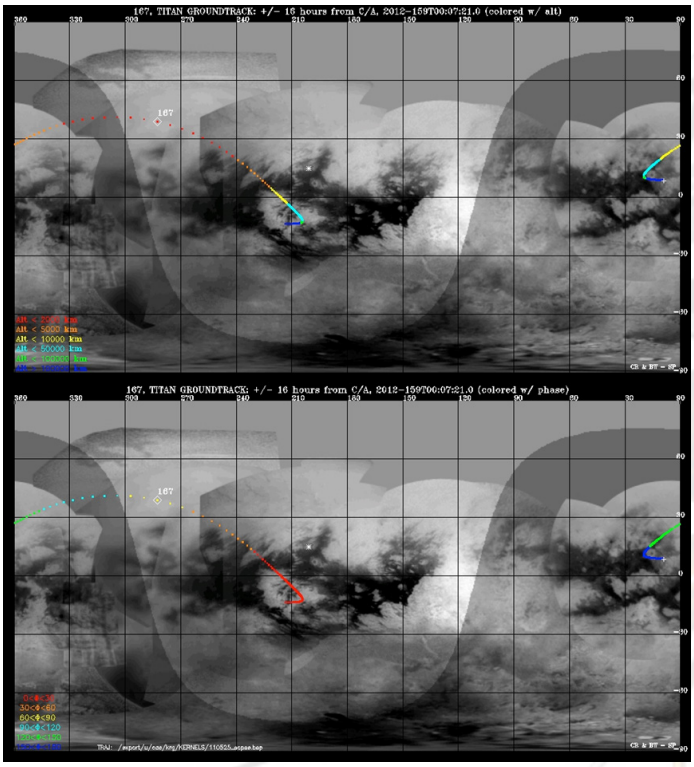
Cassini Solstice Mission Quick-Look Flyby Facts

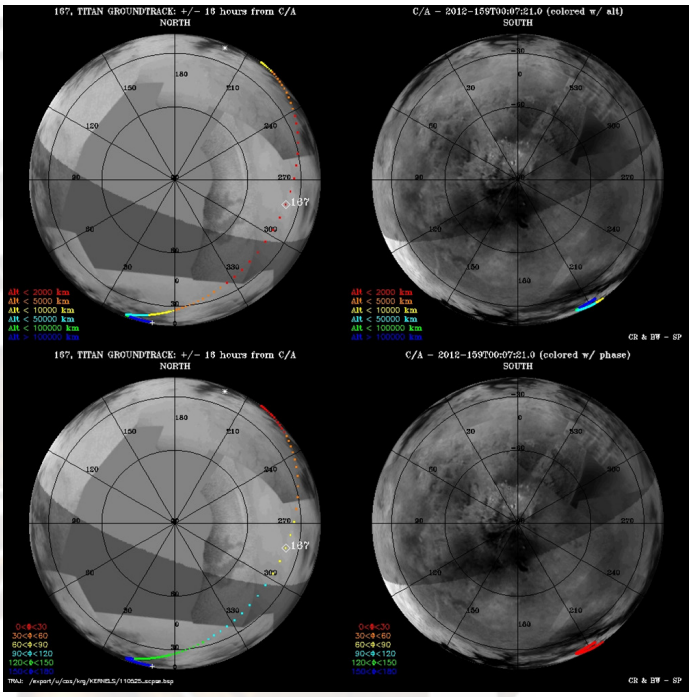
Titan T-84 Encounter (Orbit 167)

The T-84 flyby occurs with local time coverage moving from the dayside to the nightside.

Cassini Groundtrack: Global Plot



Cassini Groundtrack: Polar Plot



* Start ◇ Closest Approach + End

Quick Facts

Closest Approach at 2012-159T00:07:21
June 7, 2012
Altitude: 959 km (~596 miles)
Speed: 5.9 km/sec (~13,000 mph)
Closest Approach latitude: 39.1° N

Flyby Setup Maneuver Schedule
Titan approach maneuver on Sunday,
June 3 UTC 155T15:15:00
Closest Approach occurs ~ 2 days after Periapse

14th Titan encounter in the Solstice Mission

Science Highlights

Closest Approach/Unique Observations

RADAR: RADAR will acquire SAR of the sparsely-covered Northwest quadrant (plus global shape from SAR topo), altimetry on Adiri, and HiSAR on equatorial regions.

Time Ordered Listing

Event	Time (PDT)	Event	Time (PST)
Turn Cameras to Titan	Wed June 6 01:45 AM	CIRS	Thu June 7 03:23 AM
Deadtime	Wed June 6 02:25 AM	Deadtime	Thu June 7 03:35 AM
CIRS	Wed June 6 02:40 AM	Downlink	Thu June 7 03:30 AM
VIMS	Wed June 6 05:23 AM	Turn to Titan	Fri June 8 03:30 AM
CIRS	Wed June 6 09:23 AM	ISS	Fri June 8 04:10 AM
RADAR	Wed June 6 04:08 PM	RADAR Cal	Fri June 8 11:20 AM
Flyby	Wed June 6 05:23 PM	ISS	Fri June 8 01:20 PM
RADAR	Ongoing	Downlink	Fri June 8 04:30 PM
UVIS	Wed June 6 08:38 AM		

Science Highlights
Inbound/Outbound Wings

RADAR: Outbound from T-84, RADAR will do altimetry on Adiri, and HiSAR on equatorial regions.

VIMS: VIMS will monitor climatic changes after the equinox and look for specular reflection on the Northern lakes. The day after the Titan encounter, VIMS will ride along with ISS and monifor seasonal change.

CIRS: CIRS focuses on mid-infrared limb sounding to determine vertical atmospheric structure of temperature and minor gas composition. The day after the Titan encounter, CIRS will ride along with ISS and monitor seasonal change

ISS: ISS will ride along with CIRS and UVIS and their outbound leg includes low-phase-angle observations of Adiri and the region where extensive surface changes were observed in Fall 2010. ISS will monitor Titan to track clouds and the evolution thereof for an extra day after the Titan encounter.

UVIS: Inbound and outbound UVIS will obtain an image cube of Titan's atmosphere at EUV and FUV wavelengths by sweeping its slit across the disk.

MAG: T-84 is another low altitude north polar flyby in the post noon sector of Saturn's magnetosphere. With closest approach slightly in the dayside ionosphere, Cassini will be able to study the diffusion of the external magnetic field at low altitudes and high solar zenith angles.