SPACE

## A SPHERE IN SPACE



## A SPHERE IN SPACE, SPINNING

All circles connecting the poles are the same size, and are as large as possible.

This in the largest circle perpendicular to the axis of rotation. It is half way between the poles.

## RELATIVE SIZE, SUN 109X EARTH'S DIAMETER

1,392,000 km

## RELATIVE DISTANCE, EARTH NOT VISBLE




## A SPHERE IN SPACE, SPINNING, TLITED



## A SPHERE SPINNING, TLITED, AND ORBITING <br> WITH CONSTANT TILT









## Autumnal Equinox

September 22

(PHEW)


## A SPHERE WITH FRIENDS



## A SPHERE WITH FRIENDS

South

$\cdot 0$
$0 \& \quad 0 \cdot$



## Mars is overhead

View for you
planetarium

## WHY "ECLIPTIC"


(PHEW X 2)







(PHEW X 3)



## SU SONG ASTRONOMICAL WATER CLOCK 01094 CE, FIRST ESCAPEMENT

"Thus if the water is made to pour with perfect evenness, then the comparison of the rotary movements (of the heavens and the machine) will show no discrepancy or contradiction: for the unresting follows the unceasing."


## ARMILLARY SPHERE MADE BY GIROLAMO DELLA VOLPAIA, FLORENCE ITALY, 01554



# AUGHRA'S ORRERY 

Dark Crystal

Flown to the Lunar Surface on A ApoLLO $x$ )



https://space.stackexchange.com/questions/1621/where-are-pioneer-10-11-and-the-voyagers-ultimately-headed



