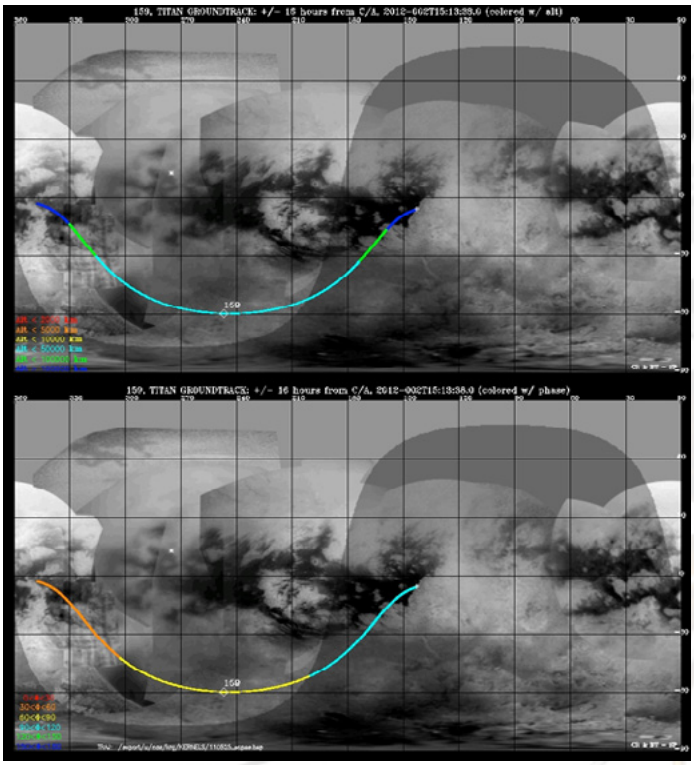
Cassini Solstice Mission Quick-Look Flyby Facts

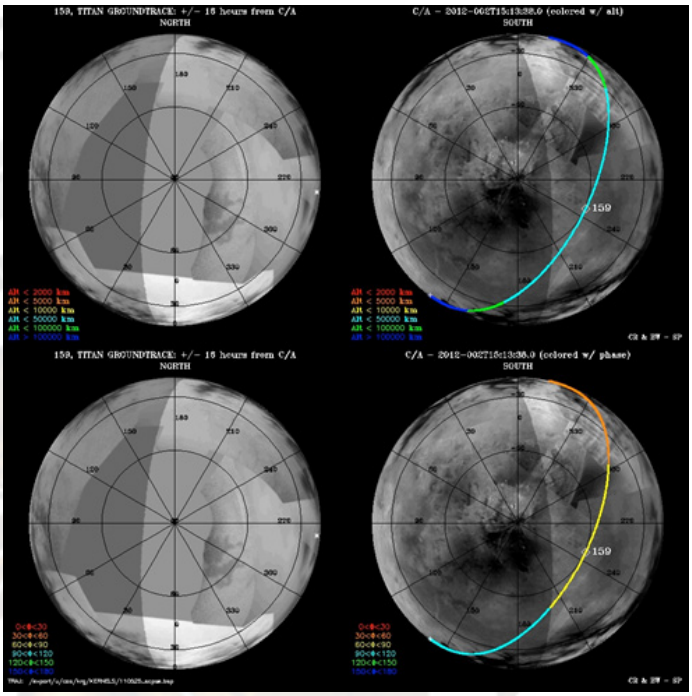
Titan T-80 Encounter (Orbit 159)

The T-80 flyby occurs with local time coverage moving from the dayside to the dusk side.

Cassini Groundtrack: Global Plot



Cassini Groundtrack: Polar Plot



* Start ◇ Closest Approach + End

Quick Facts

Closest Approach at 2012-002T15:13:38
Jan. 2, 2012
Altitude: 29,415 km (~47,339 miles)
Speed: 5.5 km/sec (~12,000 mph)
Closest Approach latitude: 59.9° S

Flyby Setup Maneuver Schedule

Apoapsis maneuver on Wednesday,
December 21 UTC 351T02:20:00Titan approach maneuver on Monday,
December 26 UTC 356T15:51:00
Closest Approach occurs ~ 2 days before Peri-apse

Tenth Titan encounter in the Solstice Mission

Science Highlights

Closest Approach/Unique Observations

ISS: On this high-altitude encounter, ISS will perform high-resolution observations around closest-approach along the anti-saturnian and trailing hemispheres at mid- to high southern latitudes. This is one of ISS' so-called "10-pointers," i.e. one of the two scientifically most significant Titan flybys for ISS during the Solstice mission.

Time Ordered Listing

Event	Time (PST)	Event	Time (PST)
Turn Cameras to Titan	Sun Jan 1 05:45 PM	RADAR	Mon Jan 2 10:51 AM
Deadtime	Sun Jan 1 06:25 PM	VIMS	Mon Jan 2 01:36 PM
CIRS	Sun Jan 1 06:39 PM	Deadtime	Tues Jan 3 11:20 PM
ISS	Mon Jan 2 06:21 AM	Downlink	Tues Jan 3 01:46 AM
Closest Approach	Mon Jan 2 08:36 AM		

Science Highlights
Inbound/Outbound Wings

ISS: CIRS: As the lead instrument on the inbound approach to Titan, CIRS views Titan at various distances and spectral resolutions to make maps of atmospheric and surface temperature.

RADAR: After closest approach RADAR will do radiometry of the subsaturn hemisphere.

VIMS: Outbound, VIMS will perform stellar occultations of CW Leo and R Leo which will constrain the composition and the spectral properties of Titan's atmosphere. VIMS will also perform a global mapping observation of the high southern latitudes.

ISS: ISS will ride along with VIMS' outbound observations of Titan's leading hemisphere, including Senkyo. This is one of the last few views of the high southern latitudes.