Philae Lander Sends Back First Ever Image from Comet

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A note from Pastor Kevin Lea follows this article.



← Picture shows bumpy surface of 67P where Philae touched down after anxious overnight wait following gaps in communications.

Philae's CIVA instrument captured this image of its landing site. Photograph: European Space Agency/AFP/Getty Images

The European Space Agency's Philae lander has sent back the first ever image <u>from the surface of a comet</u>.

The picture shows the cracked, bumpy surface in monochrome,

with one of Philae's three legs in the bottom left of the frame. It is not yet clear whether the leg in the image is actually touching the surface. What is certain is that Philae is not level, and may be wedged into a pit. "We're either looking into a ditch or we are against a wall," said ESA Rosetta project scientist Matt Taylor.

<u>Comets</u> are often described as "dirty snowballs", irregular blocks of ice covered with dust and rocks, but no human craft has ever reached the surface of one before.

Scientists <u>re-established communications with Philae on Thursday after an anxious overnight wait</u> while its mothership Rosetta, which relays the signals to Earth, dipped below the comet's horizon.

Magnetic field data from Philae's <u>ROMAP</u> instrument analysed overnight revealed <u>three "landings"</u>. The first was almost exactly on the expected arrival time of 15:33 GMT. But the anchoring harpoons did not fire and Philae rebounded. In the weak gravity of the comet it took about two hours for the lander to return to the surface. It touched down for a second time at 17:26 GMT, then bounced again before finally coming to rest at 17:33.

Esa scientists described the lander as "stable" on Thursday morning despite concerns following the <u>touchdown</u> on <u>Wednesday afternoon</u>. It emerged that a harpoon which was meant to tether it to the surface of the 2.5 milewide comet had failed to deploy.

The first image from the surface is in fact a mosaic of two images taken by the lander's CIVA (the <u>Comet</u> <u>Infrared and Visible Analyser</u>) camera. It shows one of Philae's landing legs and the craggy surface. ESA had been expecting a view of the horizon so the scientists believe the craft is not on a flat surface. "We are definitely not in the open," said Fred Jansen, ESA Rosetta mission manager.

This presents a danger to the mission which has an initial battery life of about 60 hours. After that it must switch to rechargeable batteries and rely on solar illumination to keep it powered, so if it is stuck in a trench it may not be able to receive sunlight.

Discussions are already taking place about whether deploying the lander's drills and other moveable parts could move it into a better position.

Four other pictures from CIVA have been downlinked. These will be released at 13:00 GMT on Thursday. They will form the first 360° panorama of the surface. The Guardian has been told by an ESA official that there may be no horizon visible in those either.

Engineers are currently investigating the best way to pinpoint the location of Philae. They are planning to use the radar instrument <u>Consert</u> (Comet Nucleus Sounding Experiment by Radiowave Transmission), on both Rosetta and Philae, to triangulate the position.

During the decent, Concert showed that the lander was just 50 metres adrift from the targeted landing spot. ESA had planned for an error of up to 500 metres.

Science data is flowing in...

To read this article in its entirety, go to: <u>http://www.theguardian.com/science/2014/nov/13/philae-lander-first-ever-image-comet-surface-rosetta</u>

Note from Pastor Kevin Lea: These scientists think that they have landed on a comet "made from ancient material that pre-dates the birth of the solar system." However, Dr. Walt Brown has developed an alternative theory on the origin of comets (#1 Google hit out of half a million; <u>www.creationscience.com</u>). If Dr. Brown is correct, then these scientists will be greatly surprised at what they find if the Lander is able to complete planned experiments and take better photographs before its batteries die.

Those who follow Dr. Brown's work will not be at all surprised if the probe finds rounded-off boulders on the surface and minerals that are common to earth and only form in the presence of heat, pressure, and liquid water; possibly even organic compounds; and more that will surprise the scientists, but be completely consistent with Dr. Brown's predictions.

Why will this be? Because the Philae Lander has just landed on a mass of rock, water, and earth debris that was ejected from the earth in the beginning days of Noah's flood when, on a single day, all the fountains of the great deep burst forth [with explosive energy sufficient to send earth materials into space] (Genesis 7:11).

Those with some physics background should be able to follow and appreciate what Dr. Brown proposes. You can read about his theory online at: <u>Origin of Comets</u> and <u>Origin of Asteroids</u>.

UPDATE November 19, 2014: See also <u>http://creationsciencehalloffame.org/2014/11/18/astronomy-</u>2/space/philae-sees-organics-comet/