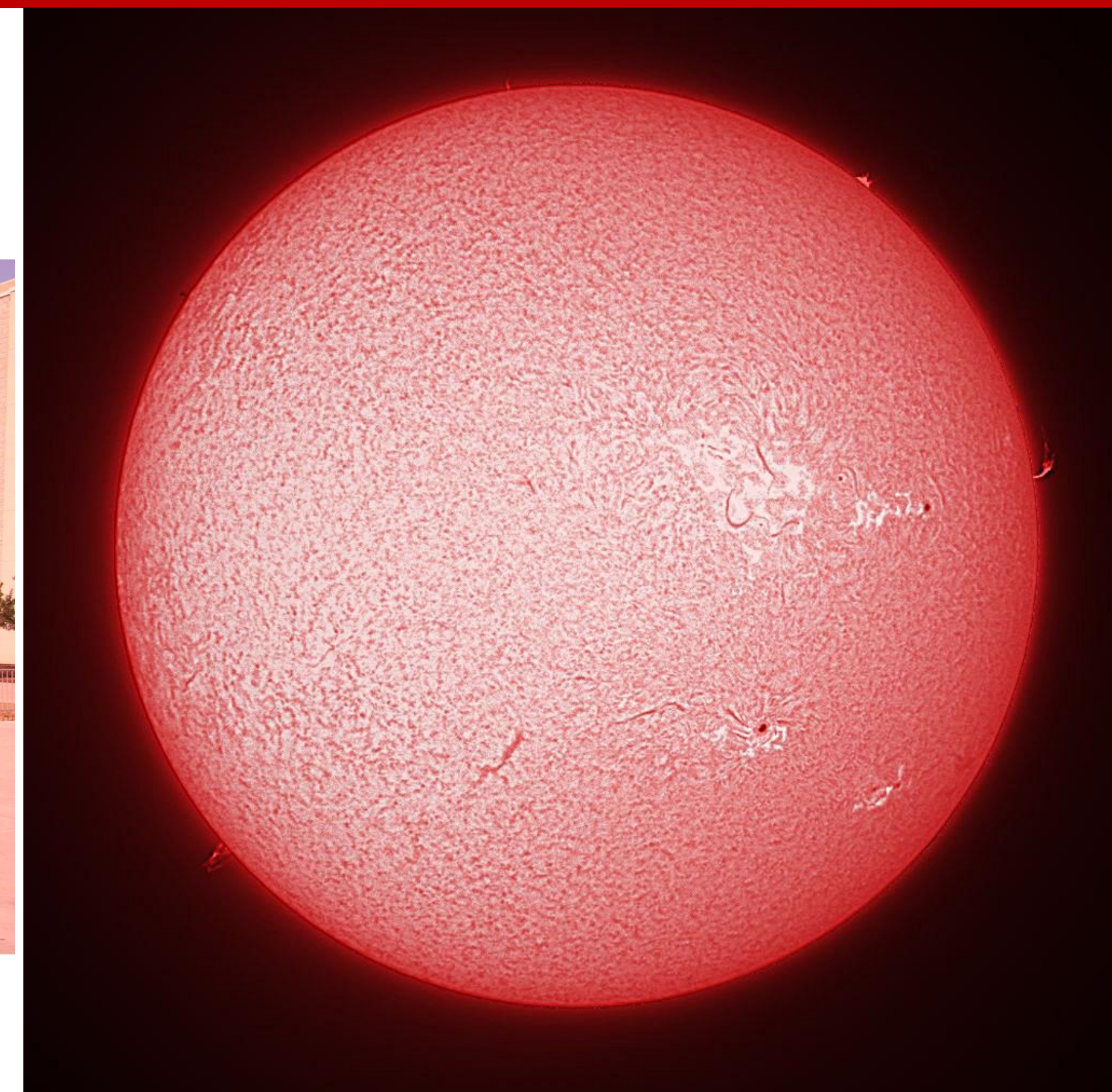


# Observing the Sun at Fresno State

The Sun is the key to understanding the Universe. It is also essential for teaching, both observing and astrophysical theory.

