

SS9 Rev 130 Saturn Occ

4/26-27/10

Ingress Or Egress

SS9 Rev 130

DSS-25, DSS-15, DSS-34, DSS-43

①

Ops Room: Aseel, Danny, Elias
25-15 34-43

↑ John started pass for GSE

David at Madrid. NOPE: Jack. Mitch there too

34 rcvr 4 Ka-band & 6 X.

fgain

25X	5A	34X	5A
25Ker	55	34Ker	55
15X	54	43X	60
15S	42	43S	50

0635 25 XMT off

0636 34 briefing .. Pass 4590 ~~6000~~

BOT 0800 AOS spray w/ 25. EOT 1700

094212 @ 131.42 s/c will be off Earth point for occ.

Equipment green. Weather overcast.

0654 NOPE asking Canberra what teams.

⇒ Team D. When shift change, team C

0704 DSS-15 Briefing. Pass # 4589

No TLM requirement.

Disable SNT on both

BOT 0800, EOT 1100

AOS 3way w/ 25

Weather clear & calm. Equipment green

PrdX

M: 3-way w/ 2

A: 3-way w/ 3

0708 DSS-43 Briefing.

Pass #

BOT 0800, EOT 1600. DL only. No TLM req't.
Weather overcast. Equipment green.

0730 3A reporting monop. coal values

0.47 dB

0.48

0.49

0736 started seeing signal at 34

0741 Called NOPE.

Asked if he has 43 fft. We see what looks like spurious signal on right of carrier (u2k).

0743 NOPE said he has fft & only sees car.

⇒ told him it could be RSK related. We'll bring up another rcvr

(station also said they don't see spurious signal).

0729-0750 RWA Brew.

fluctuations at X & Kcr at both 25 & 34.

0754 34 1/L.

wait for bias to complete before we enable mon.

0805 34 enable monopulse ⇒ no visible jump in power

~0830 Spur almost on top of carrier

0837

15 SNT enabled.

0834 Asked 43 & 34 to enable

0840

SNT measurement

15X 28.09

43X 23.119

15S 31.3

43S 22.096

25X 24.2

34X 23.060

25Ka 52.5

34Ka 55.742

0840 Asked 15 to disable on both

0840 Asked 25 to disable Ka

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SSA Rev130

(2)

084130 43 disable SNT on both

0842 34 disable SNT on Ka only

0843 25 monop. offsets less than 1
34 monop. offsets less than 2

0842 att auto 34 & 43

08431 now spur on left. in 500 b left of carrier.

0844 Switch RSR to 1-way (~~3-way w/ 2~~)
(though still tracking 2-way, but to collect noise baseline for GSSUM)

0844 Record all

084543 25 X gain change to TLM off (55)

085830 Monopulse disable after switch to 1-way
at 34 & 25.

↓
0859

0901 25 1/L on both revrs.

090280 25 man. enabled

090300 34 enable man.

→ ~~0900~~
0900 Told NOPS that we no longer see spur since
now looking at different freq.
→ said RS OK there & he has display up,
& looks good.

0905

Pc/No Measurement

15X	49.9
15S	35.8
25X	49.4
25Ka	48.7
33X	54.69
43S	44.38
34X	49.95
34Ka	50.21

0924 B4 lost Ka-band!

DR C107343
Antenna stopped tracking

0928 Antenna issues. Have to re-~~set~~.
lost communication

0942 34 back up.
locked up on X but Ka too weak

0955 34 43 25 LOS on X

1002 NOPS advised 25 to put closed-loop rvr in
open-loop mode so that SNT value can remain
in log.

⇒ done at 1003

1004 34 X-band rvr in open-loop mode.

1013 43 LOS X-band

Asael left to nap 1035-1300
but did not nap!
No email from David

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559 Rev 130
③

1048 SNT measurement

34 X	20.591
34 Ka	42.887
43 X	20.023
43 S	18.069
15 X	45.3
15 S	44.6
25 X	34.6
25 Ka	89.2

1050 stop record
Camberra reset SNT
1051 switch prdx for egress

Ingress Playback 0845 - 1050

found out no 50 & 100k data for 25!!
Danny set it to record, but maybe because
it was stopped w/o halting & data file deleted
after 656.

No email from David about 34 man!

Asked Danny to call him on cell phone then at Madria

David said to enter manual offsets

EL +1.95 mdeg

Xel +0.74 mdeg

mean radial
error was 2 mdeg

When Danny questioned, David said it would prob.
improve signal by .2 dB, so if worried about operator
error

Experiments: 124800 34 XMT on for gravity

1303 Asked 34 & 43 to enable SNT
130430 SNT disabled except X @ 34

u 1321 started seeing S band
u 1328 started seeing X @ 43
1329 43 1/L on S-band
u 1339 43 1/L X
u 1339 Ka-band started
→ 1303 SNT measurement

43 X	20.22
43 S	18.27
34 X	21.10
34 Ka	45.34

1344 34 1/L X & Ka

1405 Pc/No

43 X	49.69 54.80
43 S	44.50
34 X	49.69
34 Ka	48.70

(Ka starting to degrade)
34 X SNT 24.14

Experiments Playback	43	1255 - 1535
	34	1255 - 1515

4/26-27/10
S59 Rev130
④

1455 Enceladus granites
Pass 4590
BOT 1620, EOT 0310
Weather partly cloudy. Equipment green

WOPR: LU

1458 Lu telling 55 we'll use LQG coefficients..
has it been installed

1500 55 said LQG still not implemented yet.
Have to do manually.

1505 Lu..

if we use LQG problem

1515 3A 1/L 2-way

43 1/L 3-way

1522 3A Monopulse enabled

Going back to Perth w/ station & WOPR (LU) about
LQG model. Also talking to David at station.

1534 SS reporting mon. cals

44.860

44.851

44.770

Gain 1.403
1.405
1.407

16120 Lu told SS because of AMC slw anomaly w/ LQG, go back to PF servo coefficients (per my recommendation since we didn't hear back from David).

161350 SS changed table

161850 SX-band 11L

162158 SS 11L Ka-band

No mono pulse yet. Waiting for elevation to reach 410deg

1634 asked SS to enable monopulse
⇒ ~4 dB jump in power

1700 34 60T
(station only) had X SWT enabled during gravity)

0115 SS weather update .. clear, low winds. Ka-band looking good.

SS gravity playback 117/1610 - 118/0315

25 pass .. windy, fluctuating Ka-band.
at 011053, wind 25 mph w/ gusts up to 30.
high clouds