

Spacecraft: Cassini

DSS: 14

Monitor File: S95SROC2016_205_2250_14_MON.ecsv

APPLICABLE_START_TIME = 2016-205T22:50:36.066;

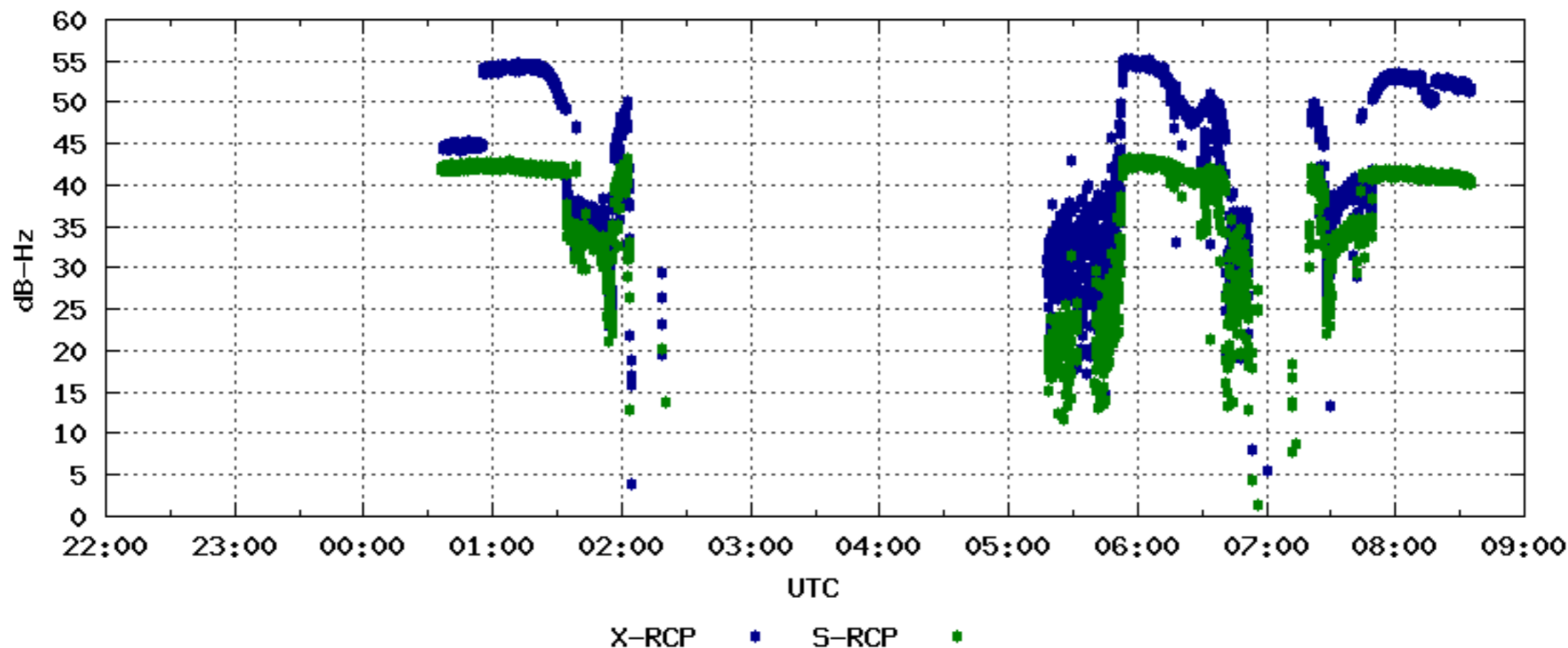
APPLICABLE_STOP_TIME = 2016-206T08:39:57.119;

60 minutes omitted from beginning of file

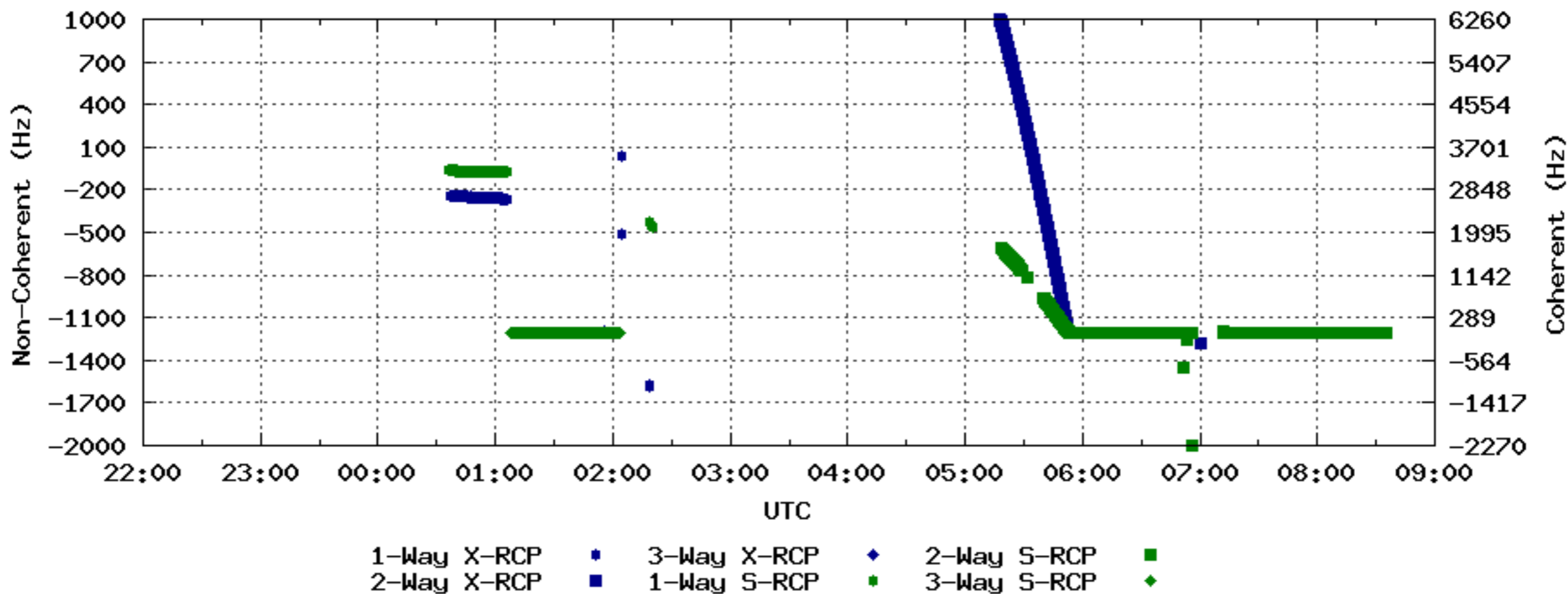
5 minutes omitted from end of file

02. Carrier Power to Noise Spectral Density Ratio (Pc/No) and Residual Frequency
03. X-Band Measured Carrier Frequency, Predicted Carrier Frequency, and Residual Frequency
04. S-Band Measured Carrier Frequency, Predicted Carrier Frequency, and Residual Frequency
05. Uplink Frequency and Power
06. Carrier Power to Noise Spectral Density Ratio (Pc/No) and Carrier Power
07. Carrier Power to Noise Spectral Density Ratio (Pc/No) and System Noise Temperature
08. Carrier Loop Tracking Bandwidth
09. AGC Voltage
10. Azimuth & Elevation
11. Weather: Air Temperature, Dew Point Temperature, Relative Humidity, Precipitation Rate, and Barometric Pressure
12. Wind Speed and Direction
13. Conscan Drive Status
14. Azimuth & Elevation Residuals
15. Index