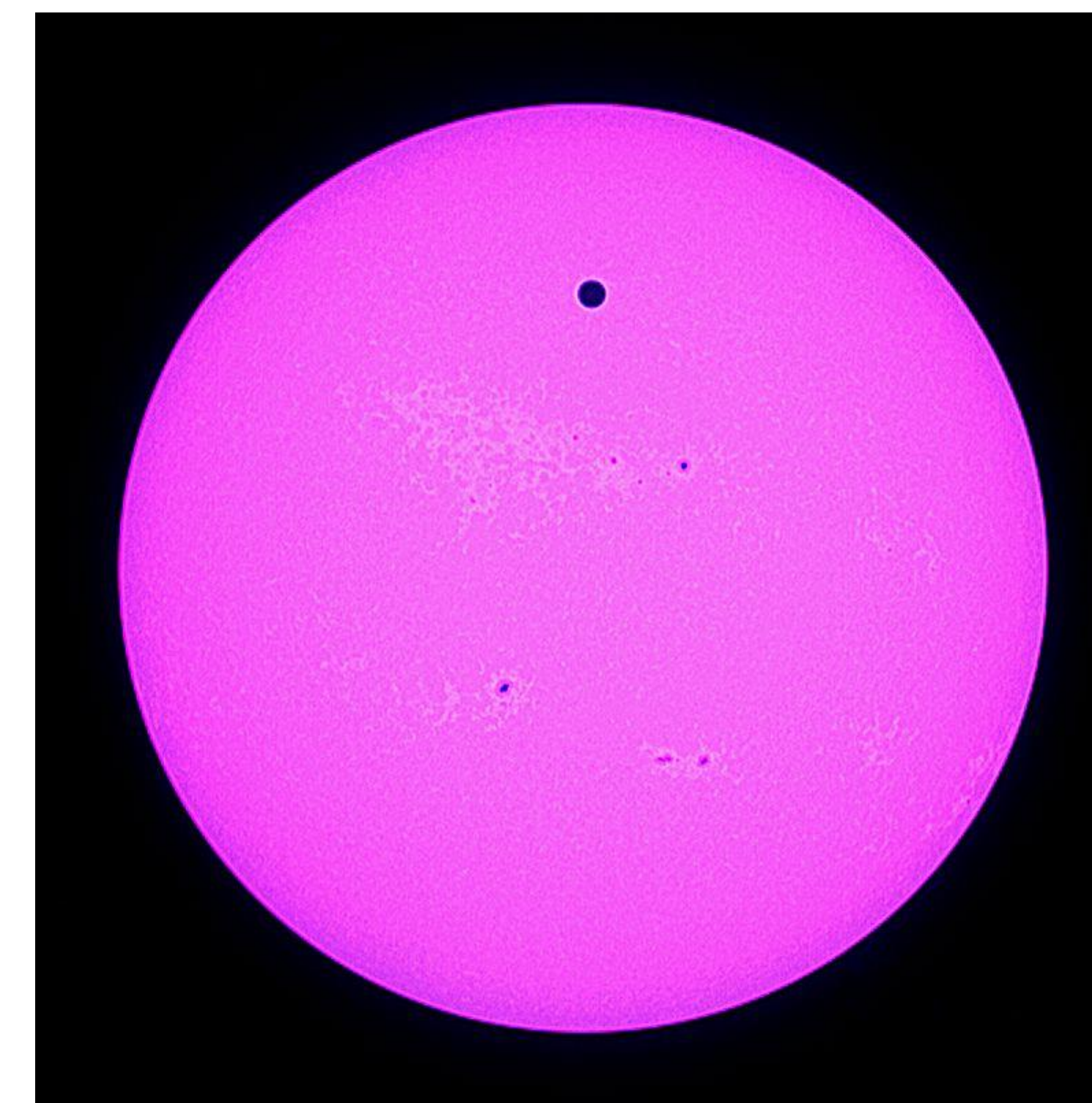


Solar observing is also superb for public outreach. The Central Valley Astronomers will have solar telescopes at the Downing Planetarium at the Vintage Days fair from 9 a.m. to 6 p.m. ***tomorrow*** (Saturday, 4/22), weather permitting.



