

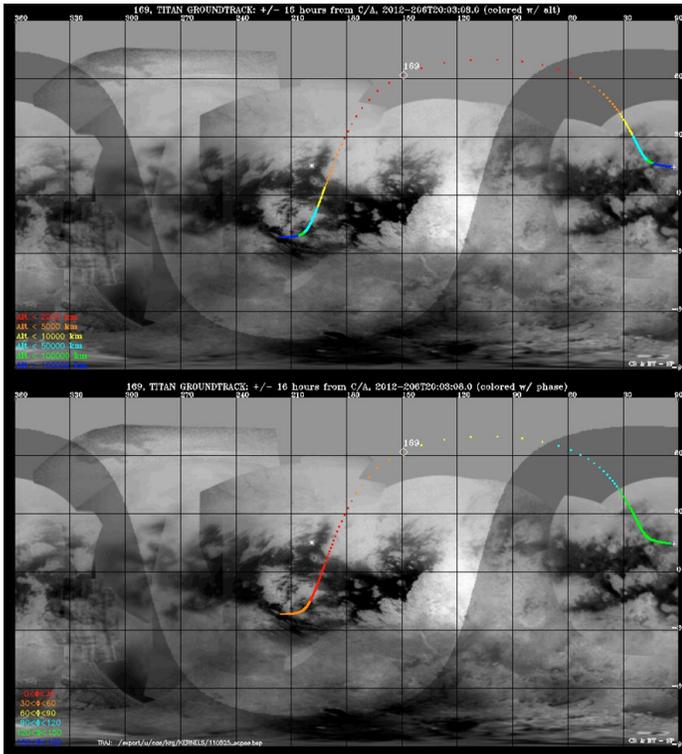
Cassini Solstice Mission Quick-Look Flyby Facts

Titan T-85 Encounter (Orbit 169)

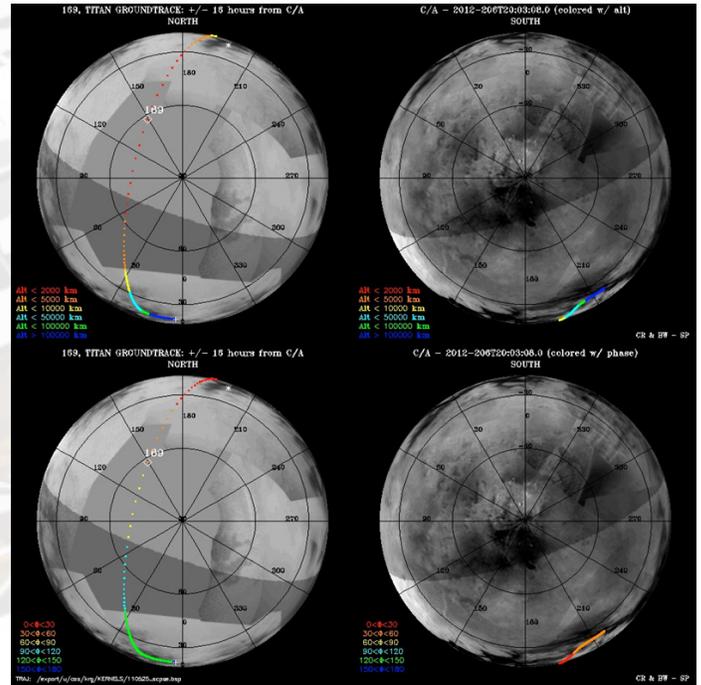


The T-85 flyby occurs with local time coverage moving from the dayside to the nightside.

Cassini Groundtrack: Global Plot



Cassini Groundtrack: Polar Plot



* Start \diamond Closest Approach + End

Quick Facts

Closest Approach at 2012-206T20:03:07
July 24, 2012

Altitude: 1012 km (~629 miles)
Speed: 5.9 km/sec (~13,000 mph)
Closest Approach latitude: 61.6° N

Flyby Setup Maneuver Schedule:
Titan approach maneuver on Friday,
July 20 UTC 203T01:38:00
Closest Approach occurs ~ 2 days after Peri-
apse

15th Titan encounter in the Solstice Mission

Science Highlights

Closest Approach/Unique Observations
VIMS: VIMS will look for specular reflection on Kivu Lacus, one of the Northern small lakes. VIMS controls pointing at closest approach and will acquire a 1 km/pixel image of Kivu Lacus and Punga Mare. Then, it will acquire a 2 km/pixel image of the Huygens landing site to look for geological changes. These observations will be compared with previous observations (VIMS and RADAR) to study Titan's orbital characteristics

Titan T-85 Encounter

Time Ordered Listing

<u>Event</u>	<u>Time (PDT)</u>	<u>Event</u>	<u>Time (PST)</u>
Turn Cameras to Titan	Mon July 23 03:00 PM	Flyby	Tue July 24 02:25 PM
Deadtime	Mon July 23 03:40 PM	VIMS	ongoing
CIRS	Mon July 23 03:54 PM	CIRS	Tue July 24 04:40 PM
VIMS	Tue July 24 05:25 AM	VIMS	Tue July 24 11:25 PM
CIRS	Tue July 24 05:25 AM	Deadtime	Wed July 25 12:04 AM
VIMS	Tue July 24 05:25 AM	Downlink	Wed July 25 01:00 AM

Science Highlights Inbound/Outbound Wings

VIMS: On the outbound wing, medium resolution capability will allow VIMS to detect clouds and to monitor climatic changes after the equinox.

CIRS: CIRS carries out an infrared temperature mapping of Titan's atmosphere and performs far-infrared limb-sounding to retrieve vertical temperature, aerosol and gas distribution near 36N.

ISS: ISS will ride along with CIRS' and VIMS' observations, inbound and outbound, to image Titan's atmosphere. These observations include Adiri and the region where extensive surface changes were observed in Fall 2010.

MAG: With closest approach in the dayside ionosphere, the magnetometer will be able to study the diffusion of the external magnetic field at low altitudes and mid solar zenith angles. A comparison with the T83 and T84 flybys will be very useful.