

In Ops room:
John, Gene, Danny, David, Arv, Essam
Don and Elias coming in later

NOPE: Lu

Remotely: Aseel

Canberra weather overcast, light winds

Problems with WVSR1, using VSR1 instead
Complaining of missing IF, bad readings for ADC Amp

Enceladus Occ and Saturn rings and atm IN prdx: 3_way/2

1508 att auto

1510 Start record 1510

1515 SNT measurement

43S 19.860

43X 20.891

34K 71.471

34X 26.364

1532 start seeing S-band

1532 start seeing X-band

1533 Ka-band signal

1539 monopulse enabled

~.7-.8 deg increase

1545 weather update

Overcast. Wind 8-9

1548 Pc/No

43XR 55.94

43SR 44.38

43XL 32.52

43SL 23.80

34XR 49.54

34KR 49.59

1642 34 Ka looking nice and stable. Monopulse corrections AZ-1.75 El 2.80

1518 SNT measurement

43X 19.511

43S 18.025

34X 24.512
34Ka 59.285

1510-1720 Enceladus file playback

182130 asked 34 to disable monopulse and clear offsets

1824 monopulse offsets cleared. ~-1-1.5 dB rop in power (station took a bit to clear offsets)

Watch it for minute and then enter manual offsets

1826 asking 34 to enter manual corrections
+2.0.mdeg in elevation
-2.5 mdeg in cross-elevation

1829 DSS-34 said they've entered offsets
Increase in power

1847 Pc/No measurement

34X 49.75
34Ka 49.8
43XR 56.15
43SR 44.73
43XL 30.19
43SL 18.34

1914 nope talking with 34 .. shift change? -> team alpha tpo team Charlie

1954 NOPE (Jack) asked 34 to put downlink channel (X) in open-loop mode to continue to record SNT values in NMC log

Timeline

2153 SNT measurement

2155 End record

0002 att auto

0005 start record, start SNT measurement

0007 End SNT measurement

0044 Pc/No measurement

0335 Pc/No measurement

0346 Pc/No measurement 55

0408 SNT measurement

0410 end recording

210630 Pc/No

34 K 48.76

34 X 49.35

43 SR 43.92
43 XR 55.24
43 SL 19.16
43 XL 28.63

No monopulse enabled at 210627

Madrid partially cloudy. 23 km/hr winds
55 microware system orange. ACE says it's been like that for days with no impact to us

2120 Ask 34 to go to open-loop when they lose signal

2134 34 configured for X open loop

2153 SNT measurement

34X 27.570
34K 55.375
43S 22.906
43X 21.653

Ingress playback 1800 till 2155

EGRESS – Madrid support
Prdx 3_way/3

Madrid weather overcast. 55 wind 23 kph. 63 Wind pre-cal 34 kph

0005 SNT measurement

55X 26.434
55K 45.694 fluctuating 76 30
63X 23.155
63S 18.706

S-band signal strength attenuated at station by 10 dB

00:44 Pc/No
55 K 48.06
55 X 49.34
63 SR 26.2
63 XR 54.8
63 SL 14.7
63 XL 18

005330 monopulse enabled

0103 63 weather update
Clear sky, 2 deg c, wind 34 km/hr, pressure 929.6 mbar

010533 monopulse disabled itself

Went unnoticed. Signal 10-12 dB lower than expected

Fix curve on S-band

0205 Danny to 63: Seeing a weak s-band signal so maybe a positive thing.
Still tuning maser?

□ Negative. Completed 5 mins ago

Retuned the maser

Curve was off 20 MHz

DR M105624 on S-band problem

021230 Pc/No

02:12 Pc/No

55 K 48.54

55 X 49.73

63 SR 45

63 XR 55

63 SL 12.3

63 XL 25.6

Poor ka-band pointing

0300 danny asking which coefficients they r using .. lqg or pi?

Pi

0327 plan to enable lqg at 0327 at end of baseline to see if that makes a difference for future occs

0340 switch back to PI controller

Data compromised because of

s-band recovered but missed atmosphere and c ring

ka-band likely compromised throughout

degraded and likely compromised

m105626

Playback 0005 – 0410

SNT
04:08
55 K 29.659
55 X 22.547
63 S 17.74
63 X 19.3

john says:

hi aseel are ou there?

Aseel says:

yep

john says:

so i got some info on the 63 maser

if you are interested

Aseel says:

sure

john says:

i called the LNA oe

to ask him what happened

after looking through the morning reports from 12/26-1/26

i noticed that there were a series of power failures at MDSCC

on 1/4, 1/6, 1/7

Aseel says:

ok

john says:

thse wernt outages

but rather power trips from commercial to backup

it is the OE's belief that the outages may have cause the maser to warmup a bit and loose its tune

Aseel says:

aha

john says:

according to him if the maser warms up > 8K it will loose its tune

and since the s-band maser is hardly used

Aseel says:

and it went unnoticed since no one uses it

right

john says:

it is likely the station folks did not notice it

yup

so that is the likely suspect

he also said that the 63's maser is due for 10,000 hour service and it will be down for maintenance

Aseel says:

ok

john says:

he also said that 14 will be replacing their maser with a hemt during their next downtime

Aseel says:

is hemt better?

john says:

hemts have a wider bandwidth

but they also operate at a slightly higher temp

raising the overall system temp slightly

we use hemts plenty in our experiments

so it is likely a non-issue for us

Aseel says:

so can they track s-band with hemt

john says:

i guess in this case they can

i did not ask him that question

i assumed that they could if they were planning to replace it

but you are right we typically track s-band with the maser on the 70m

Aseel says:

yep

john says:

so my guess is that 14 will be a test and they will likely replace them at the other 70m sites

Aseel says:

probably

john says:

so that is what i got

Aseel says:

thanks so much

that's helpful

john says:

de nada

i said i would follow up on that

so i just wanted to tell ya what i got