The Sun's atmosphere, or chromosphere, in scarlet H $\alpha$  light shows violent turbulence.

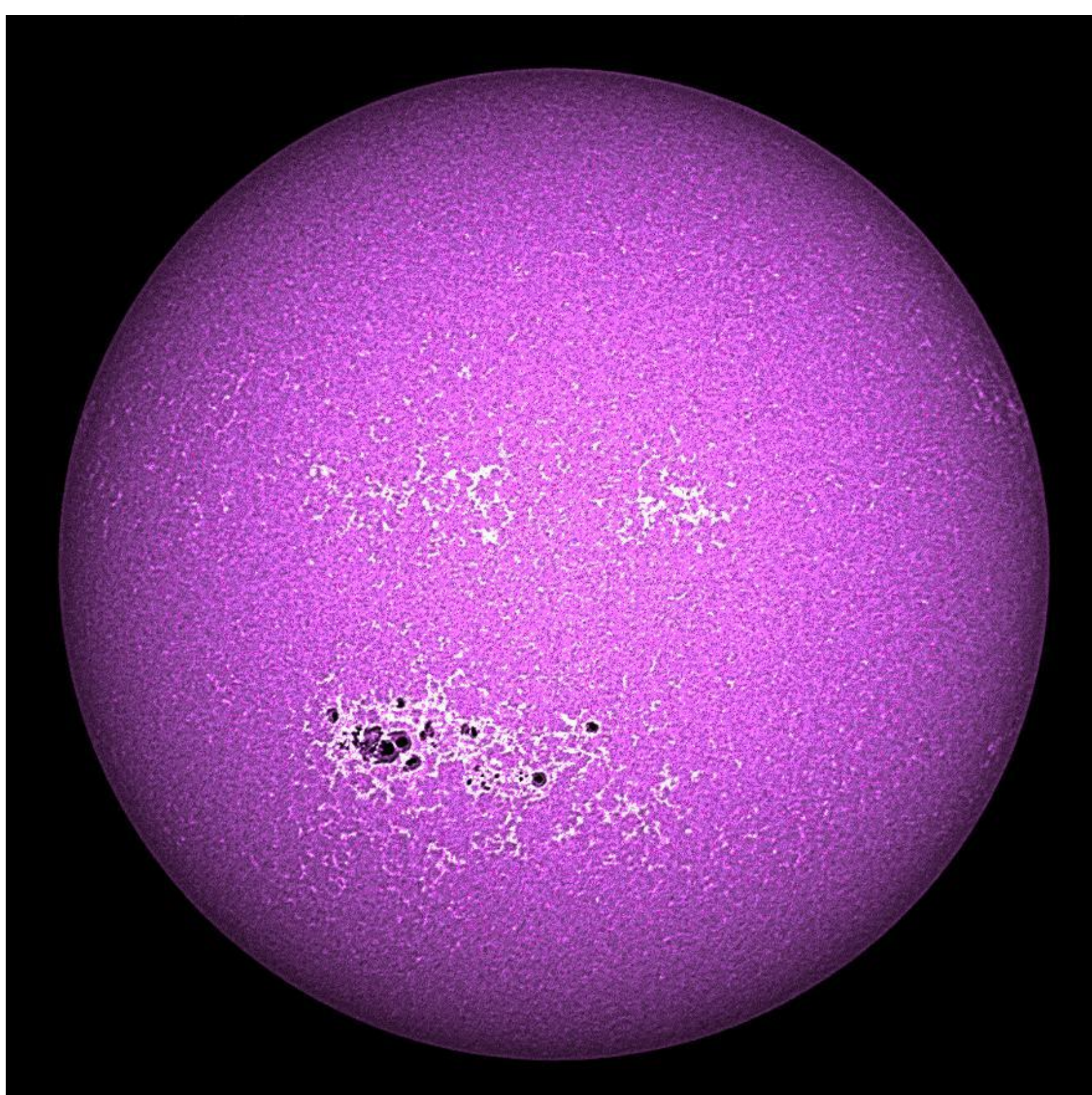
All images were made on campus by Professor Frederick A. Ringwald, Department of Physics.



