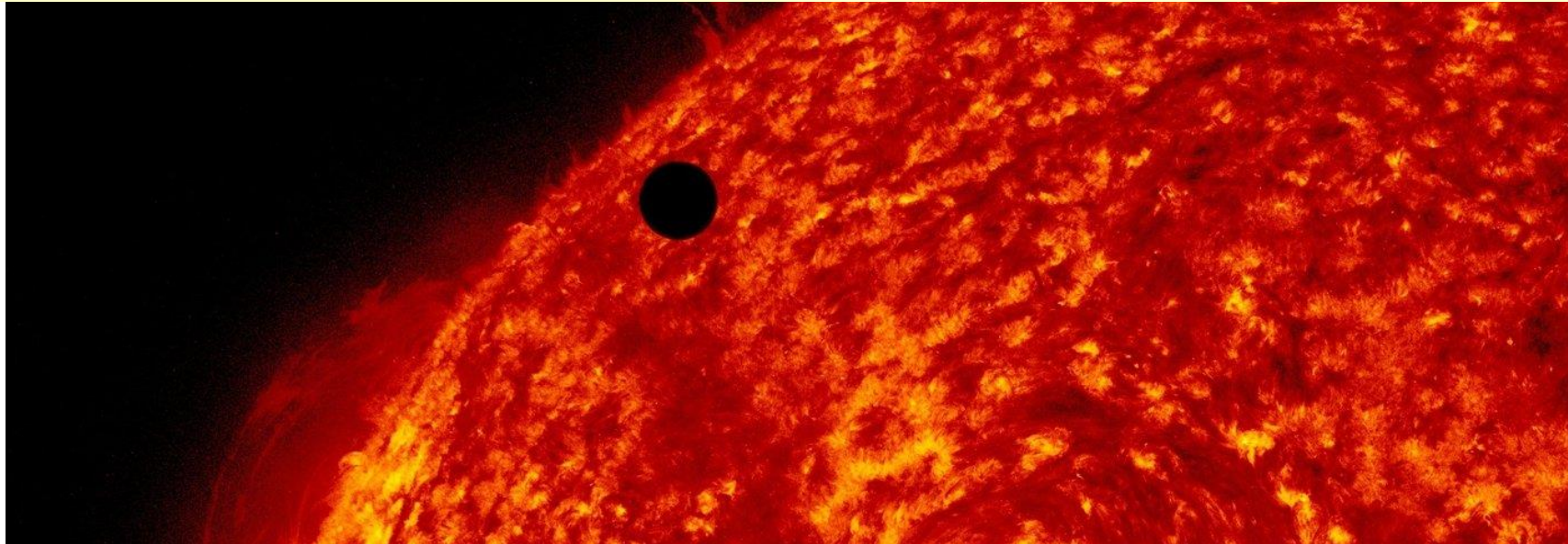


# Galileo

Lessons he and his life teach us today



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# Galileo

This notion of examining facts, absent emotion, superstition, perceived consensus, religious fervor, and similar elements of human experiences is relatively new.

Examination of facts absent these human failings is a basic element of Science

Perhaps the most telling example, from beginnings the Enlightenment, is of Galileo, whose telescopic examination of the path of Mars revealed that the Sun was the center of our Solar System.

Religious teachings of the day were that Earth was the center of all things, Geocentrism.

Galileo was put under house arrest for publishing on Heliocentrism, because it violated Church teachings of Geocentrism.

*The conclusions of Natural Science are true and necessary, and the judgment of men has nothing to do with them.*

Galileo Galilei

## SCIENTIFIC IDEALS

### Scientists...

- are truth seekers.
- make rational arguments.
- try to minimize biases.
- demand naturalistic explanations supported by empirical evidence that is testable against the natural world.
- are skeptical.
- are honest peer-reviewers.
- require reproducibility of results when possible.
- know that models or theories must be altered or discarded when data contradicts them.

