

S94 T119 Titan Bistatic
& Occultation
↑

5/6/16 ①
DOY 127
T119

last in the mission ☹

DOY 127, DSS-43 & DSS-35

May 6, 2016



NOA: Lu

Ops room: Aseel, Elias, Danny, Jay, Dustin
Essam

ACE: Mike Straub

Stations: Team D the B

Ops team in ops room @ 4:30am

1215 Pre-Cel Briefing for DSS-43

Weather clear

Equip green

1225 Asked ACE to tell stations not to go
to print when done w/ Cels

1226 43 asking about xmtr times

SOE

NOA: Follow BM or timeline

Fgains	43 XR	60
	43 XL	37
	43 SR	50
	43 SL	30
	35 XR	55
	35 XL	35
	35 KR	55
	35 KL	35

~1300 43 reported ready for coals
 RS → standby

1307 Lu asked 43 if completed steps on page 10
 43 → negative

Coherent frequency offsets (for 181505 in timeline)

S 744727
 X 2730668
 Ka 10376540

1327 43 said they ~~are~~ completed all steps on page 10
 (through 10)
 me → Standby. Still setting up here. will let them know when ready

1330 Lu called. Want configured per page 7
 me → yes. I usually ask them to setup per pages thru 10
 He's still checking configuration. Give him a few more minutes

1336 Lu told 43 to go through pages 7 to 9 (RS wants us to go through...)

5/16/16 (2)
DOY 127
T 119

1337 43 said they configured per the instruction but have not enabled SNT at this time

1345 Called Lu. Done checking?

Done

OK diode better for XR $\xrightarrow{\text{me}}$ yes, but don't want to confuse

1347 Told 43 we are done setting up on our side. We'll be going over steps on page 12. Configure rcrs to XLCP & XLCP. Switch DCO1 to XLCP per instructions on page 11.

1348 43 said configured DCO1 to XLCP out the horn

$\xrightarrow{\text{me}}$ We'll be going over steps on page 12. Will let him know when ready to go to step 2.

1351 Lu called when switch rcr it goes back to default will ask to switch to 12.5K

1351 Lu to 43 on both dIL channel change MFQ to on Q diode to 12.5K. 43 said enabled ?!

1354 Called Lu. We are running out of time. They said had something enabled? Lu asked 43 to disable SNT. Lu configuration verified.

1354 Start of 43 pre-cel calibrations

1431 43 problems w/ ambient load
configuration

Lu instructed
Repeat SRCP cells

1450 35 Briefing

ACE told 35 to enable mono @ 3-way
acquisition

Lu → Mono is red. Won't be using
But still ask station to calibrate mono

Weather fine

Equipment Mono is red. Appear as
"X KIA is orange."

X xmtr is orange. limited to
15kw

1455 Lu to 35

Once done w/ pre-cel, don't go to point
We'll be going over bistatic

1511 Told 43 done w/ cells

Go to point

Reconfigure DCO6 to ~~SRCP~~, select 12.5k diode
MFR to on,

Lu to 43 to complete step 10 on page 10

Day 127 (3)
5/16/16
T119

1515 Told 43 to let me know when they are on-point. Would like to do SWT Meas.

1516 43 saying they are on-point
told them @ 1520, to go through steps 1-6 on page 21

152015 43 enabled SWT on X & S

152300 43 said they disabled diodes

!!
We didn't get reading
Very high
Lu said they had 12.5K diode selected

1528 Told 43 to disable SWT
We'll continue w/ meas. after xmtr on.

1531 35 completed mono cal. Told Lu

ready for calcs
Asked Lu to focus on UL

1531 ACE confirms 43 xmtr on
17.559 kW

1532 Lu told 43 reminder don't need to have range mod is off (asked him to verify)
Verify TDM will not turn range mod on.