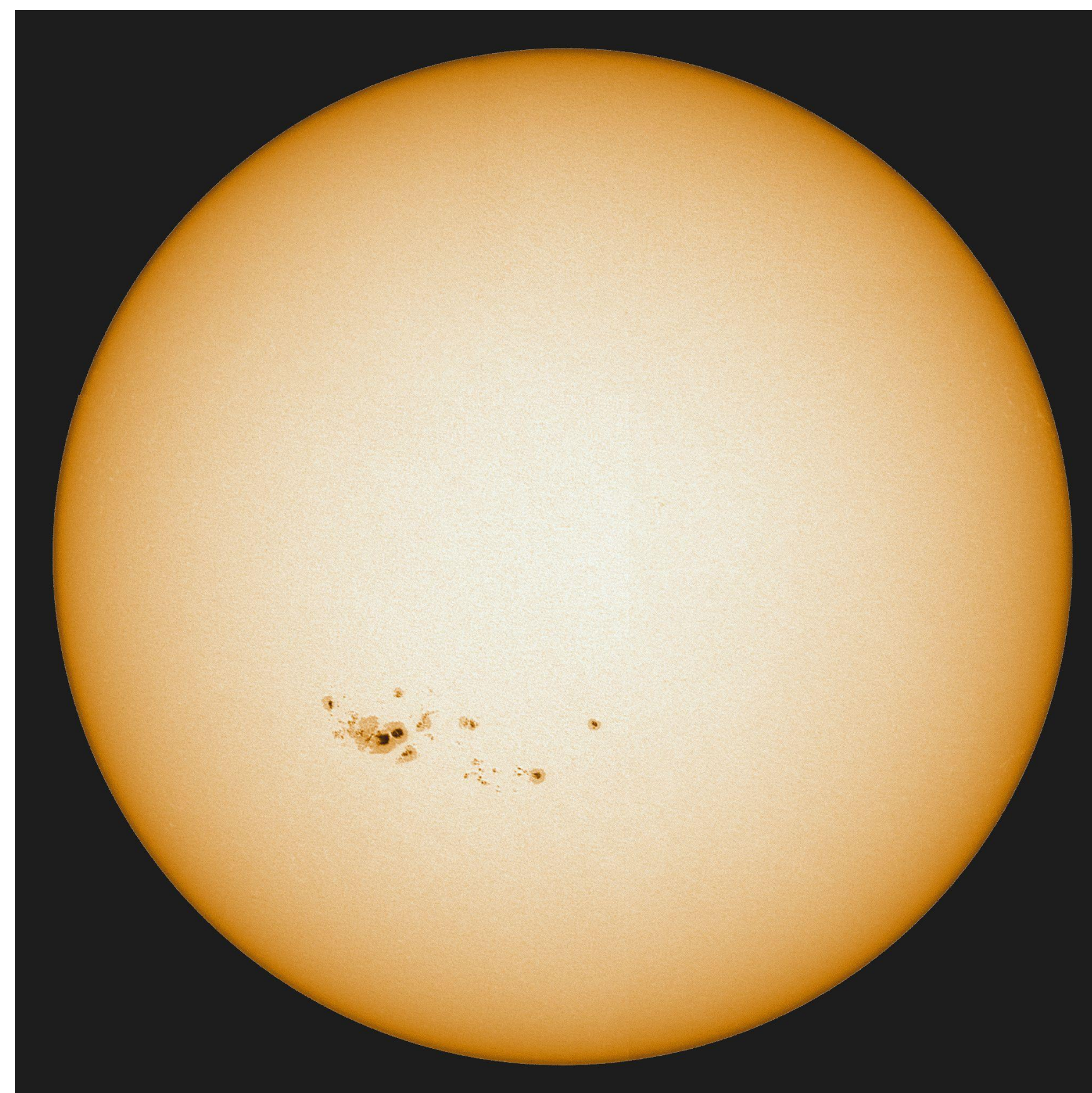
Venus transited the Sun in 2012.



