

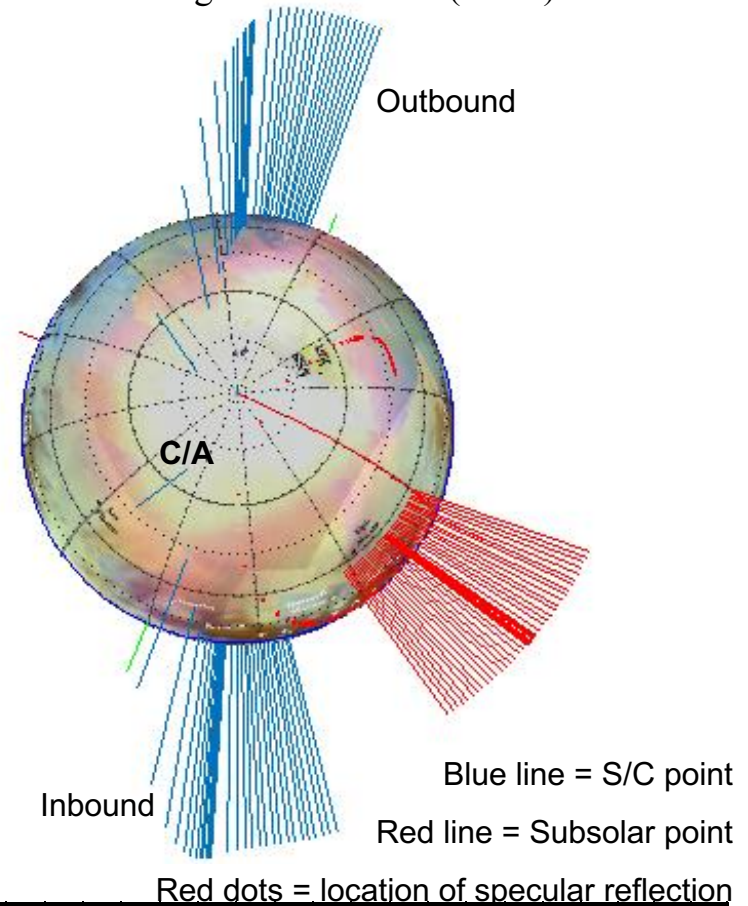
T126 – rev 270 – S99

April 22, 2017 – 112T06:08:08 @ 979 km altitude

Christophe Sotin, Ken Lawrence, Tucson VIMS team

T126: Radar will be prime at closest approach during this flyby (979 km). On the inbound, VIMS will ride along with ISS and CIRS and will look for clouds in the northern hemisphere (TC1a). On the outbound, VIMS will take images of the North Pole with very large emission angles, looking for clouds forming above the seas (TC1a). It will also get limb images that are used to characterize Titan’s haze (TC1a).

C/A - 0T16:43:09	-14:00	CIRS	A (Tc1b)
-14:00	-12:00	ISS	D2 (TC1a, TC1b, TN1a, TN2c (Could also use TN1c for limb haze layer, depending on geometry if along limb, or TN2d, depending on timing.))
-12:00	-09:00	CIRS	D2 (TN1c)
-09:00	-06:00	ISS	H1 (TC1a, TN1a, TN2c (Could also be TC1b and/or TN1c, depending on geometry, or TN2d, depending on timing.))
-06:00	-02:15	RADAR	H1+ L (TN2c ,TN2c)
-02:15	-01:12	RADAR scatterometry/radiometry	(TN1a, TN2c)
-01:12	-00:31	RADAR HISAR	(TN1a)
-00:31	-00:30	RWA to RCS Transition	
-00:30	-00:15	RADAR Altimetry	(TN2b)
-00:15	0	INMS*	RADAR Needs to get entire northern lake region. RADAR ride along (TC1a, TN1a, TN1b, TN2b, TN2c)
2017-112T06:08:08		CLOSEST APPROACH	NEG_X to RAM, NEG_Z to Titan (Tc2a)
0	+00:18	RADAR SAR	INMS ride along. RADAR SAR+Close Altimetry (TC1a, TN1a, TN1b, TN2b, TN2c)
+00:18	+00:30	RADAR Altimetry	(TN2b)
+00:30	+00:52	RCS to RWA Transition	
+00:52	+01:30	RADAR HISAR	(TN1a)
+01:30	+02:35	RADAR scatterometry/radiometry	(TN1a, TN2c)
+02:35	+06:00	RADAR	L+Q1 (TN2c ,TN2c)
+06:00	+09:00	VIMS	Q1 (TN1a (Specular reflection of lakes-depending on geometry))
+09:00	+13:00	VIMS	O (TN1a (Specular reflection of lakes-depending on geometry))
+13:00	+22:53	CIRS	M2 (Tc1b (TN1c on outbound))



