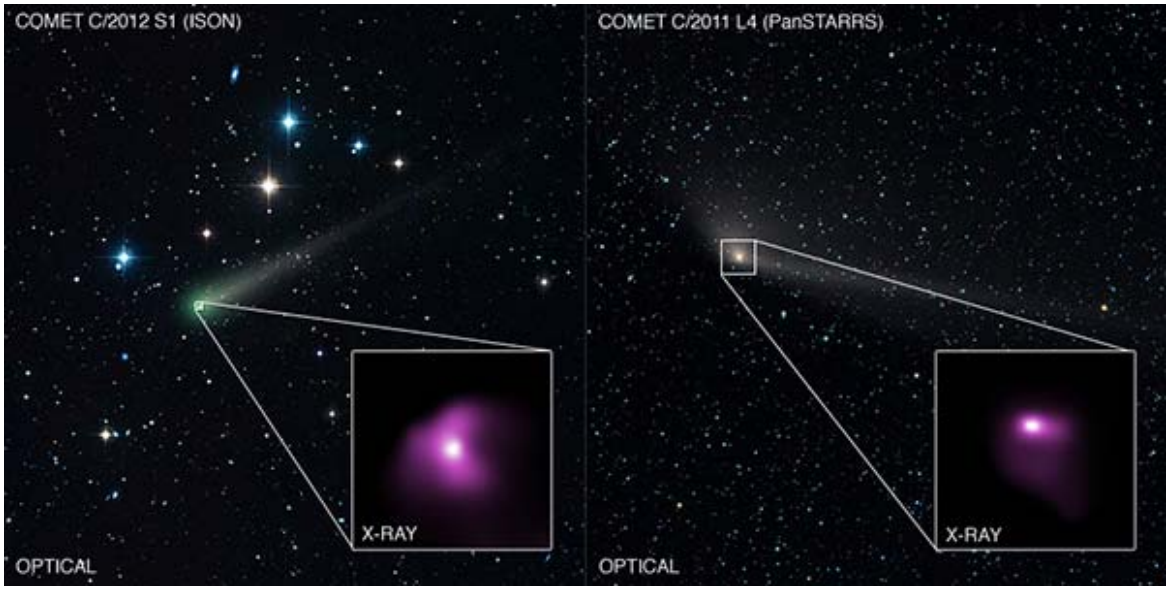

Chandra X-ray Observatory Center

Harvard-Smithsonian Center for Astrophysics
60 Garden St. Cambridge, MA 02138 USA
http://chandra.harvard.edu

ISON & PanSTARRS: Two comets observed in 2013 when both were relatively close to Earth, about 90 million and 130 million miles for Comets ISON and PanSTARRS respectively.
(Credit: X-ray: NASA/CXC/Univ. of CT/B.Snios et al, Optical: DSS, Damian Peach.)

Caption: Astronomers used Chandra to observe Comet ISON and Comet PanSTARRS in 2013, when these comets were relatively close to the Earth. The graphic shows the comets in optical images taken by an astrophotographer, with insets showing the X-ray images from Chandra. The X-ray emission is produced when a wind of particles from the Sun – the solar wind – strikes the comet's atmosphere. The Chandra data was used to estimate the composition of the solar wind, including the amount of carbon and nitrogen, finding values that agree with independent measurements.

Scale: ISON Main Image is about 40 arcmin across (X-ray image: 3.7 arcmin); PanSTARRS Main image is about 2 degrees across. (X-ray image: 9 arcmin)

Chandra X-ray Observatory ACIS Image

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