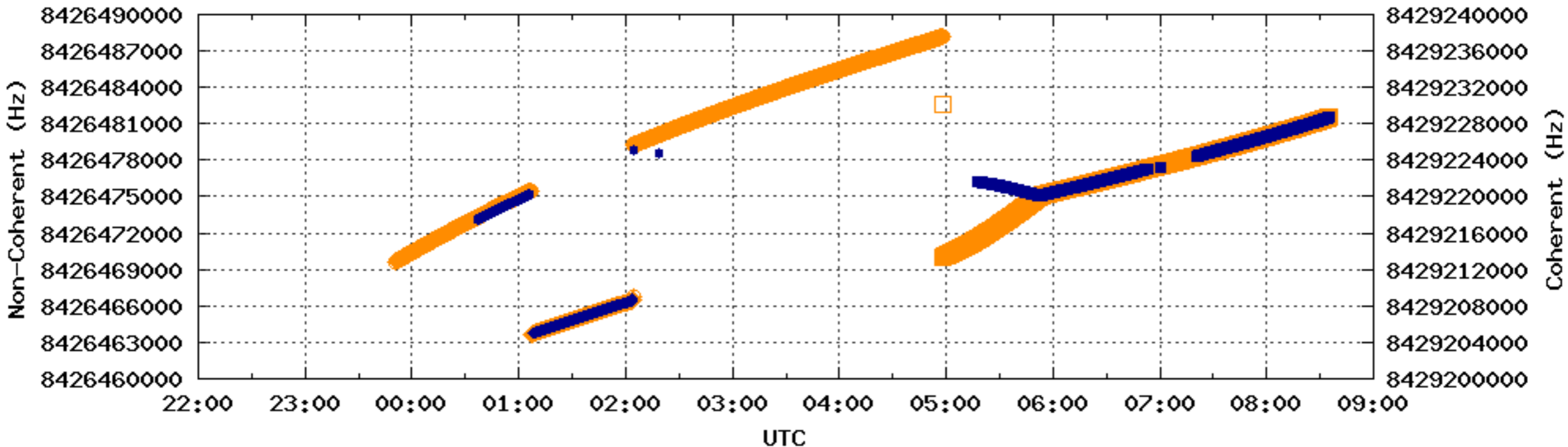
2016/205 D55-14 Carrier Power to Noise Spectral Density Ratio (Pc/No)



2016/205 D55-14 Carrier Frequency Residual (Measured - Predicted)