T126 – rev 270 – S99

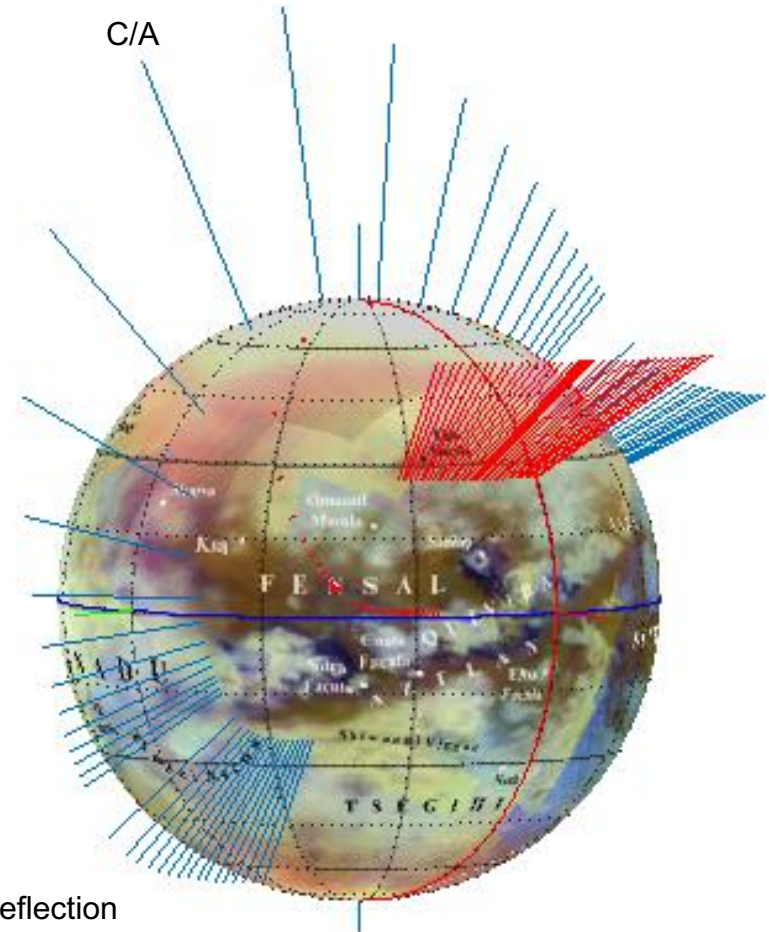
April 22, 2017 – 112T06:08:08 @ 979 km altitude

Christophe Sotin, Ken Lawrence, Tucson VIMS team

Inbound:

Monitoring cloud activity (TC1a)
and the evolution of the south polar
vortex (TC1b).

Global mapping of Titan.



Blue line = S/C point

Red line = Subsolar point

Red dots = location of specular reflection

T126 – rev 270 – S99

April 22, 2017 – 112T06:08:08 @ 979 km altitude

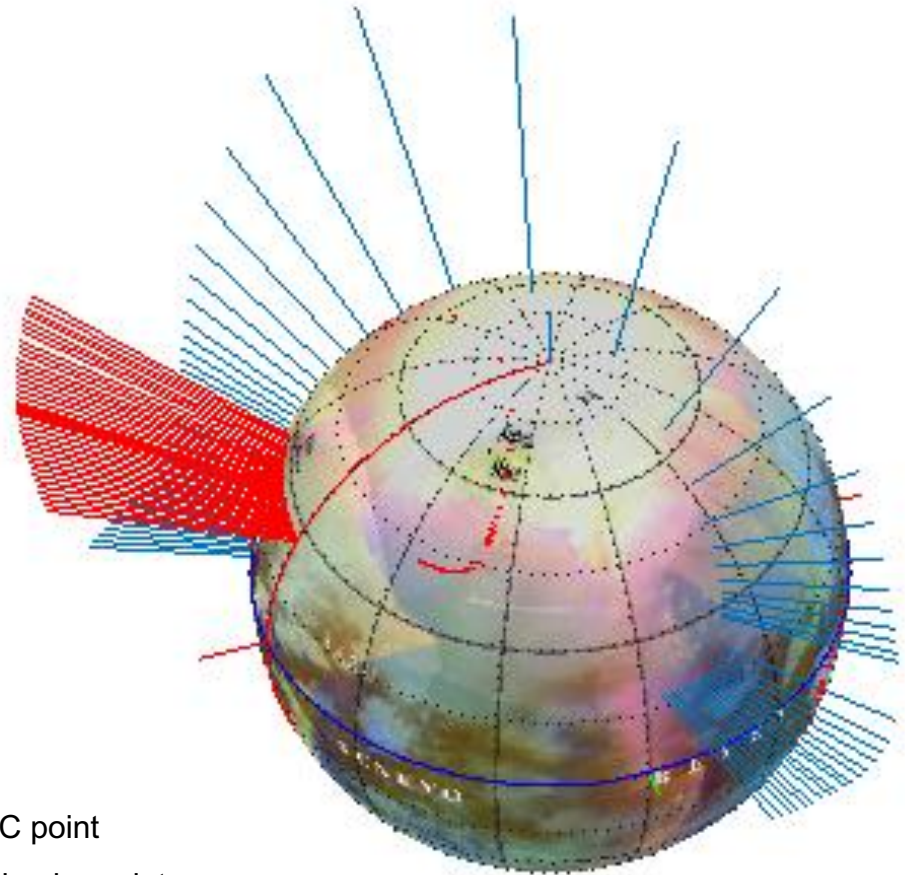
Christophe Sotin, Ken Lawrence, Tucson VIMS team

C/A

Outbound:

North Pole observations during the ride along with CIRS.

Specular reflection geometry occurs in the mid-northern latitudes (42 N, 315 W) at C/A + 06:00. No liquids are expected at these latitudes.



Blue line = S/C point

Red line = Subsolar point

Red dots = location of specular reflection

T126 – rev 270 – S99

April 22, 2017 – 112T06:08:08 @ 979 km altitude

Christophe Sotin, Ken Lawrence, Tucson VIMS team

No specular reflection geometry at high northern latitudes. Prior to C/A, specular geometry occurs at equatorial latitudes. After C/A, at mid-northern latitudes.

Specular reflection geometry occurs over Kraken Mare at C/A, but this is during the Radar observation.