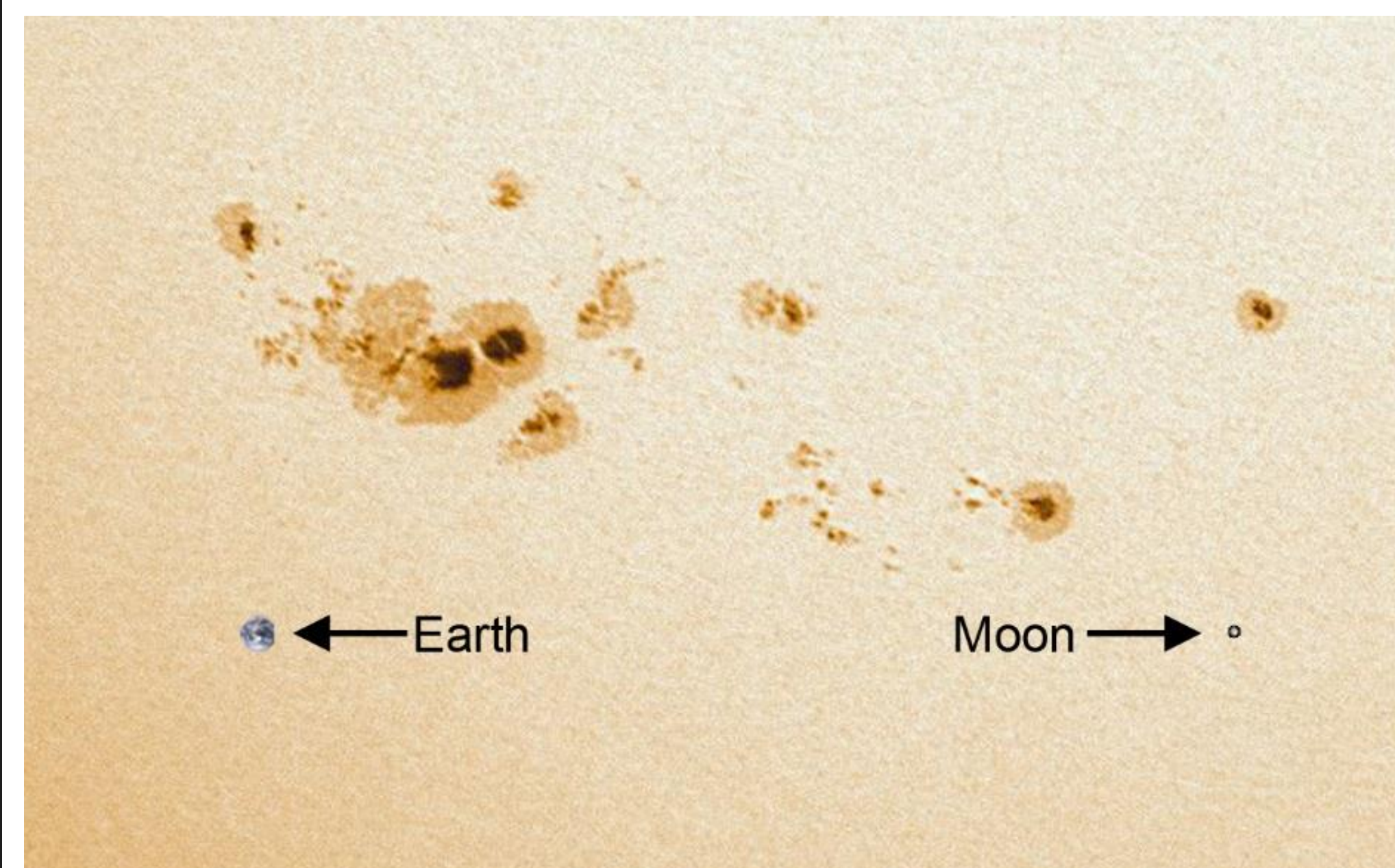
There is no reason to risk anyone's eyes while solar observing, because of < \$100 webcams. A webcam in a dedicated solar telescope can project an image on a laptop computer, with the bonus that many people can observe simultaneously.