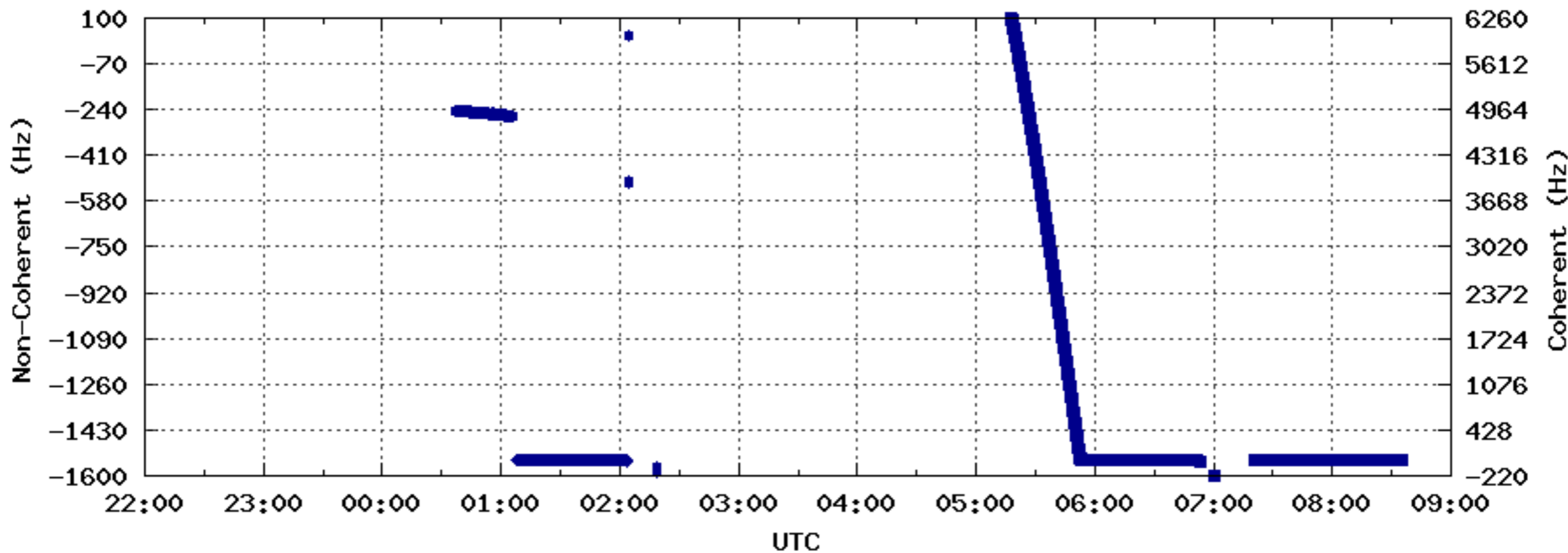


2016/205 DSS-14 X-Band Measured and Predicted Carrier Frequency



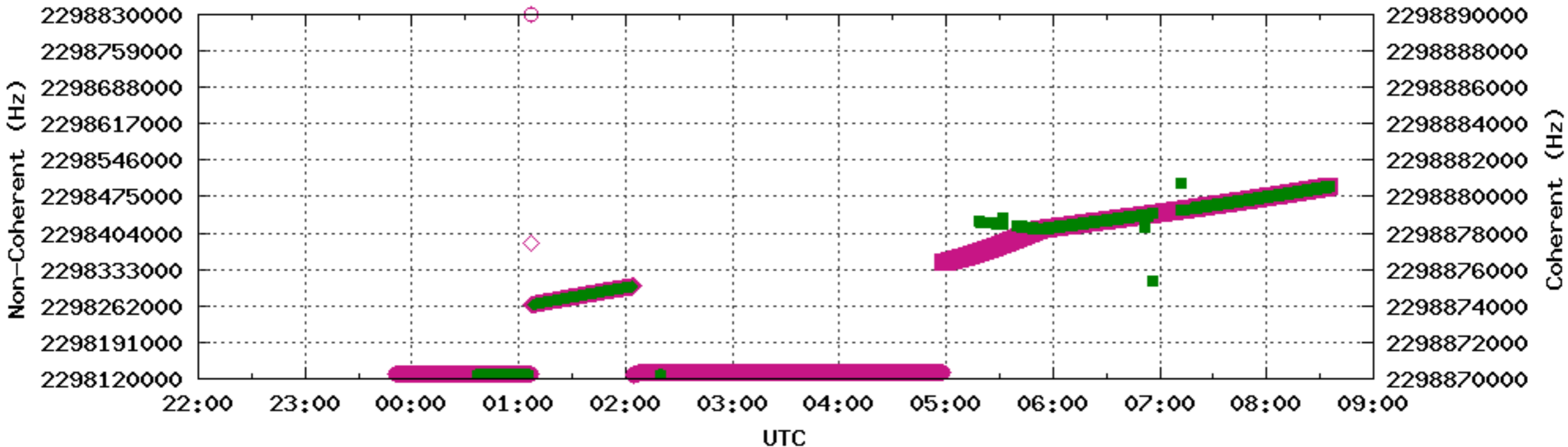
- 1-Way Predicted X-RCP ○
- 2-Way Predicted X-RCP □
- 3-Way Predicted X-RCP ◇
- 1-Way Measured X-RCP ●
- 2-Way Measured X-RCP ■
- 3-Way Measured X-RCP ◆

2016/205 DSS-14 X-Band Residual Frequency (Measured - Predicted)

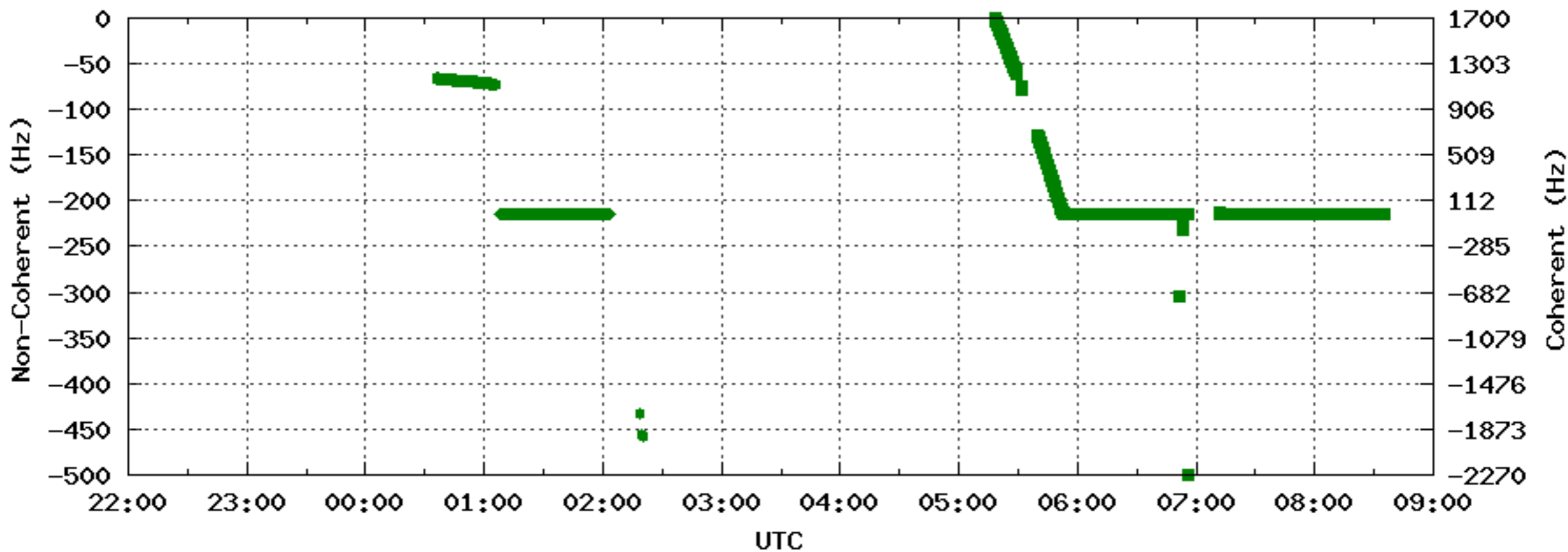


- 1-Way X-RCP ●
- 2-Way X-RCP ■
- 3-Way X-RCP ◆

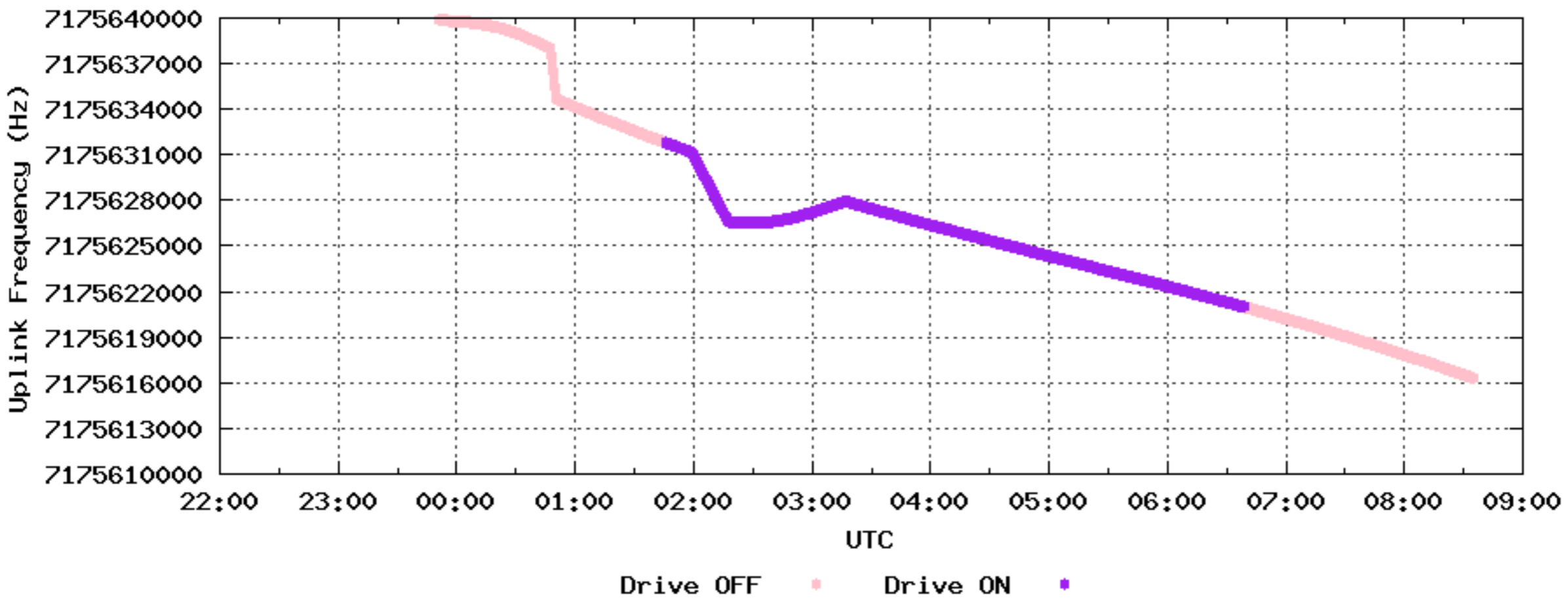
2016/205 DSS-14 S-Band Measured and Predicted Carrier Frequency



