

Cassini's voyage of discovery

CAPE CANAVERAL – OCT 4, 1997

A seven-year journey to the ringed planet Saturn begins with the liftoff of a Titan 4B rocket carrying the Cassini orbiter and its attached Huygens probe.

Developed by NASA, ESA and the Italian Space Agency, Cassini arrives at Saturn in June 2004 after a 3.5-billion kilometre journey. For 13 years, Cassini and Huygens send back remarkable images and data about newly-discovered moons, geysers of water shooting into space, and lakes of hydrocarbons.

The mission ends on September 15 with Cassini vaporizing in Saturn's outer atmosphere



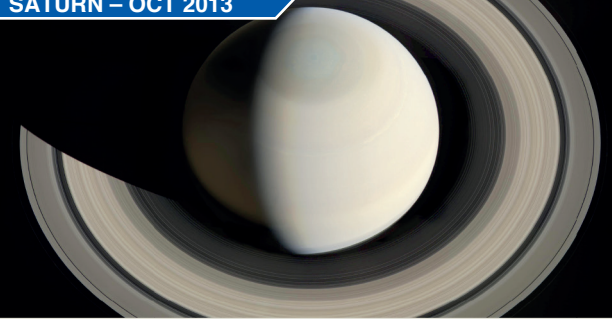
JUPITER – DEC 2000

True colour mosaic of Jupiter, constructed from images taken by Cassini's narrow angle camera, is most detailed global portrait of Jupiter ever produced.

Mosaic is composed of 27 images: nine images were required to cover the entire planet and each of those locations was imaged in red, green, and blue to provide true colour



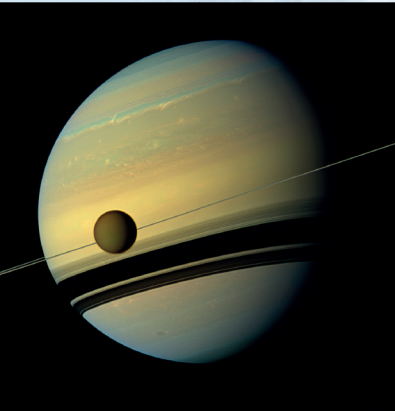
SATURN – OCT 2013



Composed from 36 separate exposures, this portrait shows Saturn's north polar vortex – remnants of a monster storm in the northern hemisphere

CLOUDS ON SATURN – MAY 2017

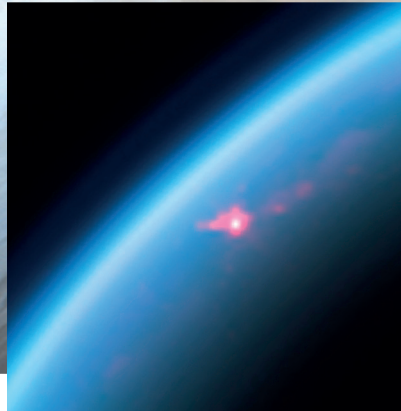
Neighbouring bands of clouds move at different speeds and directions depending on their latitudes and take on the appearance of strokes from a cosmic brush



TITAN – JUL 2017

Atmosphere of Titan – largest of Saturn's 53 moons – is discovered to contain **acrylonitrile**, vinyl cyanide molecules.

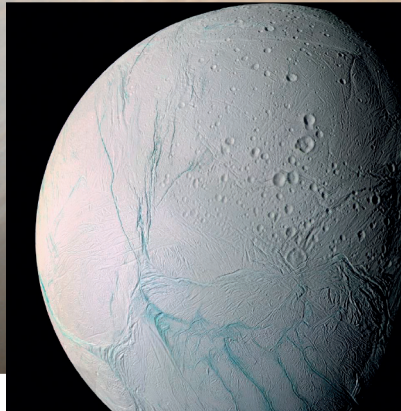
Organic compound intrigues scientists investigating chemical precursors for extraterrestrial life



HYDROCARBONS – JUL 2017

Near-infrared image shows specular reflection, or sunglint, from a hydrocarbon lake named **Kivu Lacus** on Titan, close to moon's north pole.

View was obtained by Cassini Visible and Infrared Mapping Spectrometer (VIMS)



ENCELADUS – MAY 2017

Saturn's icy, ocean-bearing moon Enceladus spews plumes of hydrogen, suggesting frigid water is interacting with heated rocks.

These hot spots could be perfect places for small organisms – bacteria, for instance – to thrive