



Deep Impact imaged ISON for the first time on January 17 and 18, 2013, from 493 million miles away



MESSENGER observed ISON as it passed by Mercury on November 19<sup>th</sup> on its way to the Sun



SOHO will be continually observing ISON as it passes by the Sun in late November



Hubble observed ISON in April-May and will see it again in October and December (if ISON survives)



STEREO observed ISON as it passed by on its way to Sun in October

Astronauts aboard the International Space Station will be able to observe Comet ISON as it passes by Earth in late November



In January and March, Swift observed ISON in X-ray and UV when it was 460 million miles away from the Sun

Curiosity was not able to observe ISON as it passed by Mars.



Opportunity was not able to observe ISON as it passed by Mars

In November, Chandra observed ISON with its X-ray instruments



# How NASA Space Assets Observe Comet ISON

(items in yellow successfully observed the comet)

For more information, visit: <http://solarsystem.nasa.gov/ison>

Lunar Reconnaissance Orbiter was not able to observe ISON



SOFIA, an airborne observatory, captured images of ISON on October 24, 2013, in Infrared



Spitzer observed ISON on June 13. The comet was 310 million miles away from the Sun



FORTIS, a sounding rocket, launched on November 20, 2013 will obtain ultra-violet spectra from ISON



SDO will have the ability to observe ISON under extreme-ultraviolet light when the comet is closet to the Sun

Mars Reconnaissance Orbiter observed ISON as it passed by Mars on October 1<sup>st</sup>



BRRISON, a sub-orbital balloon, launched successfully, but its instrument failed and did not observe the comet