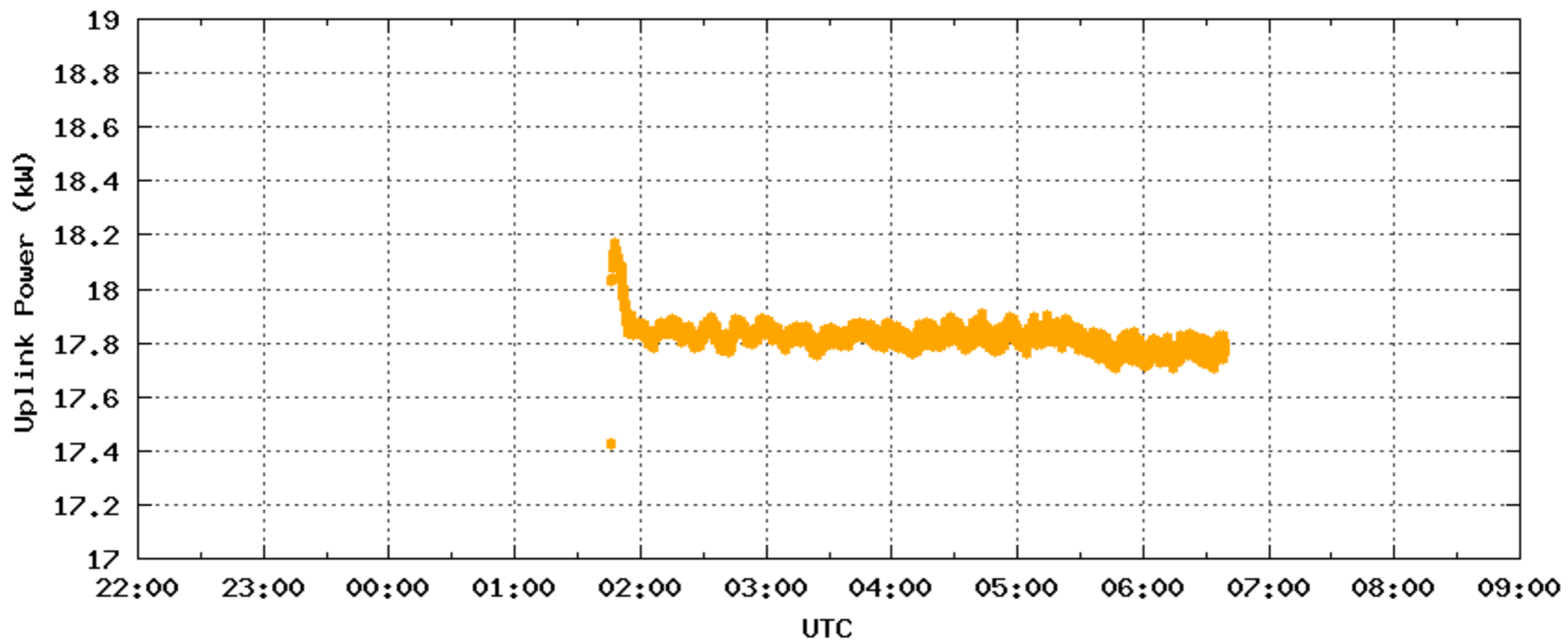
2016/205 DSS-14 S-Band Residual Frequency (Measured - Predicted)



