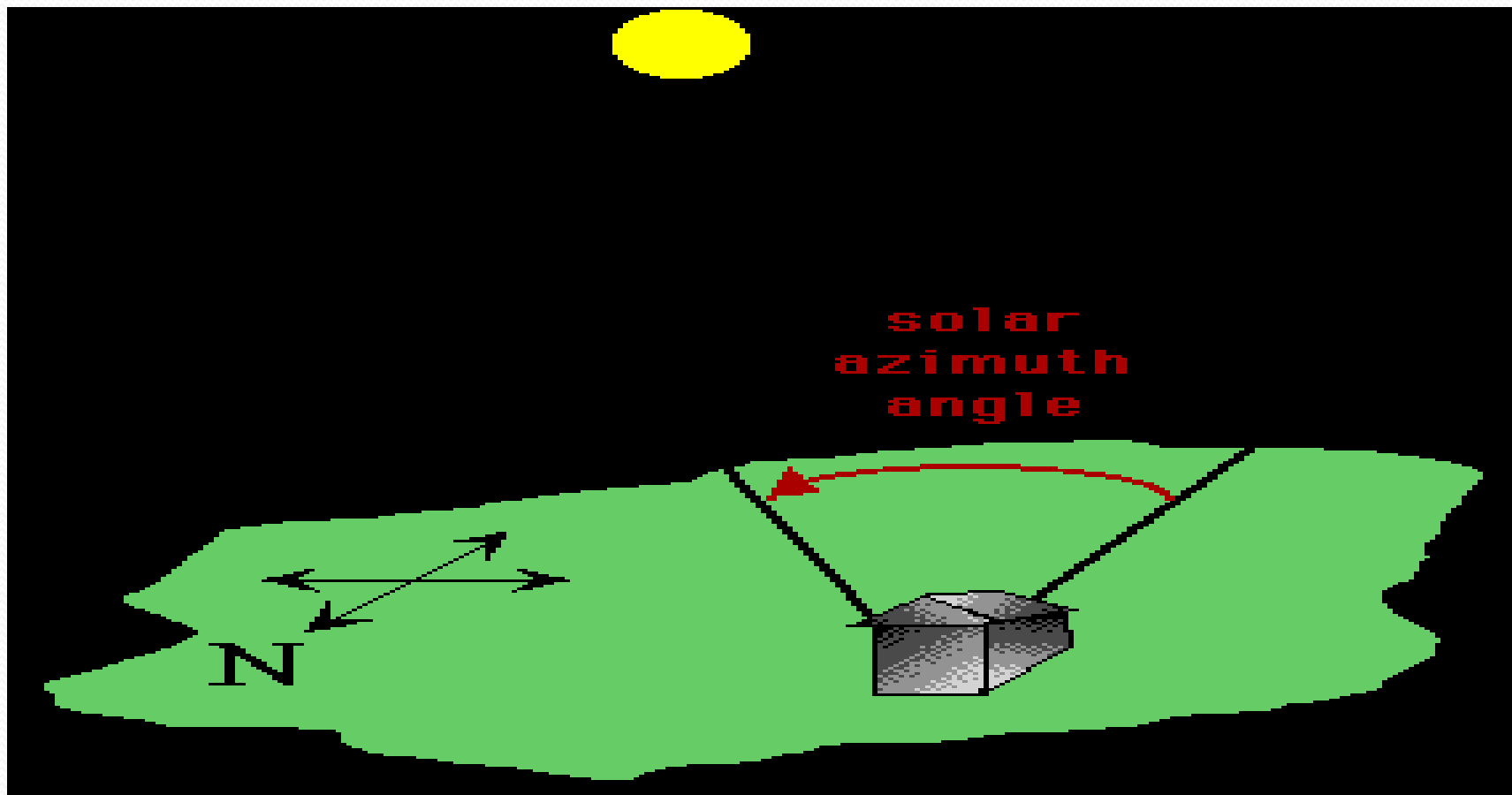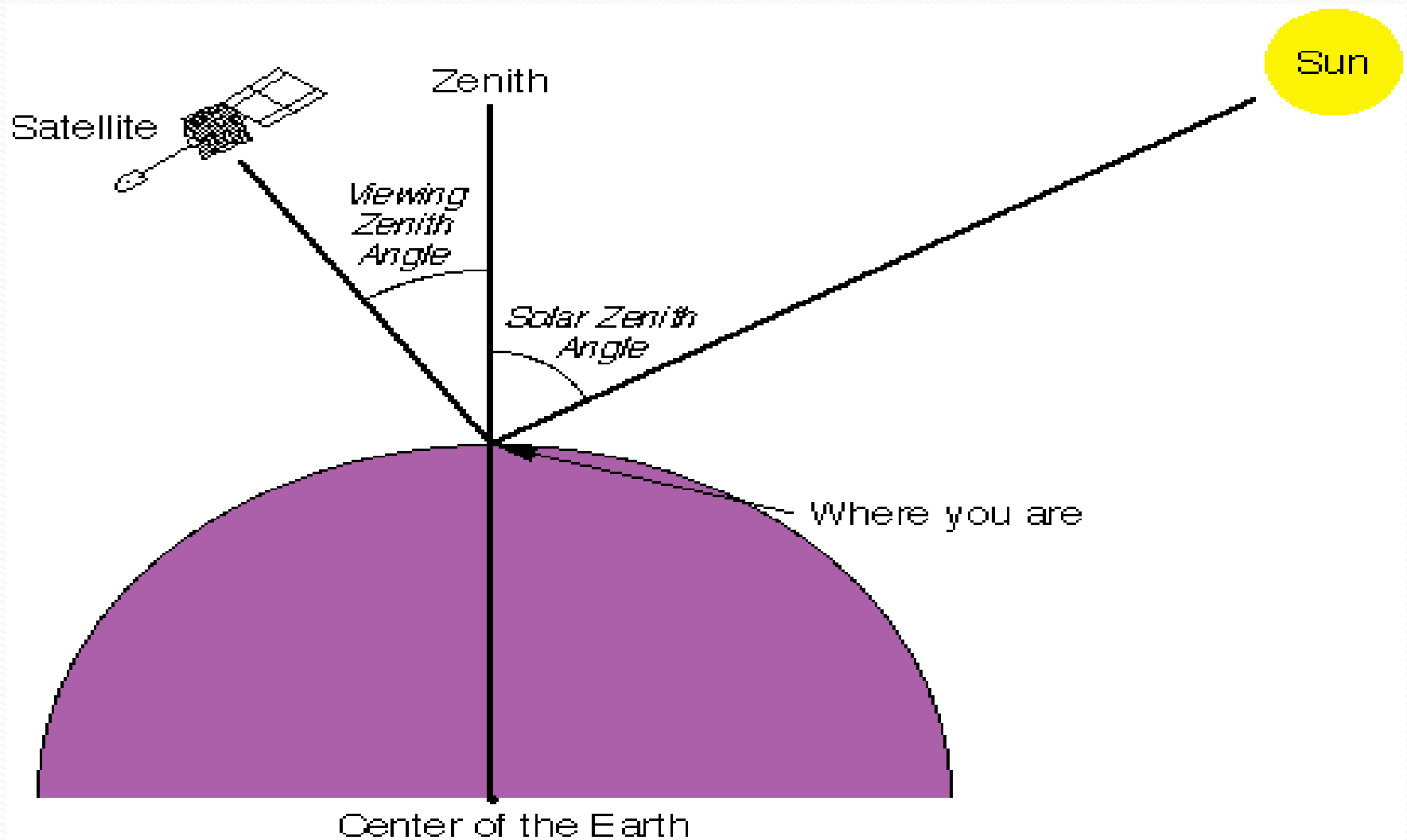

h = elevation angle, measured up from horizon

z = zenith angle, measured from vertical

A = Azimuth angle, measured clockwise from North

Solar Azimuth Angel

Solar Azimuth Angel

Thank You