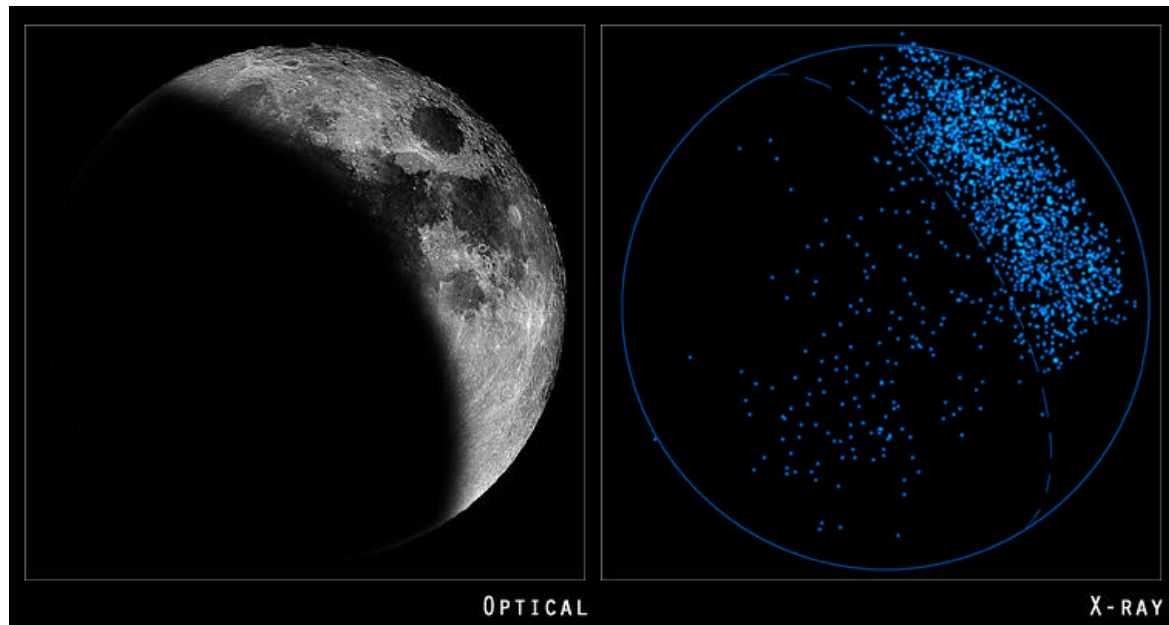




# Chandra Science Highlight

## The Moon



Chandra's image (right) of the bright portion of the Moon reveals fluorescent X-rays produced when solar X-rays bombard the Moon's surface. The X-rays that appear to come from the dark portion of the Moon are due to emission from the Earth's

extended outer atmosphere.

*Chandra X-ray Observatory ACIS image.*

- Fluorescent X-rays from oxygen, magnesium, aluminum and silicon atoms have been detected from the bright side of the Moon.
- Measuring the amount and distribution of aluminum and other elements over a wide area of the Moon will help to test theories for the origin of the Moon.
- The Chandra data show that the X-rays from the dark moon can be explained by radiation from Earth's geocorona due to collisions in which carbon, oxygen and neon ions in the solar wind capture electrons from hydrogen atoms in the geocorona into an excited state.

*Credit: X-ray: NASA/CXC/J. Drake et al.; Optical/R. Gendler*