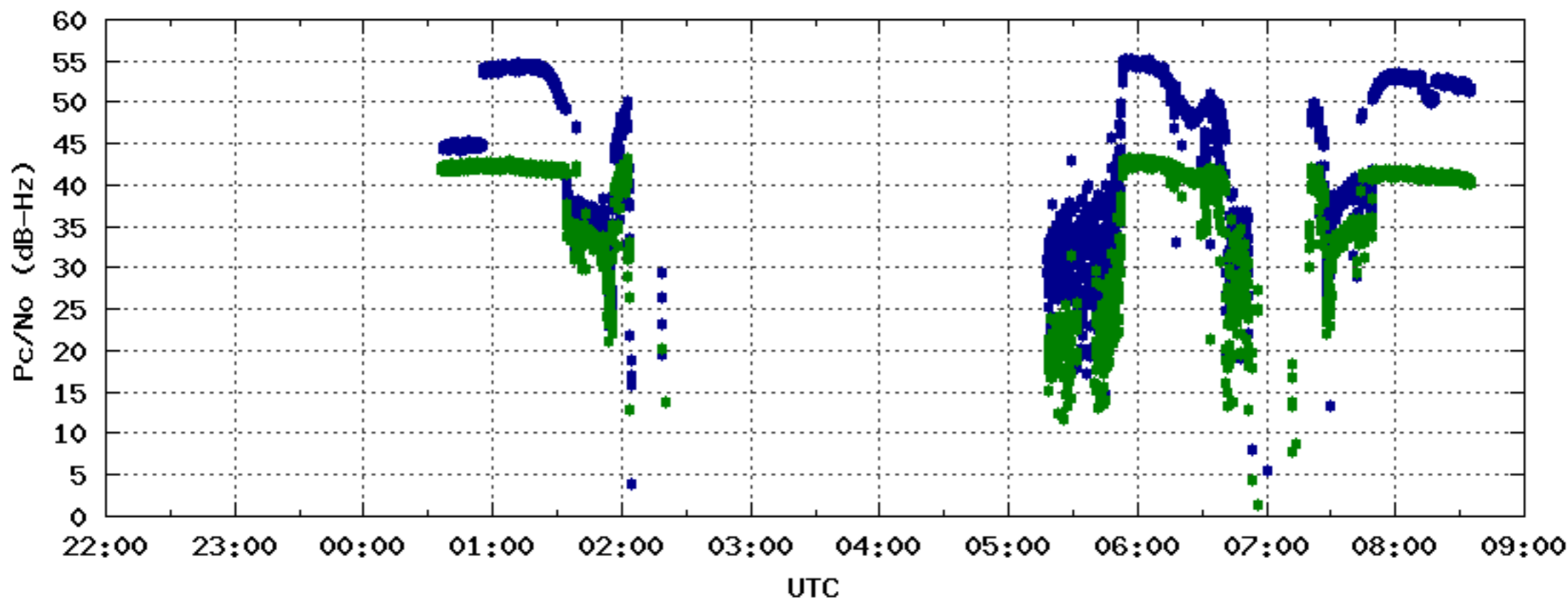
2016/205 DSS-14 Uplink Frequency



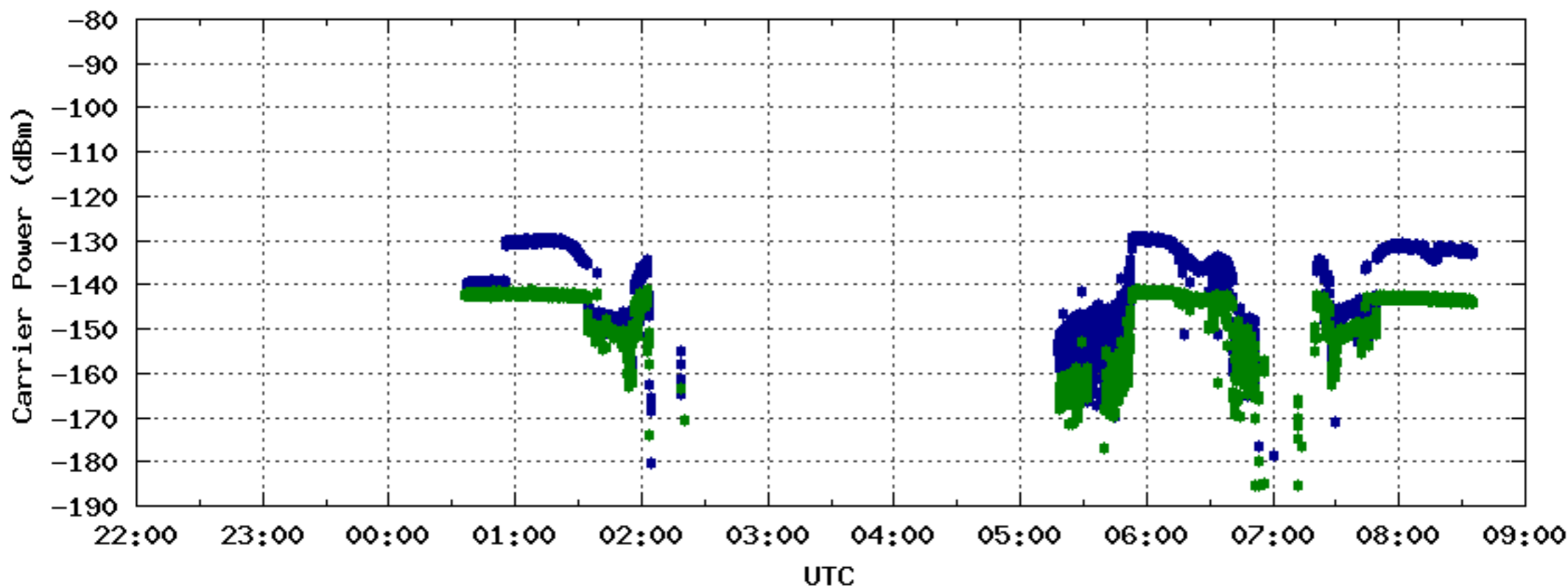
2016/205 DSS-14 Uplink Power (with TXR ON and when > 1)



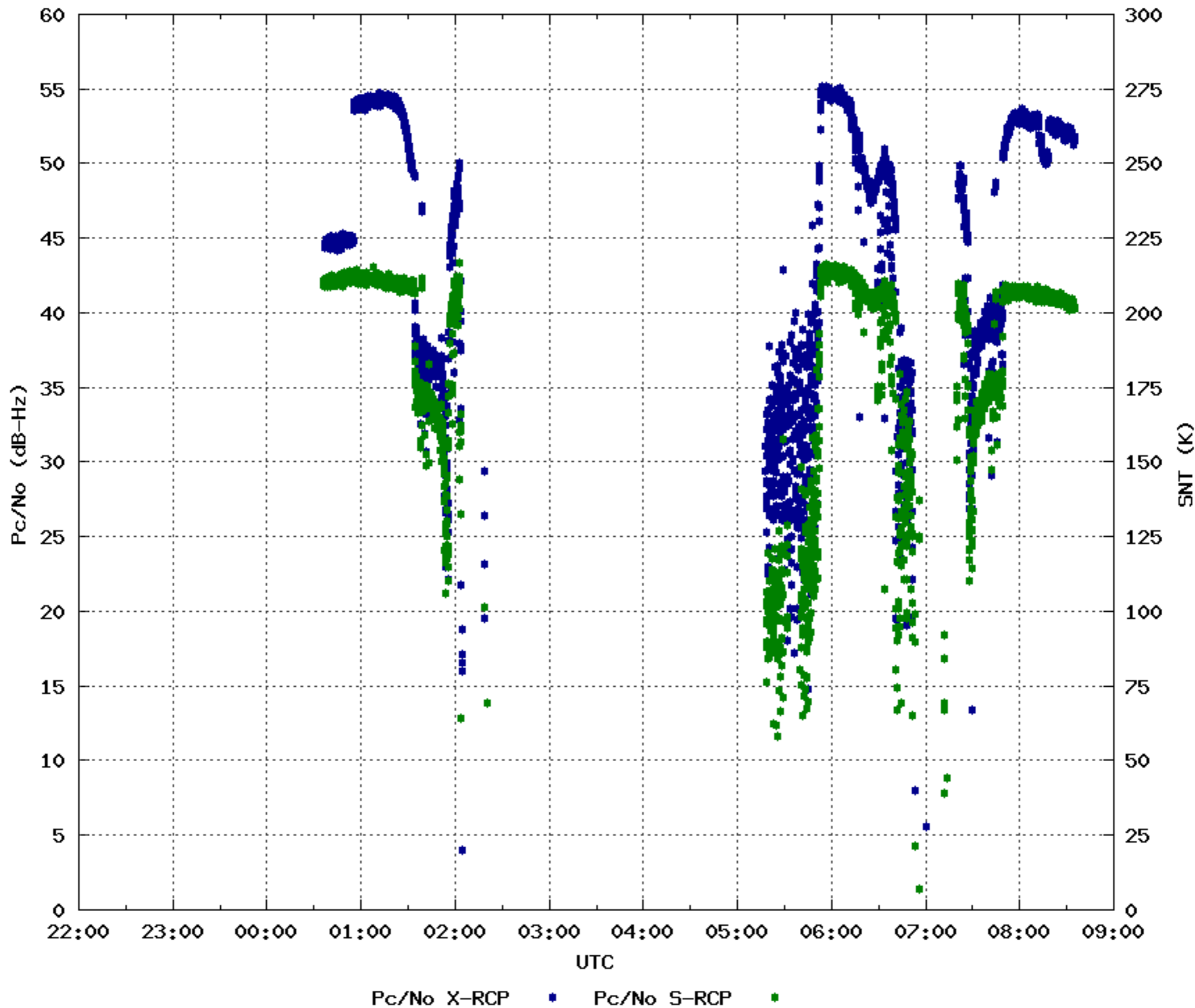
2016/205 D55-14 Carrier Power to Noise Spectral Density Ratio (Pc/No)



