A Big Year for Small Bodies: Comet ISON

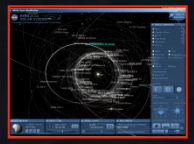
Louis Mayo, NASA GSFC, Kristen Erickson, NASA HQ

2013 is a watershed year for celestial events involving the solar system's unsung heroes, small bodies. The Cosmic Valentine of Asteroid 2012 DA14 which passed within ~ 3.5 Earth radii of the Earth's surface (February 15, 2013), Comet C/ 2011 L4 PANSTARRS and the Thanksgiving 2013 pass of Comet ISON, which will pass less than 0.012 AU (1.8 million km) from the solar surface and could be visible during the day. All this in addition to Comet Lemmon and a host of meteor showers makes 2013 a landmark year to deliver the excitement of planetary science to the audiences worldwide. To deliver the excitement and wonder of our solar system's small bodies to worldwide audiences, NASA's JPL and GSFC education teams in partnership with NASA EDGE will reach out to the public through multiple venues including broadcast media, social media, science and math focused educational activities, observing challenges, interactive visualization tools like "Eyes on the Solar System" and more culminating in the Thanksgiving Day Comet ISON perihelion passage. This talk will highlight NASA's focused education effort to engage the public in small bodies science and the role these objects play in our understanding of the formation and evolution of the solar system.

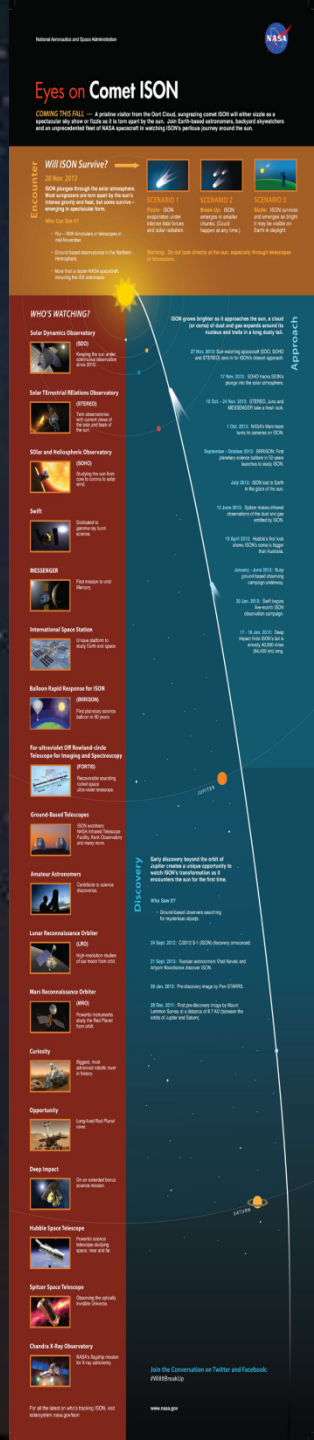
NASA has developed a significant web presence for solar system small bodies information and education programs. This includes the Comet ISON toolkit – a portal to general information and status, science, educational materials, and observing programs.

Amateur astronomers play an important role in both scientific research and outreach serving as our ambassadors to schools and the public. For Comet ISON, NASA has developed pro-am observing programs, materials suitable for star parties and other public engagements, journal articles, and observing challenges .

NASA reaches millions world-wide through televised webcasts such as NASA EDGE and NASA TV. These media provide access to scientist interviews, on site events, real time technology demonstrations, educational videos, and more. Comet ISON's historic meeting with the sun will be televised and webcast from JPL.



Assistive modeling and visualization technologies assist with observing plans, event status, and science knowledge, and conceptualization. NASA's Eyes on the Solar System (EoSS) tracks the progress of this year's high profile comets and asteroids providing real time analysis and visualization. This year, EoSS is used with planetarium software to develop small bodies classroom and lab activities.

16 NASA and 2 ESA space-based assets comprising spacecraft, sounding rocket and balloon instruments will monitor Comet ISON at high resolution and in multiple wavelengths. These observations are made available to students and the public through our website and to the research community through the Planetary Data System.

http://solarsystem.nasa.gov/ison