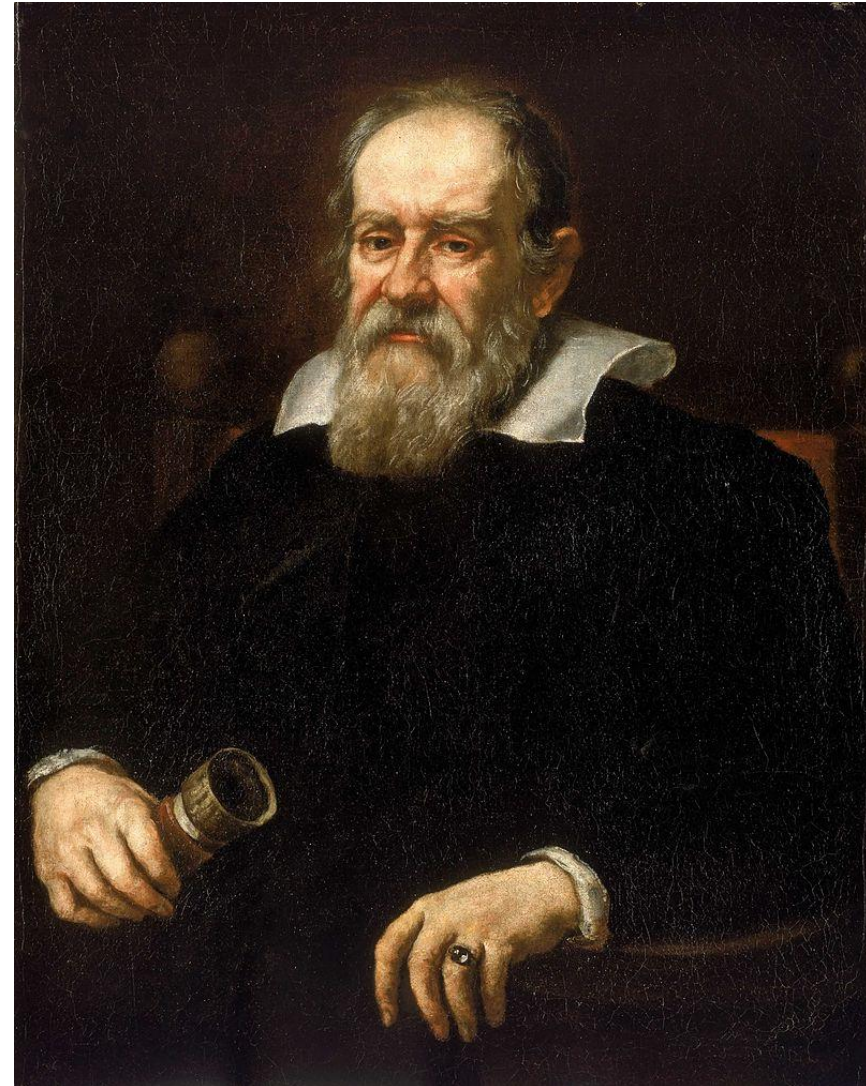


# Galileo: Why he matters today

Galileo's championing of [heliocentrism](#) was controversial within his lifetime, when most subscribed to [geocentrism](#).

The [Roman Inquisition](#) in 1615, concluded that heliocentrism was false and contrary to [scripture](#), placing works advocating the Copernican system on the [index of banned books](#) and forbidding Galileo from advocating heliocentrism.

He was tried by the [Holy Office](#), then found "vehemently suspect of [heresy](#)", was forced to recant, and spent the last nine years of his life under house arrest.





<http://time.com/7809/1-in-4-americans-thinks-sun-orbits-earth/>

## 1 in 4 Americans are apparently Unaware the Earth Orbits the Sun

Image, right, is of an astronomical event, a Transit of Mercury.

Observed from Earth, as Mercury and Venus orbit the Sun, they cross in front of some terrestrial observers. The black dot is Mercury passing in front of the Sun.

This is plain proof of Heliocentrism. Galileo was put under house arrest for espousing the principle of Heliocentrism.

