

Buccino, Dustin R (332K)

From: Buccino, Dustin R (332K) <Dustin.R.Buccino@jpl.nasa.gov>
Sent: Friday, August 23, 2013 10:18 PM
To: rs@list.jpl.nasa.gov
Subject: Cassini ORT Report: S80 2013/236 DSS-34
Attachments: dss34_ka_spurs_1w.png; dss34_ka_spurs_3w43.png

CAS OORT Report: S80/236 DSS-34/(DSS-43)

Dustin provided support for this activity.

DSS-34: S80 ORT, August 23, 2013 PDT, 2013/236 UTC

BOA: 0015

BOT: 0145

EOT: 1045

EOA: 1100

Activity: RSS_196SA_OCCORT002_RSS

Pass Number: 0236

DSS-34 (shadow)

X-band (DCC-4, RSR2A, fgain 38)

Ka-band (DCC-6, RSR2B, fgain 55)

DSS-43 (prime tp)

X-band (DCC-2, RSR1B, fgain 48)

- Weather: clear

- Wind: 12.4 kph

- Equipment: Green

01:10 – Arrival at ops room

01:15 – verify failed on every RSR, determined ifs was not properly set

01:25 – ACE gives permission to talk with station. Speak with DSS-34, who reports they are investigating

01:35 – Sation reports all cables are connected. Rebooting RSR1 to see if that helps

01:45 – BOT. RSRs still not functioning

01:45 – DSS-43: X-band in lock, DCC-2

01:48 – DSS-34: X-band in lock, DCC-4

01:50 – DSS-34: Ka-band in lock, DCC-6, Monopulse enabled, corrections updating

02:05 – Conversation with DSS-34, will look into IFS again

02:10 – IFS fixed. Record subchannel

02:14 – att auto issued on each RSR

02:19 – ffti, fftna, FFT_SIG_NUM_BINS issued on each RSR

First record times:

RSR1B – 43/X – 1 kHz – 02:10:47

RSR2A – 34/X – 1 kHz – 02:13:19

RSR2B – 34/K – 1 kHz – 02:11:25

RSR2B – 34/K – 2 kHz – 02:11:27

02:23 – sfro 1 250 issued on Ka-band, spurs seen

02:26 – Ka-band spurs present on DSS-34, visible in 1kHz, 2kHz bandwidths (about 180Hz from the carrier). See attached screenshot.

02:32 – Pc/No X-band 34: 33.41, Ka-band 34: 49.31, X-band 43: 39.84

02:33 – SNT X-band 34: 26.141, Ka-band 34: 45.519, X-band 43: 19.808

02:34 – Monopulse corrections: Azimuth correction -4.31, Elevation correction 2.13, Elevation 35.27 deg

02:54 – fgains weren't set! I forgot due to trying to record the data ASAP after the IFS switch problem! Fgains are now properly set! 34X: 38, 34K: 55, 43X: 48

03:14 – Pc/No X-band 43: 40.44

03:15 – SNT X-band 43: 18.697

03:15 – Pc/No X-band 34: 33.72, Ka-band 34: 49.57

03:15 – SNT X-band 34: 35.291, Ka-band 42.378

03:16 – Monopulse corrections: Azimuth correction -4.95, Elevation correction 4.20, Elevation 43.43 deg

04:12 – Pc/No X-band 34: 33.89, Ka-band 34: 49.67

04:12 – SNT X-band 34: 24.314, Ka-band 34: 40.538

04:13 – Pc/No X-band 43: 40.69

04:13 – SNT X-band 43: 17.832

04:14 – Monopulse corrections: Azimuth correction -4.65, Elevation correction 3.47, Elevation 54.10 deg

04:40 – Monopulse disabled

04:45 – Loss of signal

04:47 – X, Ka reacquired

04:47:53 – Monopulse enabled, corrections updating. DCCs back in lock.

04:50 – Spurs are present in the 3-way signal about +/- 180 Hz from carrier. See screenshot

04:53 – Pc/No X-band 43: 40.55

04:53 – SNT X-band 43: 17.523

04:54 – Pc/No X-band 34: 33.67, Ka-band 34: 49.64

04:54 – SNT X-band 34: 24.350, Ka-band 34: 39.722

04:55 – Monopulse corrections: Azimuth correction -6.00, Elevation correction 1.26, Elevation 60.35 deg

05:10 – Nominal tracking. Gave ACE cell phone number should something arise.

Additional Notes: Station 34 reported that he could not hear me very well at all, and eventually I dropped out completely. However, the ACE could hear me, but barely. I swapped headsets with the other phone by rpos2 and that seemed to help, but I was still quiet. Microphone volume was at maximum.

Data to be played back to /rsgg/data/CAS/2013_236/ORT/RSR/ on Monday:

DSS-34, X-band, RCP, 1-way & 3-way w/ 43

RSR2A, 1kHz, 16-bits

Start: 2013/236 02:13:19

Stop: 2013/236 10:50:00

DSS-34, Ka-band, RCP, 1-way & 3-way w/ 43

RSR2B: 1kHz, 16-bits

Start: 2013/236 02:11:25

Stop: 2013/236 10:50:00

DSS-34, Ka-band, RCP, 1-way

RSR2B: 2kHz, 16-bits

Start: 2013/236 02:11:27

Stop: 2013/236 04:45:10

DSS-43, X-band, RCP, 1-way & 2-way

RSR2B: 1kHz, 16-bits

Start: 2013/236 02:10:47

Stop: 2013/236 10:50:00

158 MON data will be queried and monopulse file generated and sent to David and rs@list on Monday.