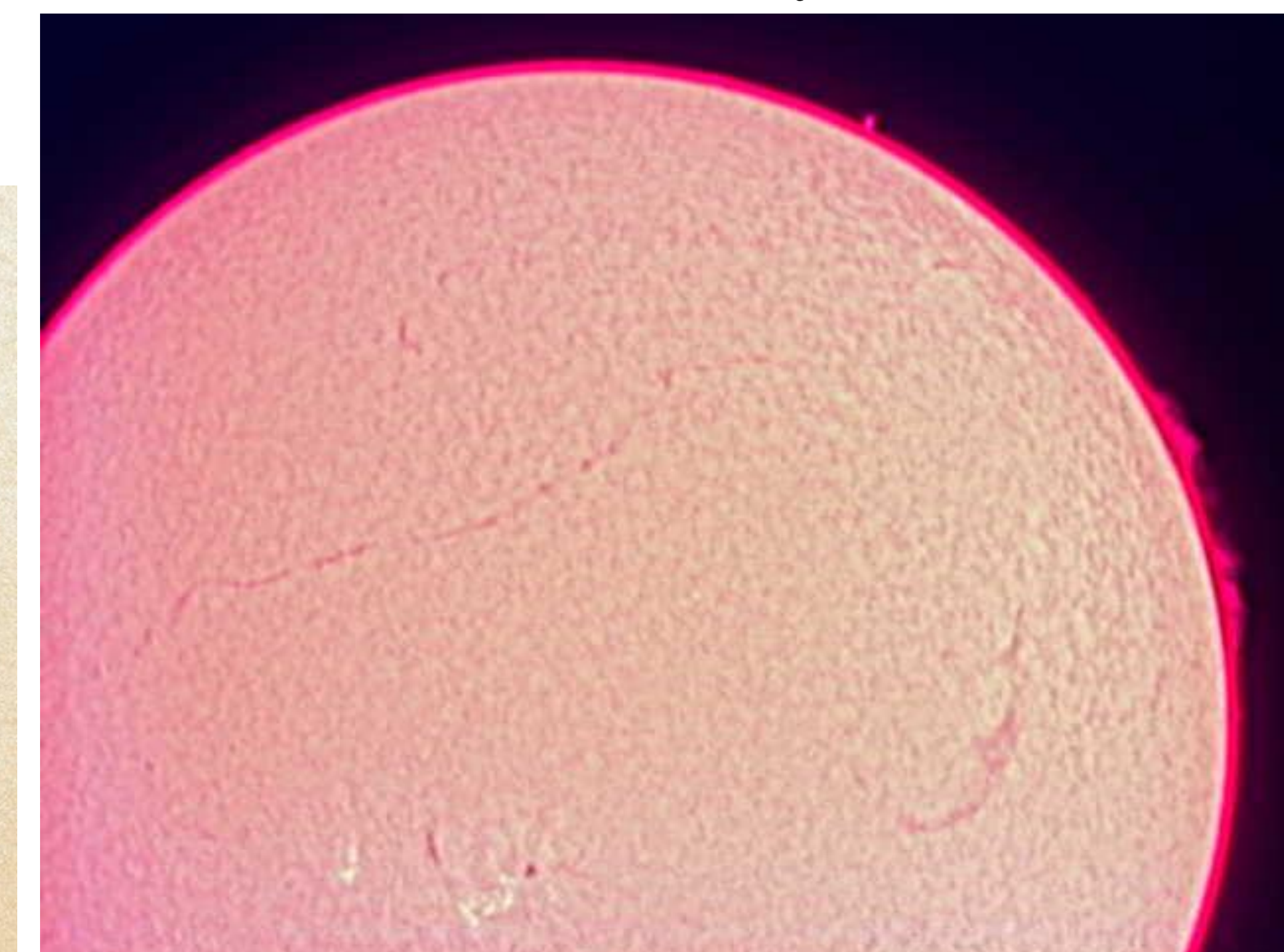
Ultraviolet light from the Sun's lower atmosphere shows a large sunspot group surrounded by a magnetically active region.



White light from the Sun's visible surface, or photosphere, shows this sunspot group the way the eye would see it.



Photoshop can show relative sizes. This is the sunspot group previously shown at left.



Prominences are streamers of hot gas that rise and fall a million miles into space over several hours.