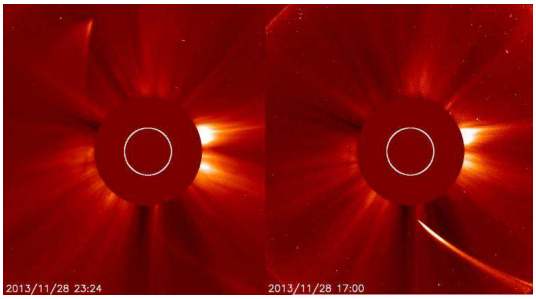
Comet ISON Autopsy: NASA Details Last Days Of The 'Comet Of Century,' Fatal Encounter With The Sun



←These two panels follow ISON before (right) and after its close approach. The bright comet is seen along its path at the bottom of the before panel, but something much fainter exits near the top of the after panel, potentially a dust tail reforming from the debris left from ISON's **perihelion** passage. NASA, SOHO

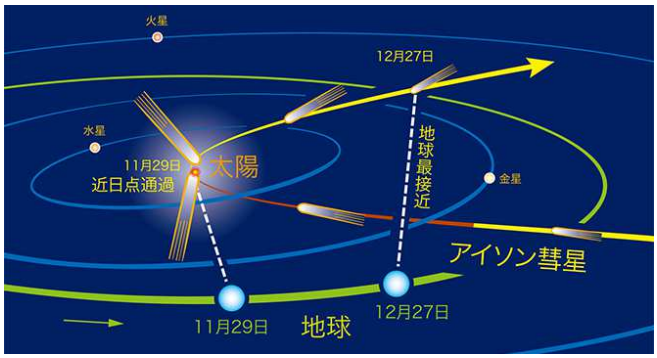
1. Comet ISON did not end up being the "comet of the century" as many hoped but scientists are still excited about the comet even after its **demise**. NASA presented the last days of ISON and discussed the final moment of the comet's existence and what the event means for the scientific community.2. NASA presented its findings at the 2013 Fall American Geophysical Union meeting, held in San Francisco, Calif., on Dec. 10. ISON's orbit would bring the comet dangerously close to the sun, just 730,000 miles from the surface of the star, and there was always the risk that the comet would not survive the trip. If ISON would have survived the trip it would have been visible with the naked eye during the day on Earth.

3. **C/2012 S1** was first discovered by two Russian astronomers, Vitali Nevski and Artyom Novichonok, in 2012 when ISON was 585 million miles from Earth. Unlike other comets that have **returning orbits**, such as Halley's Comet, the trip around the sun was ISON's first and, ultimately, its last. While ISON is a recent discovery its origins dates back billions of years within the Oort cloud, approximately 4.5 trillion miles from the sun, reports NASA. Something happened which caused ISON to be kicked out of the cloud and begin its life as a comet.

4. Before ISON reached the closest point to the sun, known as the **perihelion**, the comet began to lose mass and broke up as it made its closest pass around the sun. Despite the loss, ISON will have a lasting legacy as it was a **well-documented** comet, with observatories and amateur astronomers carefully monitoring ISON's journey.

5. Karl Battams, an **astrophysicist** at the Naval Research Lab in Washington, D.C., said in a statement, "The dirty snowball that we came to call Comet ISON was created at the same time as the planets."

6. With all eyes on ISON, astronomers were able to gain new insights on how the sun affects comets. With many observatories tuned in to ISON's approach to the sun, NASA's **Solar Dynamics Observatory** was unable to image the comet. The reason for this may have been due to the lack of oxygen emitted by the comet. Dean Pesnell, project scientist for NASA's SDO, said, "The fact that ISON did not show oxygen despite how close it came to the sun provides information about how high was the evaporation temperature of ISON's material." NASA says they have years of data to **cull through** and could give researchers new insight into the early universe as well as the composition of comets. 【12/11/2013/International Business Times】



autopsy《比喩的》 (事後の)解剖的吟味死体解剖、実地検証;**1.** demise 消滅,終末 **3.** C/2012 S1：アイソン彗星のこと アイソン（ISON）は、発見者が所属する国際科学光学ネットワーク（International Scientific Optical Network）の略称 returning orbits 回帰軌道 **4.** perihelion 近日点:惑星あるいは彗星の軌道上で太陽に最も近づく点. ⇔aphelion 遠日点:惑星や彗星が軌道上で太陽から最も遠ざかる点 well-documented 事実などが)今までにたくさん記録されている. **5.** astrophysicist 天体物理学者. **6.** Solar Dynamics Observatory 2010 年に NASA(米航空宇宙局)が打ち上げた太陽観測衛星。従来の観測衛星に比べて高解像度かつ短い時間間隔での多波長観測が可能であり、太陽表面と大気の活動、太陽風や太陽フレアと磁場の関係について詳細な観測を行う。cull through 選び抜く

☆Ice breaker for active discussion☆

1. What is the reason why Comet ISON was called "Comet of the Century"?
2. What are the differences among asteroids, comets and planets?
3. What is the Oort cloud?
4. When was the comet discovered and who discovered it? Why was it named ISON?
5. Are you one of the people who are fascinated about the study of the Universe? What do you think are the reasons why some people are interested about it?
6. If you can study one thing about the Universe, what would it be? Why?
7. Make sentences using the following words: autopsy, demise, optical, perihelion, dynamics, ultimately, approximately, astronomer, insight and cull.

ベラルーシとロシアの天文学者が国際科学光学ネットワークの反射望遠鏡を用いた観察で、かに座方向におよそ19等の彗星状の天体を発見。その後彗星と確定され、発見者が所属する国際科学光学ネットワーク（International Scientific Optical Network）の略称にちなんでISON彗星と命名されました。太陽に極端に近づく軌道を持つことが分かっていたため、近日点通過後、太陽の光と熱を浴び、12月の空を天然のイルミネーションが飾るのではと期待が集まっていましたが、ISON彗星はあっけなく散り、チャーター機で上空から彗星を眺めるツアーやビルの屋上での観察会など、便乗イベントはご破算になってしまいました。専門家は、彗星の核が予想より小さかった可能性があり、太陽の熱や重力に耐えられず、急激に蒸発、崩壊との見方を発表しました。彗星の研究自体がまだ100年足らずで、未知の部分が多いそうです。