

S42 T4S Gravity
DOY 212-213 / July 30-31

S42 T4S ①
gravity
July 30-31

Stations... too many to list. See timeline.

Queue...

- 1545 Begin recording 1, 16
- 1545 AH auto
- 1525 Nope told station 54 that he sees they have some offsets (monopulse). Looks like reset worked.
- 1527 Nope asking 54 to select .5 diode on DC6.
- 1545 Nope (Scott) told 25 that he saw them repeat monopulse calls three times. Any issues they want to report? ⇒ Standby
- 1548 Nope (Lu) asking 26 to load 4th order model.
- 1554 26 has TLC prob. tried to enable 3 times.
- 1555 Asked 25 for weather update
25.9 km/hr, clear skies
- 1558 Ace reminder to call stations 10 mins to sk furth part.
- 1559 Asked NOPE if 25 or 26 has difficulty w/ TLC ⇒ (Scott) 25
⇒ if this last reset does not work we can forgo TLC

1600 26 reported TLC enabled

1603 Nope (Jack) told station that they have to use (QPC FSR) bec. doing U/L transfer
→ station copies

1607 Told 25 & 26 to wait on enabling monopulse until pass 10 degrees elevation

1608 Nope (Jack) told stations 25 & 26 that since they reset defaulted back to other pointing

~1609 Coherent signal .. all except RSR 25 K.

160951 55 & 54 reporting X & Ka-band in lock.

161019 26 I/L X & Ka

161048 Asked 54 & 55 to enable monopulse

1611 Monopulse enabled 55 & 54

161215 26

161250 25 asking 55 to delay XMTR off..

161621 .. have driver off at 161626

161457 55 telling 25 that they have changed drive off to 161626

161610 Change 55 gain from 53 to 54 Ka
(signal levels Ka ~ 49.xx)

161610 25 drive on, 55 drive off

Still no Ka-band signal at 25 Ka .. prodx prob?
closed-loop I/L.

1620 Elias gave me Ka signal for Madrid reversed?!
See in power plots 54 is ~49.xx & 55 is ~47
Asked Elias to put 55 gain back at 53 & change 54 to 54

1623 Elias found 25K RSR had wrong prdx..

⇒ I changed (Don was off trying to figure out problem)

162310 Change 26 fgain to 54 (levels at 46.xx now, but elevation will increase)

162450 25 Ka-band signal in RSR

1630 SNR readings

		fgain
55X	32.5	38
55Ka	46.99	53
54 X	32.55	38
54 Ka	48.90	54
25 X	31.0	38
25 Ka	45.2	53
26 X	31.3	38
26 Ka	46.8	54

163145 SNT readings

55 X	28.416
55 Ka	45.418
54 X	26.517*
54 Ka	38.640
25 X	32.2
25 Ka	78.4
26 X	26.6*
26 Ka	62.4

SNT enabled on all except ~~array~~ reference antennas, so 54X & 26X

* Default values. Not enabled.

~1905 losing 2-way/3-way signals. Mode change (a bit earlier than expected time at 190846).

1905 All auto at Goldstone RSRs. 2-3 off.

1907 55 reporting dropped lock on both rcvrs. Going 3-way & 54

~1908 X-band signal at 25 & 26

190840 Ka-band

1909 54 back in lock w/ 25 3-way.

55 signed week

1912 55 signal looking good. Manopulse enabled.

25 maintained lock on X & Ka

1916 25 said X-band maintained lock through mode change from 3-way to 2-way

190429 ~~Lost Ka-band lock~~

190849 lost Ka-band

191205 Back in lock Ka-band

1917 Verified w/ Goldstone that they have manopulse enabled

⇒ yes on 25 & 26

N small spikes around Ka-band carrier is DSS-25 RSR FFT. Don said he saw them from beginning. Luciano said they should not impact his data analysis. They are +2656 & -2625 in 16K BW. ~4 dB.

2325 NOPE (sandy?) Checking w/ Narrabri
if they are configured

⇒ 45 said they are trying to contact Narrabri, but
looks like their rxvrs are configured for support

2338 Asked 47 for weather

⇒ fine

Asked if all antennas are supporting

⇒ yes, all 6.

2340 Signals at 45 & 47

(may have been there earlier but 2340 is
when Don had correct mode).

Begin recordings 2340-42

2347 45 reported they are I/L 3-way

0000 SNR readings

	SNR	Gain
25 X	31.0	38
25 Ka	48.4	53
26 X	31.5	38
26 Ka	49.3	54
45 X	30.1	38
47 Ka	49.7	58

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0012 SNT readings

25 X	24.6
25 Ka	50.4
26 X	off
26 K	34.3
45 X	28.0

0055 25 X Carrier freq = 25920 on EDMD

0114 25 Good 26 shows same thing

0120 Both Good but EDMD lost connection to Goldstone

Tried to restart - Internal Server Error

Don's is still updating Canberra but can't open any new stations

Asked NOPE, who is investigating, may open a DR.

01:33 NOPE mentioned cannot access SPS. I tried - Login failed

02:00 NOPEs talked to comm chief - EDMD up now, SPS, 60

02:55 shift change Lu Scott Jack?

Lu says products have a lot of points near C/A. Receivers could have trouble, but should be OK

03:08 Nope (Jack) asked for DR for degraded monitor data earlier

03:25 JIL transfer 25 to 45. xfr template for both

03:30 SNR readings

25X	30.4
25Ka	44.2
26X	30.7
26Ka	45.9
45X	32.6
47Ka	51.1

03:31 SNT readings

25X	35.7
25Ka	89.2
26X	off
26Ka	76.3
45X	23.5

NOPE asked stations to monitor closed-loop rxvrs closely from 234600 to 234650. Prdx have many points. High doppler acceleration rates

03:45 Goldstone EOT

Playback 1555-0355

RSRIB (had wrong prdx at first) 1624-0325

~~03:40~~

03:46 Stations tracked nominally

Default pointing model used at DSS-54

1151 Madrid reporting detection of signal in FET
(1-way)

w/1154 coherent signal

w/1156 Monopulse enabled at 55
54 still acquiring signal

1158 54 weather update: Clear skies, no wind

1216 Nope asking 54 to give status on where they
are w/ acquisition.

⇒ having problems w/ FSPIA..
It's configuring this time.
Hope they'll be getting the array to run
shortly.

⇒ Nope want to confirm they have all arrayed

1222 54 I/L X-band (finally) & TLM I/L
for Ka-band, trying to reboot d/L channel #6

1223 Nope asking about status of FSPIA

⇒ green.
current symbol SNR -4 dB

1245 BA said they recovered Ka-band D/L
channel & ready to enable monopulse

Ka-band signal
-136 level
still works
DCC

1246 54 monopulse enabled

Jump in Ka-band power w/ 3.5 dB
Signal steady

1337 SNR readings

		again
55X	31.5	38
55Ka	46.4	53
54X	31.4	38
54Ka	47.95	53

← Danny used 53 & not 54 as first 54 pass

1338 SNT reading

55X	26.84	
55Ka	50.851	
54X	26.6	← off
54Ka	43.545	