

S39 Rev 63 DOY 092
Rings Occ (chord) +
grazing ionospheric Occ

4/1/08
Rev 63 (1)
DOY 092

ACE:

Nope: Lu

Rs Ops: Aseel, Danny, Elias, Dan
Essam, Dawid R

DSS-55 Pre-Call 1515, BOT 1645, GOT 2120, Pass# 3832
DSS-63 Pre-Call 1545, BOT 1645, GOT 2120, Pass# 3832

~~⊗~~

Madrid weather: Partially cloudy

Fgain: DSS-63 X61
S49
DSS-55 X56
Ka56

LCP DSS-63 35
LCP DSS-55 30

NO KLCP
change X
to 37

1626 DSS-55 confirmed LQG coefficients are on

1631 DSS-55 reporting that monopulse appears to
be OK now, but will have to wait until AOS
& they will know for sure (displays are nominal)

Prdx 1-way throughout
1650 start recording but won't consider this beg of playback

fft1 a 1
fftna 2 15

1700 AH auto

1705 SNT measurement (reading from Danny)
63 X 26.095
63 S 22.706
55 X 28.192
55 Ka 75.859 (at 1717)

Asked stations
to enable
SNT on all
d/L channels
at 170230

.5k
25k diode
Asked station to disable
at 171230

↑ problems w/ Ka SNT. Fixed ~ 1716

171330 Nope telling station that it seems we had similar problem before.

.. Right port & LNA configured so that they have valid reading

⇒ SS said maintenance people are looking at it (microwave configuration)

171604 good Ka-band ^{SNT} reading!

~1718 Start seeing S-band signal

1719 DSS-SS maintenance suggesting using .25K for Ka-band

1K → 1.8 noise
.25K .44

Maintenance recommends .25K for Ka-band (Nope: for some reason, they re-calibrated noise diode & .25K gives better readings now)

X 1K → .22K

~172130 Strong signal

1722 Asked SS to disable Ka-band SNT

172230 Todd stations we see a strong signal in open-loop

172740 Station enabled monopulse ← Check NMC logs from display & edmd, we thought it was already enabled

1729 Nope asked 63 to go back to .25K diode (clarification: ~1723 station 63 said they have Chad?)
5 selected .. I tried to get an answer when it was changed & weather reading was w/ .25 or .5, ~~no~~ ~~answer~~ answered. Told them to keep as is & we'll talk about which diode to use the next time we do SNT measurement)
1713 X-band ?
1715 S-band } → Nope checked LOG & said they were changed at these times

.25K S 22.706 at 1706 ← Nope provided readings before diode was changed
diode X 26.095
SNT reading

1734 63 weather update: partly cloudy & 11 km/hr

173721 asked SS to disable monopulse & keep offsets

⇒ 173725 station disabled monopulse

1739 P_c/N₀ (Baseline)

K150

63 X	55.29
63 S	43.90
55 X	49.52
55 Ka	48.48

LCP 63 X	32.49
63 S	22.63
55 X	24.26

Last monopulse offsets:

- 0.55 Az correction
- 6.08 EL correction

1747 David thinks that monopulse offset was taken w/ cloud. Monopulse now wants -5 or -4.5, but nothing we can do now. Essam doesn't want another man enable. We're now off by ~1 mdeg.

1748 Essam said that this exp & next one are longest on blind pointing

1757 P_c/N₀ (Baseline)

63 X	55.45
63 S	43.93
55 X	49.50
55 Ka	48.50

LCP 63 X	32.93
63 S	22.54
55 X	23.97

1758 Told stations that in about 50 sec we'll start going through the rings & we expect that they'll maintain lock on the signal until we get to ring B w 1804

175830 ^{Essam} footprint of antenna is in ngs. ^{Essam} see

1805 Lu asked SS to configure d/L channel 5 in open-loop mode until 181203 (to continue getting SNT values in NMC log)

18120 SS reports they have both receivers in lock (after ring B)

1820 P_c/N₀ (Ring C out)

63X	55.41
63S	44.05
55X	49.74
55Ka	48.70
LCP 63X	33.31
63S	22.56
55X	24.24

1821 David reports we are now about 2 mdeg off from nominal offset.

1820 Don measures TV
Determines it is 42 in.

1825 P_c/N₀

63X	55.94
63S	44.28
55X	49.79
55Ka	48.90
LCP 63X	33.34
63S	22.82
55X	24.33

1831 Told NOPE that during past few minutes we saw what appears to be oscillations, so they are back!
Nope said that wind speed is now 16.7 km/hr

Nope saying today fluctuations in .5 dB, before 1 dB
⇒ depends on wind (and pointing), so we'll look at them & process post-pass, but they are there.
Origin not fixed!

1837 Nope waiting SS to configure in open-loop until 184422

1844 SS reports both rxrs are in lock

184548 SS went O/L again

1850 back to nominal levels.

Oscillations present & clear.

David says we're off by 5mdeg now, close to 6

185250 weather update SS: partly cloudy, wind 16.5 km/h

1854 SNT SSX readings 24.665.

1855 Essam doesn't see any ionosphere.. at least in amplitude.

1900 R/No

626
345-8006

63X	56.35
63S	44.35
55X	49.72
55Ka	47.72
LCP 63X	34.04
63S	23.02
55X	24.53

191734 Oscillations at SS gone? then back to 191525 (crossed 45° elevation)

at 45°, the SIR doesn't have any offset corrections

1945 Oscillations not obvious!
Better SNR.

DR# M104740

2058 checked station

55K	55X
54.022	23.097
63S	16.378
63X	18.564

2048 SVT Measurement

.25K diode. of all except 55X is 1K diode

Playback 1700 - 2050

2000 RWT has begins. Drop in Ka-band & X-band

LCF	63X	34.36
	63S	23.58
	55X	25.18

63X	56.50
63S	44.48
55X	50.18
55K	49.56

2000 P/N0