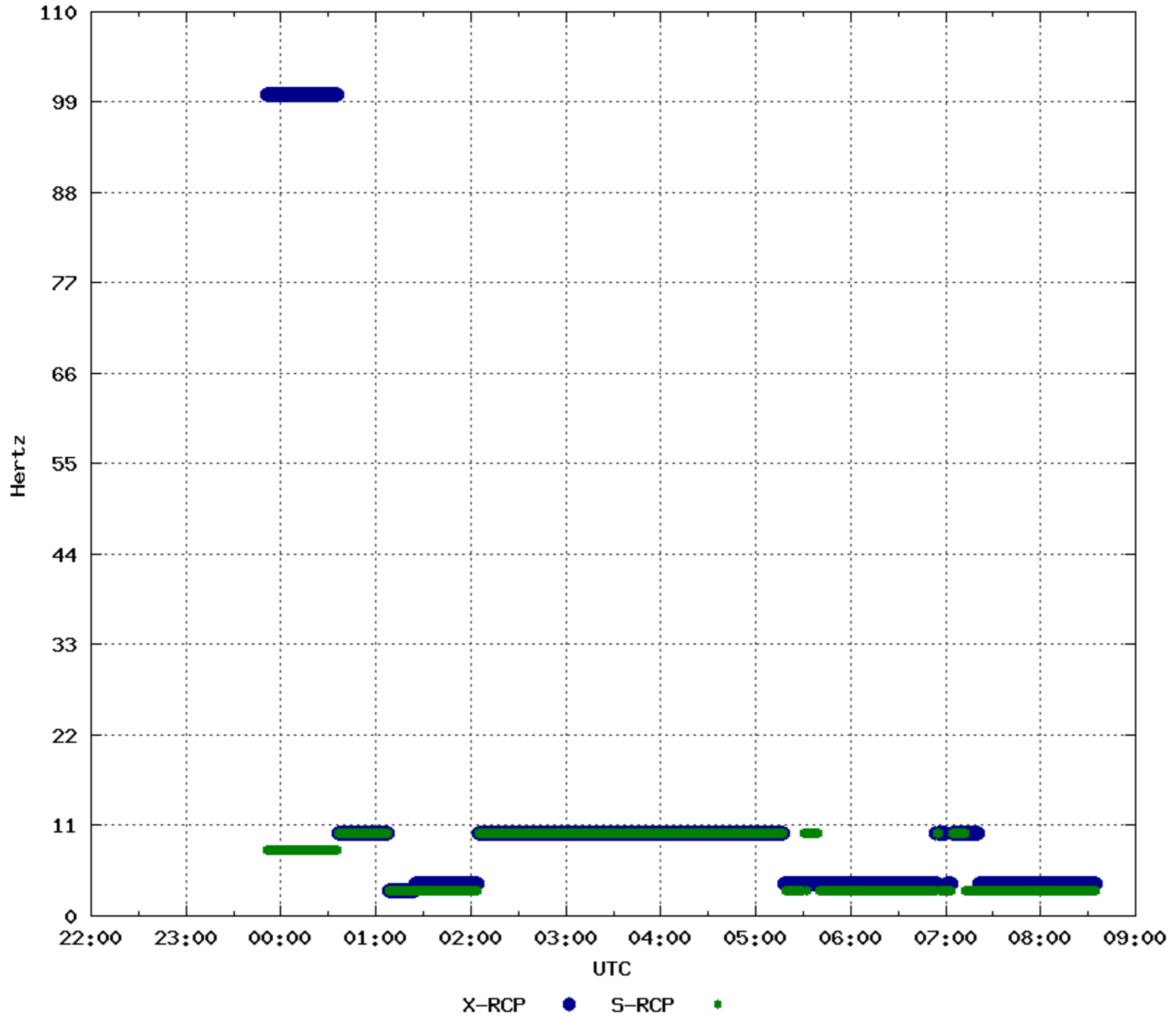
2016/205 D55-14 Carrier Power



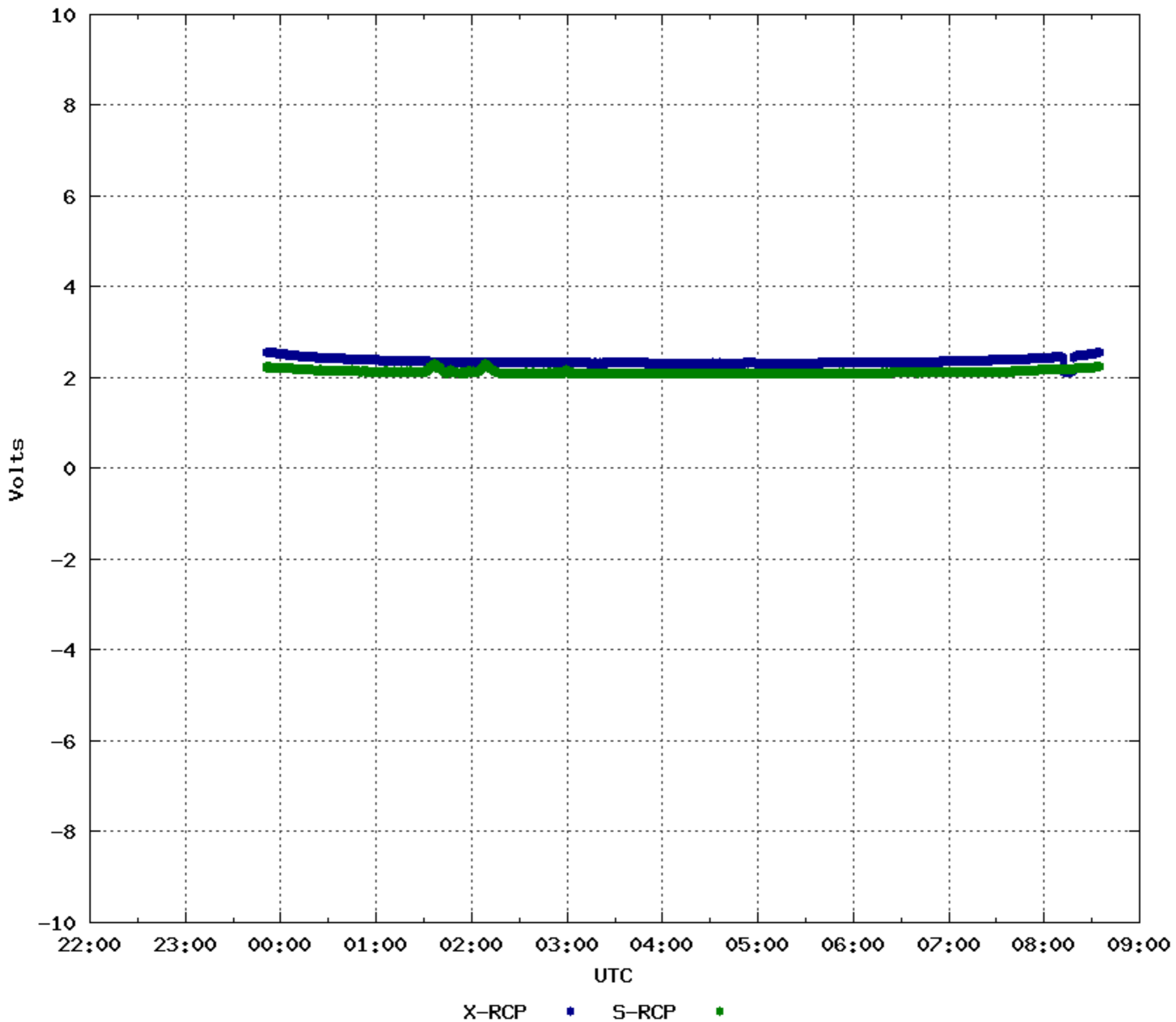
2016/205 D55-14 Carrier Power to Noise Spectral Density Ratio and System Noise Temperature



