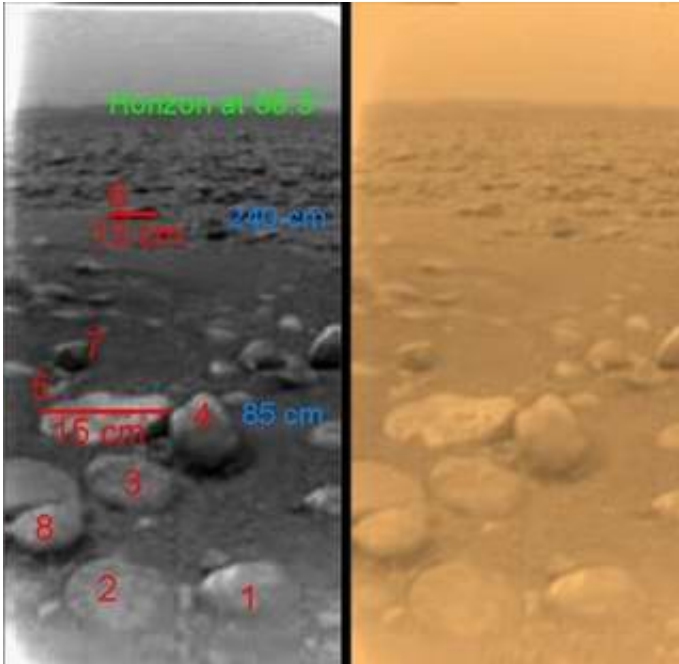


Sights and Sounds of Titan

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by Dr. Tony Phillips

The European Space Agency's (ESA's) [Huygens](#) probe, carried to Saturn by the [Cassini](#) spacecraft, parachuted to the surface of Saturn's giant moon Titan on Friday, Jan. 14th, revealing finally what lies beneath Titan's thick orange clouds.

First images released by the ESA depict sinuous drainage channels leading to an apparent shoreline. What's draining? Possibly liquid methane. The orange landscape around the Huygens landing site is

littered with little rocks, rounded and smooth like river-rocks on Earth. One of the images seems to show tendrils of ground fog made not of water but perhaps ethane or methane.

Image: Small "rocks," possibly made of water ice, at the Huygens landing site. Evidence of erosion at the base of these objects suggests fluvial activity. The right panel shows, approximately, the true color of the scene.

It's all a bit familiar, yet at the same time utterly alien. Researchers are elated.

Because Titan has a thick atmosphere, able to carry sound waves, the moon is a noisy place. Microphones onboard Huygens recorded the sound of wind rushing by the probe as it descended. The ESA has released about one minute's worth of the recording; it's a sample of what a traveler riding with Huygens would have heard during the descent: [click here to listen](#).

Huygens was designed to float in case it landed in a river or lake--but it didn't. After descending by parachute for two and a half hours, the saucer-shaped probe hit solid ground at a speed of 4.5 meters per second (10 mph), experiencing a brief jolting deceleration of 15 Gs. Huygens survived the impact and continued transmitting data for more than one hour after landing.

Among the measurements sent back to Earth were air temperature, pressure, composition and wind speed sampled at points ranging from the top of Titan's atmosphere to the ground. The temperature of the landing site itself was minus 291 degrees F. A "penetrometer" on the bottom of the probe poked into the ground. The soil, it found, has the consistency of wet sand or clay and is covered by a thin crust ... of something. Scientists are still analyzing all these data.

Source: Science@NASA (by Dr. Tony Phillips)

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