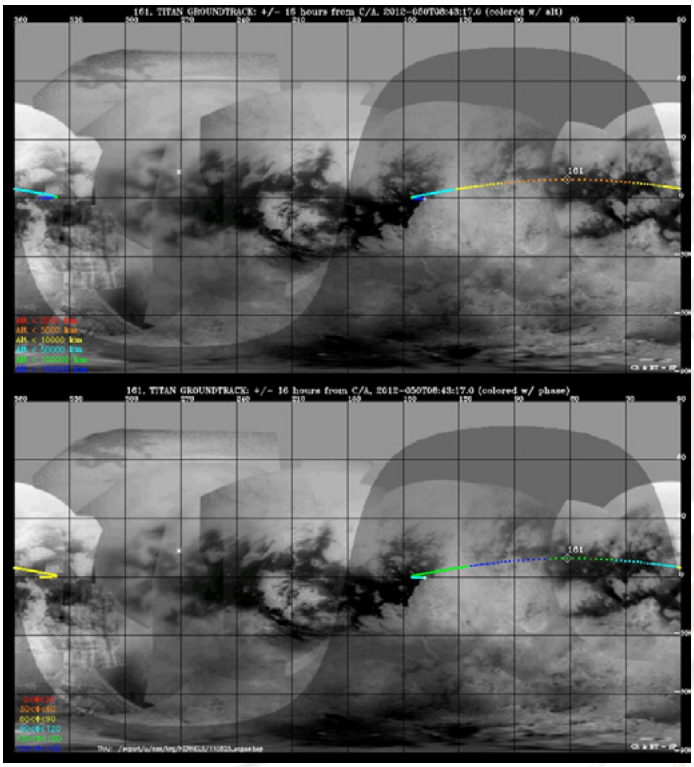
Cassini Solstice Mission Quick-Look Flyby Facts

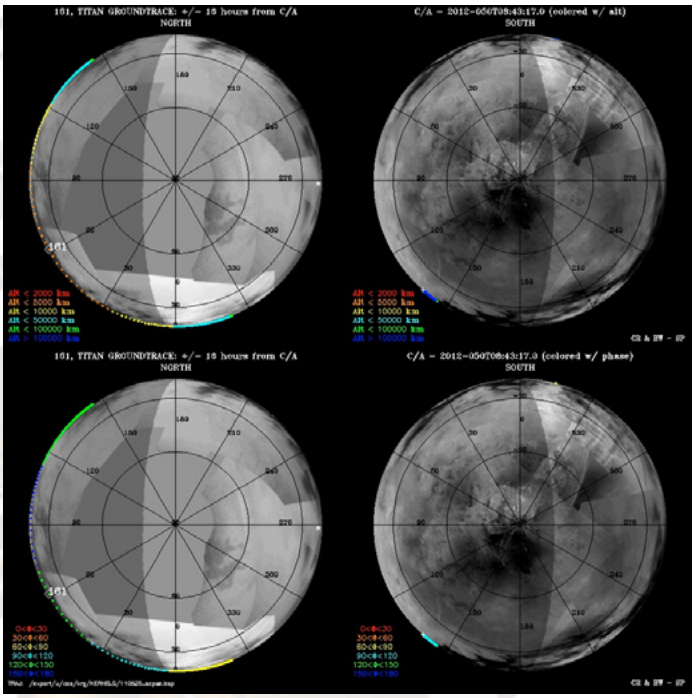
Titan T-82 Encounter (Orbit 161)

The T-82 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 2012-050T08:43:17
February 19, 2012
Altitude: 3,803 km (~2,362 miles)
Speed: 5.8km/sec (~13,000 mph)
Closest Approach latitude: 9.8° N

Flyby Setup Maneuver Schedule
Titan approach maneuver on Monday, February 15 UTC 046T22:43:00
Closest Approach occurs ~ 2 days after Periapse

12th Titan encounter in the Solstice Mission

Science Highlights

Closest Approach/Unique Observations

CIRS: CIRS performs a wide variety of observations, including limb sounding, and mapping of surface and atmospheric temperatures. Far-infrared limb sounding near closest approach reaches the most northerly latitude of the Solstice Mission (75 degrees N) until 2015, providing insights into the transition of the northern polar circulation from spring to summer, and to search for possible condensates.

mission.

Time Ordered Listing

Event	Time (PST)		Event	Time (PST)
Turn Cameras to Titan	Sat Feb 18	08:15 AM	Flyby	Sun Feb 19 01:59 AM
Deadtime	Sat Feb 18	08:55 AM	CIRS	ongoing
CIRS	Sat Feb 18	09:10 AM	Deadtime	Sun Feb 19 01:05 PM
ISS	Sat Feb 18	03:59 PM	Downlink	Sun Feb 19 03:30 PM
CIRS	Sat Feb 18	04:59 PM		

Science Highlights
Inbound/Outbound Wings

ISS: ISS has a one-hour unilluminated prime observation primarily for photometry.

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.

VIMS: VIMS rides along to detect clouds to monitor climatic changes after the equinox.

MAG: T-82 is a dusk sector equatorial flyby across Titan's magnetic tail. Similar in geometry, but at a lower altitude (3,844 kilometers) than T-78, Cassini will be able to provide a better characterization of the magnetotail by providing samples at different radial distances from the moon at a fixed local time.