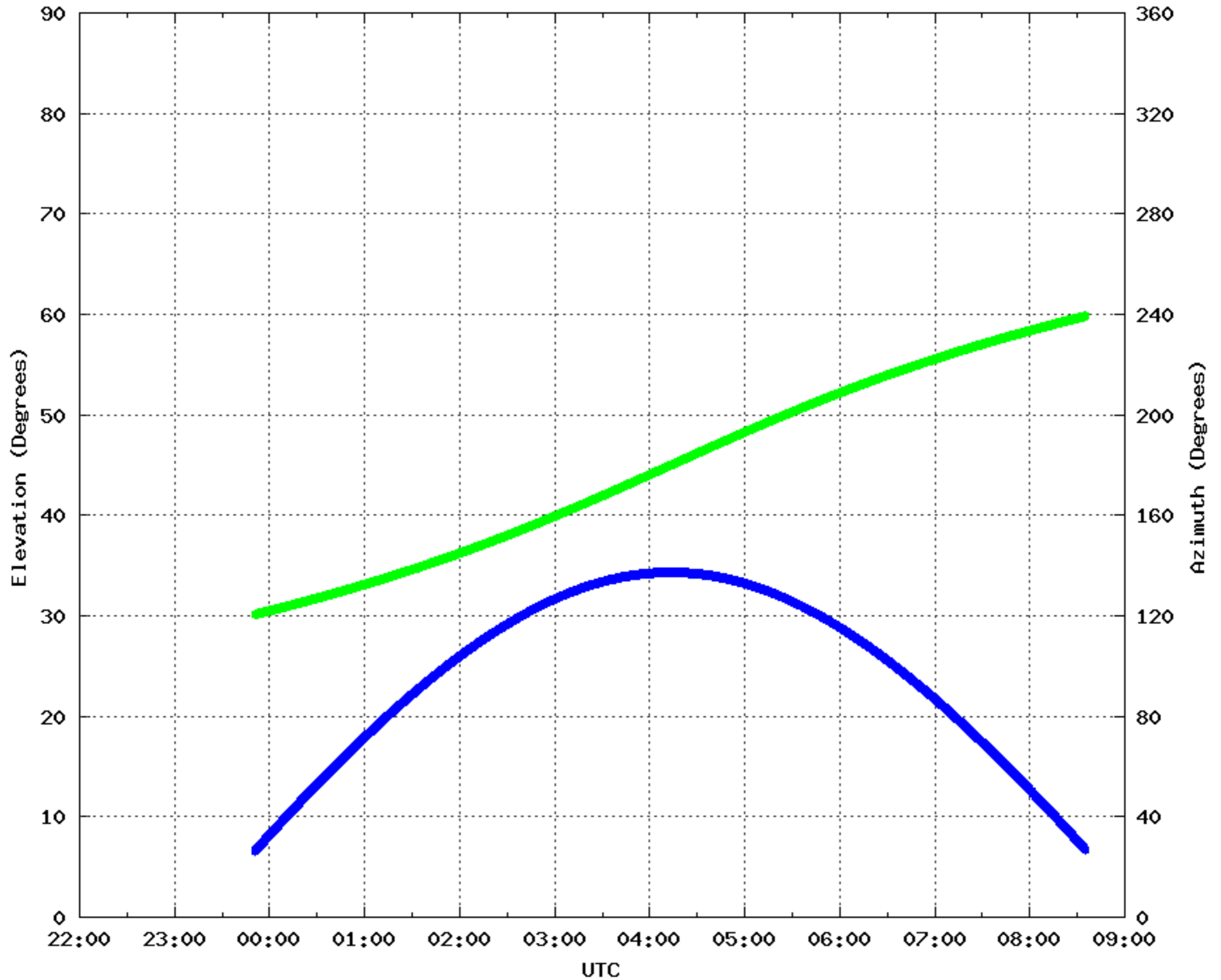
2016/205 DSS-14 Carrier Loop Tracking Bandwidth