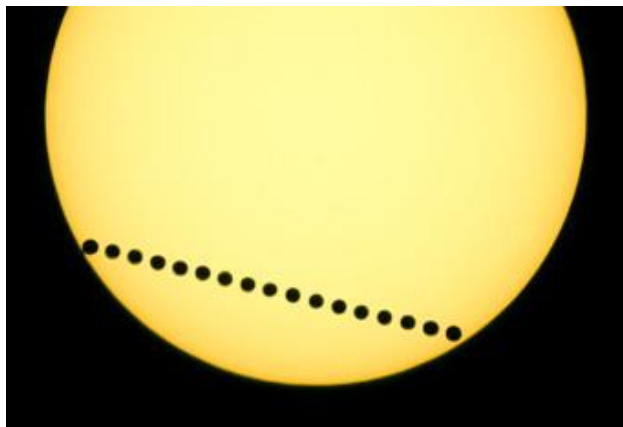
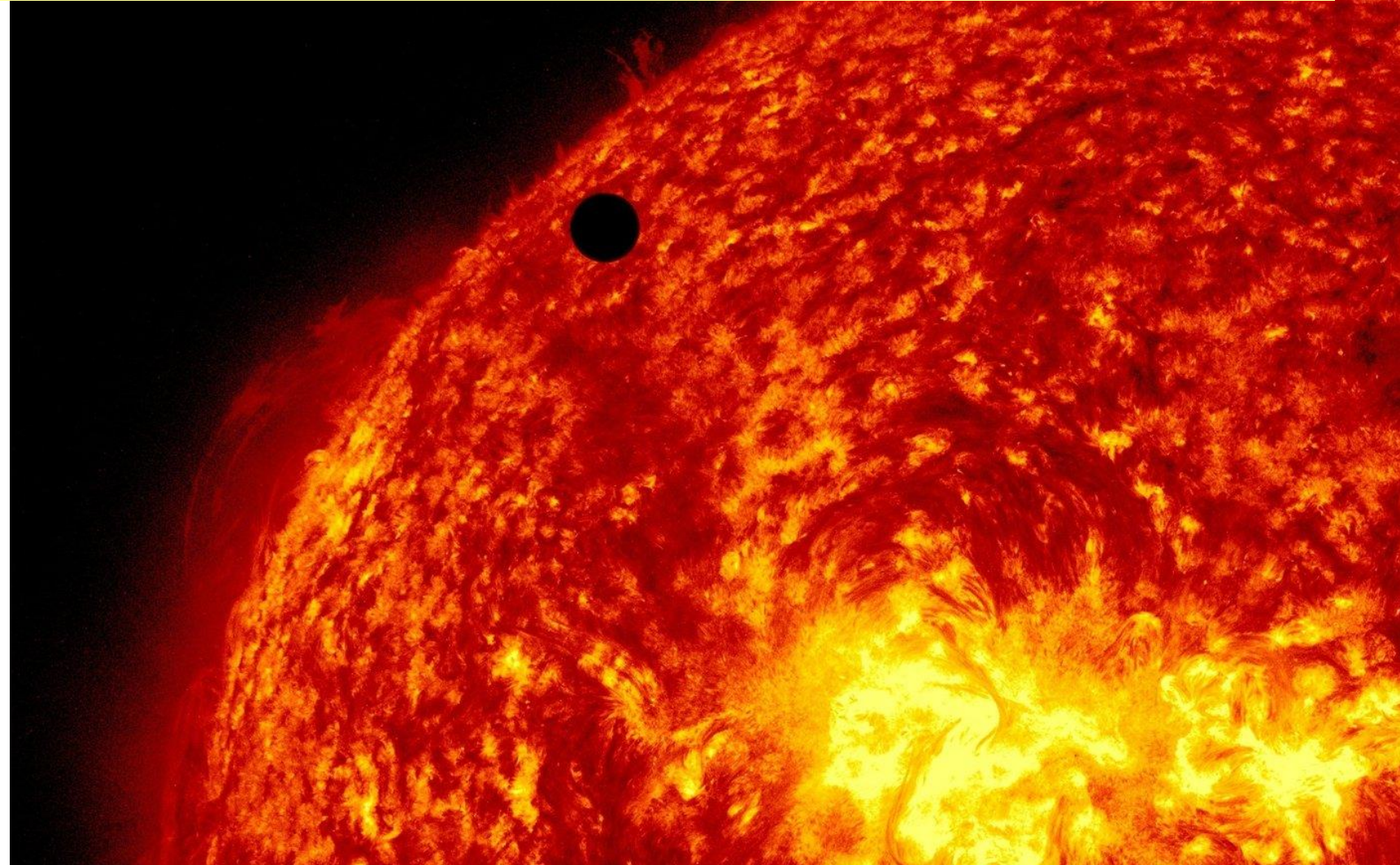


Image left shows multiple exposures of a Transit of Venus by Fred Esperak.