

European Space Agency lands space probe on comet

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On November 12, the European Space Agency (ESA) Rosetta mission successfully landed a probe onto a comet for the first time in human history. The 220-pound Philae lander touched down on comet 67P/Churyumov Gerasimenko at 11:03 a.m. EST, after a ten-year, 4 billion mile journey.

The Rosetta spacecraft, which housed Philae, made history in August 2014 by orbiting a comet for the first time. The Philae probe “bounced” twice on the comet surface after harpoons meant to anchor it failed to fire, and finally settled in a shadowy crevice where its solar panels could not recharge. The probe used 67 hours of battery life to study the comet’s physical properties and gas composition. This data, including the first-ever pictures from a comet surface and evidence of organic molecules, was beamed to Rosetta for analysis.

ESA scientists hope that as the comet’s orbit brings it closer to the Sun, Philae’s batteries will recharge and the probe can reestablish communication. In the meantime, the Rosetta orbiter continues to monitor the comet, gathering data as it nears the Sun and the ice it contains begins to thaw, expelling material into space. The comet offers clues to the origin of Earth’s oceans and possibly the origins of life, since comets may have delivered ice or organic chemicals to the young planet. It may also serve as a model for how icy planets like Pluto form and perhaps provide a glimpse into the origins of the solar system.

Sources: BBC News, European Space Agency, National Geographic
