

S37 Rev58, Ring (± chord) & atm (1&E) Occ

2/8/08
 WY 039
 Rev 58 (1)

Ace: ^{new} J
 Nope: Lu, Jack

RS Ops: Aseel, Danny, Elias, Dan, Roberto
 Science Team:

DSS-34	Pre-cool	1445	BOT	1630	EOT	2020	Pass#	3779
DSS-43		1530		1630		2020	Pass#	3779
DSS-55		1805		1935		2040	Pass#	3779
DSS-63		1835		1935		2040	Pass#	3779

Fgain:

DSS-43 & DSS-63 X50
 S48

used 49

← next time use 49

DSS-34 & DSS-55 X55
 Ka 54

DSS-43 & DSS-63 LCP 35
 DSS-55 LCP 30

Power coverage abt
 Medind, but back
 in 2 hrs before
 pre-cool.

Ganberra
 weather partly
 cloudy.

Prdx 3-way w/2 for entire period

ffHi α ↓

fftra 2 15

Start recording 1635
 att auto call 1633

1645 SNT measurement
 34 didn't enable until 1647
 Danny

43S	18.3	Starten	18.4
43X	22.4		22.9
34X	26.6		26.626
34K	58.8		59.88

u1651 started seeing signal in open-loop covr

u1652 43 in lock

u1653 34 in lock

165354 DSS-34 enabled monopulse

⇒ u2.5 dB jump

⇒ expect signal level to fluctuate bec. still turning

David

DSS-34 updated pointing model, but Canberra got new weather station two days ago, so from now on better pointing model compensating for error in weather station

no radio sources in this part of sky! Tough portion.. and no CRT data

1716 weather update from Canberra

- Partially cloudy

11° H 80% Z Wind ~~40~~_{5.6} km/hr from South?

1715 Drop in Ka-band (& X @ 43!) .. asked 34, nothing changed.

⇒ since at 34 & 43, either in sky .. or turn ← ^{most likely} sk tuning

will give monopulse decision another two ~~two~~ mins until turn is complete & signal stabilizes

TUN off at 17:19:10

↖ slight SNT increase too.
Back to w27n 1723

Decision:

Disable, clear

Enter manual offset of +4 mdeg in elevation only.

in anticipation of pointing profile change as we go on
no manual elevation in X elevation. we know model is going to

change later.

Taking into consideration:
looking at mon. offsets now & knowing model
will change later. Estimate that req'd change
Don't expect signal level to be as good at best but will
get better

2/8/08
DOY 039
②
Row 58

1728 station enter +4 mdeg offset in elevation.
Drop ~ 8 dBs. Some

David expects model to get better in 1/2 hour.

1731 Ka looking better

(monopulse offsets were 12!! If we left it at
that we'd be overcompensating now. David expects
that we're already in the better region).

~~SNT measurement~~:

P_c/No reading: 1741:

43 X	56.09
43 S	44.92
34 X	50.20
34 K	49.75
43 XLCP	18.63
43 SLCP	23.15

1803 SNT ~ 28

1805 Nope telling station to reconfigure row 6 in
open-loop mode at 18013 (ring B).

1809 55 Briefing Weather Clear skies

1817 Stations back in lock

→ 1814 Wendy Hodgkin called

1819 ACE checked w/ 55 if they anticipate problems w monopulse \Rightarrow no problem

1826 Asked 55 to load LQG coefficients for this support.

1827 P_c/N₀

43 X	55.23
43 S	44.47
34 X	49.83
34 K	49.08
43 XL	17.03
43 SL	23.54

1902 Told 43 & 34 we want to do quick SNT measurement at 1904, so to enable diodes.

1905 34 values

	Station	$\xrightarrow{\text{same}}$	Danny
Ka	88.104		
X	31.335		

\Rightarrow told station they can disable Ka SNT

1906 43 values

S	22.0	
X	27.1	\Rightarrow Danny confirms.

1908 Verified w/ 55 if they were able to successfully load the LQG coefficients file \Rightarrow yes

1917 Nope (Jack) asking 63 to select .25K diode for SNT measurement at GOT on DIL channel 4

~~1919~~
1919 Told Nope that we'd like to try SNT measurement before BOT. We know we're at v. low elevation but ok.
 \Rightarrow Nope instructed 63 & 55 to enable SNT

1921 63 said having problem enabling SNT on channel 3 (S)
No possible to enable SNT. X band

DSS-55 SNT

X 42.6

Ka 122.0

1923 ⇒ asked 55 to disable Ka SNT

~1918 S-band signal
~1921 X-band ⇒ 1925 Nope asked if we
~1924 Ka-band

1925 63 was able to re-set DDC & have SNT
enabled on D/L channel 3

DSS-63 SNT

X 119

S 72

192730 SNT disabled on both channels

1934 Told 55 that they can enable monopulse as soon as
they have solid lock on K.

1941 34 said they're seeing drop in Ka-band.
Went (at our agreement) to change offset to +10 mdeg
⇒ told them we see same degradation but we
cannot make changes to configuration

194208 DSS-55 monopulse enabled ⇒ low!

1944 Asked Essam & Arv.. keep degraded Ka-band signal or
enable monopulse. Arv said he has enough baseline.

1945 Told 34 that scientists here have accepted a change to
the configuration. Clear Amdeeg manual offset,
↓ enable monopulse.

1946 DSS-34 enabled monopulse
14 dB increase!
31.7 to 45.3

1949 Asked Nope if monopulse was enabled (trying to understand)
Enabled on antenna side but not d/L side
(so it was enabled but we could not see it)

1950 Danny reporting DSS-55 Az correction 25 !!!!

1947 We don't see DSS-55 monopulse values updating.
Station confirmed man. is enabled.
Nope asked station to enable monopulse on d/L channel.

Pc/No 1952

43X	53.64	43XL	19.14
43S	43.09	43SL	24.10
63X	53.06	63XL	20.87
63S	41.99	63SL	20.64
34X	48.28		
34Ka	45.67		
55X	41.58	55XL	17.34
55Ka	23.9	55KL	5.04 ←

I suspect 55 is ill on sidelobe

1954 Asked 55 to disable monopulse, clear affects,
& re-enable monopulse.

1956 ⇒ 55X 48
55Ka 45.5 much better !!

⇒ mono values Az 7, ϵ_{Cor} -34 Elang 10.4

Talk w/ David about 34 pointing model. He said three factors (Lee at station said clouds but this is more than just that). ① Clouds ② New weather station. Should've been installed before ORTs, but have been fighting for this for over 2 years. ORT data were collected at old weather station, so we are over compensating. ③ No radio sources in this part of sky, & no mon data

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DOY 039
Rev 58

2021 Nope asked if we want to do SNT
measurement \Rightarrow told him we're ok

~2023 55 & 63 LOS

2035 Asked 63 & 55 to enable SNT on all revrs

63 X	29.5
63 S	21.7
55 X	28.7
55 Ka	30.5

203950 stations released

2042 NOPE believes there was a problem w/ monopulse
at the beginning