ACE: It's not in DKF

1533 Lu asked 35 to configure per page 7 to 10 (per my request)

- 1537 43 configured
DC06 XLCP
DC01 SLCP
- 1540 Told 43 done w/ SNT Meas
Re-configure to RCP
Set MFQ to ON
& 12.5K diodes
- 1541 43 Completed reconfiguration (but revrs still LCP)
Asked them DC06 back to XLCP
DC01 " SLCP
- 1543 43 re-configured
- 1544 Told 43 next is Mini Cal
Steps on page 17
Go to step 2 @ 154900
- 1558 Lu asking 35 to disable SNT on both
channels.
- 1659 Told 43 couple of values don't look
right. Want to repeat. New time 160600
- 1600 43 curious what was prob.
me → Took initial reading w/ diode on. Seems
diode was on @ 154700 43 seemed to
acknowledge.
- 1606 ACE copies 43 carrier down on time
- 1608 Lu said 35 ready for calibrations

Doyle 127 (4)
5/6/16
7119

1619 Lu told 35 to go to page 15 & take a look @ that page & wait for RS

Error messages on WWSR 1 & 2
EIC

Danny spoke w/ Steve Fogstad
Likely bee low signal levels

1640 Told 35 sorry it took us a while to get ready. Was having problem w/ one of open-loop rxrs but ok now.

We'll be going over steps on page 15
confirm on step 1?

35 → hasn't switched 43 in B will do it

1642 Begin 35 calls

1650 Sue Finley called back
do fgain # 0 0

~~But that doesn't~~ Goes away when you get signal
But do fgain # 0 1, then fgain when you get signal

Corrupting noise data by leaving it in?

Sue: Yes. Histogram looks terrible
Have to do another fgain when get signal

messed up when signal is low

1656 Do fgain such 0 1 on cell bistat 1KHz

1727 Done w/ 35 calls
Told station to go to point

1730 35 said they are on-point

1741 Earl come w/ good luck peanuts

1744 Told 43 & 35 that timeline has SNT
meets. @ 1752, but if ready, start now
→ start ~~for~~

1749 Told 35 done w/ SNT meets.
Proceed w/ steps 9 & 10 on page 21

~~1749~~ Told 43 to proceed w/ step 7

1750 35 completed steps 9 & 10

1754 Told 43 done w/ SNT meets.
Complete steps 9 & 10
reconfigure for RCP.

1755 Completed item 10

1755 told 43 & 35 next minical
Page 17 for 43, 18 for 35
Time for step 2 180000

1818 Told 43 & 35
Heads up that in just a few minutes,
we'll be starting the final Titan occultation
in the Cassini mission

DOY/127 (5)

5/6/16
T119

~183740 2-way signal
It worked !!!

Farewell Titan occultations! ☹️

184950 Begin Bristatic
Echoes !!!

1919 Told Lu that we are seeing beautiful
echoes @ X & S band RCP & LCP
→ That's good. What about Ka-band?
me → Not seeing anything in real-time
Lu → 43 & 35 did a copy
→ yes

1957 43 & 35 lock on Carrier

195830 Ka LCP signal level ~35

~2013 43 X & S LOS

201253 35 K LOS

20310 35 X LOS

He told ACE was telling stations s/c will be back on point.
Stations → LOS for rest of the track Corrected him

2036 Told 43 & 35 SNT needs @ 2040

2055 Told 43 & 35 to go slow & complete steps on page 10

43 saying shift change. \rightarrow me \rightarrow Thank you very much for your support

2055 Disable recording for 3 & 4

2105 43 & 35 said they've completed up to step 8 on page 8

2108 Start 35 Post-cal calibrations

~~2108~~

~~Start post-cal calibrations.~~

2114 Asked 43 to configure RVRS for XLCP & XLCP

2150 Told 35 done w/ calcs. Thank u for excellent support. Standby for NOA.

Lu: Very good support. See you for next bistat in Nav \rightarrow Called Lu. Aren't you going to ask for DRs?

2151 Lu^{to} 35 Even though PWS was very successful two probs.

① Mono

② KLCP path 10 dB higher than expected

2235 Done w/ 43 Calibrations

2235 Told 43 we are done. Experiments were a success & calibrations good. Thanks for outstanding support. Standby for NOA

DOY/27 (6)

5/6/16

T119

Playbacks

43	Pre-Cool	1354 - 1515
	Occ	1515 - 1838
	Bistat	1745 - 2055
	Post-Cool	2116 - 223800

35	Pre-Cool	1642 - 1745
	Occ & Bistat	1745 - 2055
	Post-Cool	2108 - 2150