Sizing Up The Universe
Fundamental Questions

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Is The Earth Flat?
A Picture’s Worth a Thousand Words...
Earth’s Shadow

How Aristarchus measured the size of the Moon.
How Aristarchus measured the size of the Moon.
What’s Our Latitude?
How Big Is The Earth?
We’ll address numerical details later.
How Eccentric Is The Moon’s Orbit?
Which Is Further Away... Sun or Moon?
This is how we know that the Sun is much further away than the Moon. If it were only a little bit further away, as in the top diagram, then the time from first-quarter to last-quarter would be longer than the time from last-quarter back to first-quarter.
This is how we know that the Sun is much further away than the Moon. If it were only a little bit further away, as in the top diagram, then the time from first-quarter to last-quarter would be longer than the time from last-quarter back to first-quarter.
How Much Further?
About 400 times further
How Big Is The Moon?
Earth’s Shadow

How Aristarchus measured the size of the Moon.
How Do We Know Venus Orbits the Sun?
How Do We Know That Mars, Jupiter, etc. Are Further From The Sun Than We Are?
How Far Is Jupiter From The Sun?
How Big Is Jupiter?
How Far Away Are Stars?
Can We Measure The Distances To the Stars?
How Do We Know That The Stars,
As We See Them,
Don’t Extend Out To Infinity?
Olbers’ Paradox
A New Discovery... Do You See It?