2016/205 DSS-14 Total Power Automatic Gain Control (AGC) Voltage

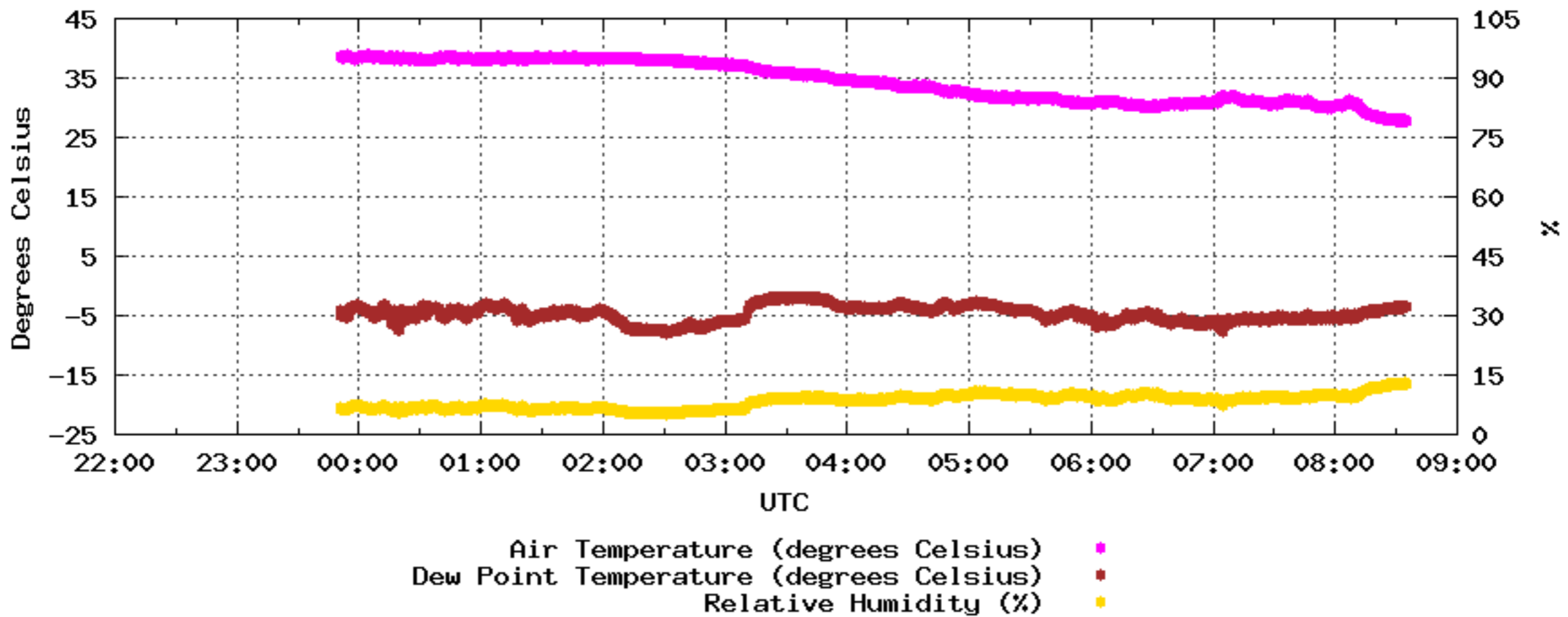


2016/205 DSS-14 Elevation & Azimuth

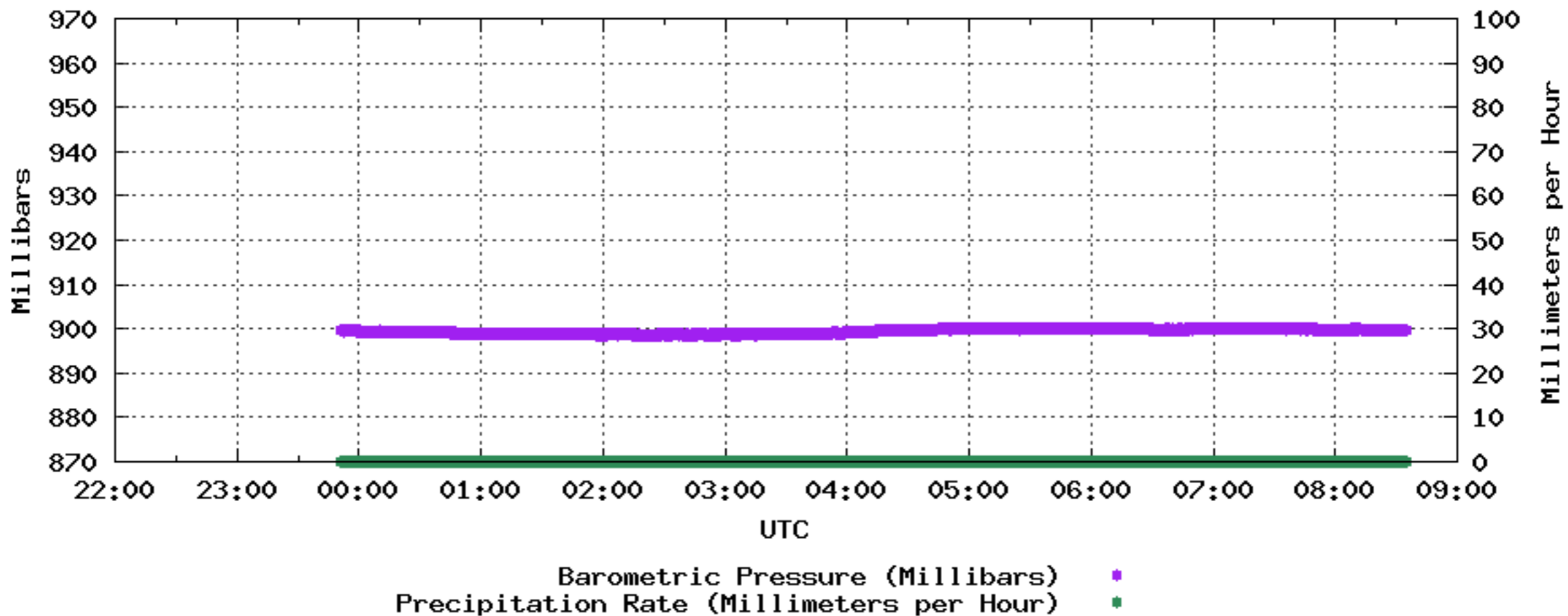


Elevation ■ Azimuth ■

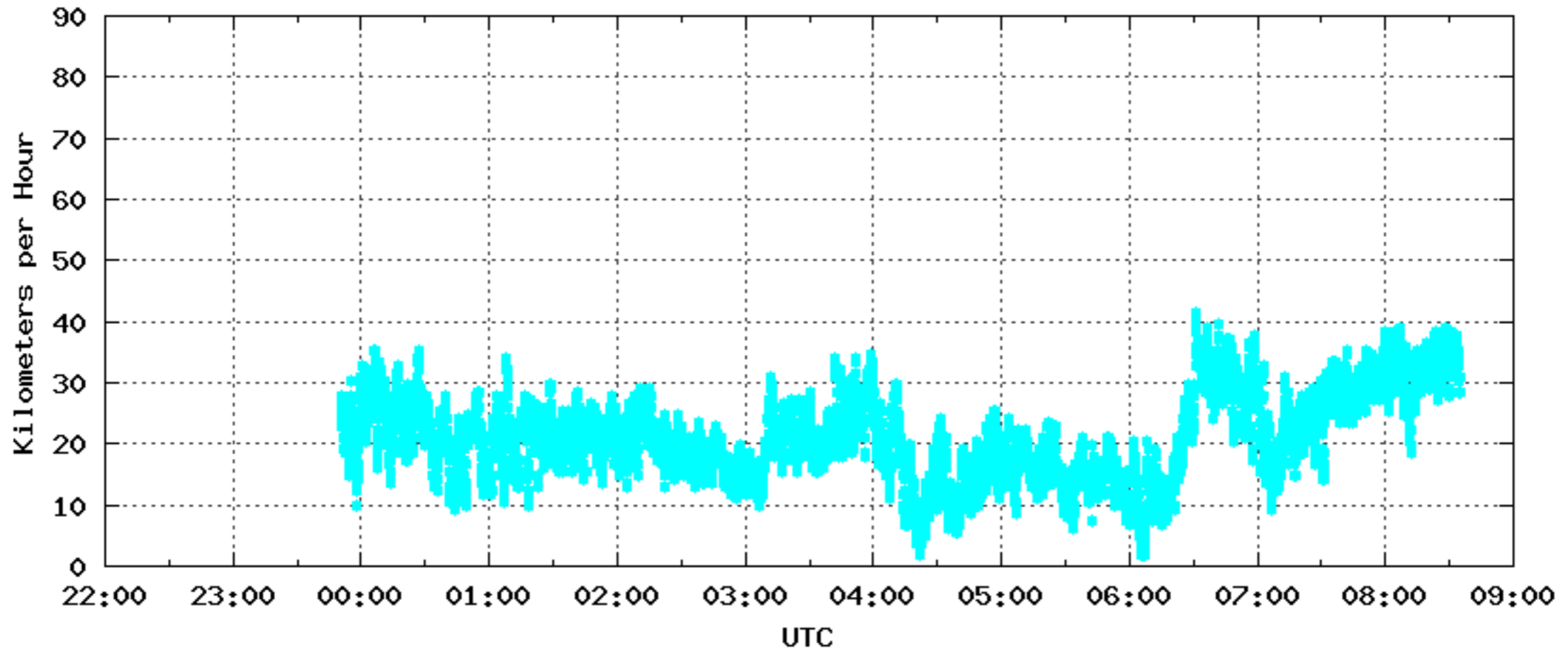
2016/205 D55-14 Air Temperature, Dew Point Temperature, and Relative Humidity



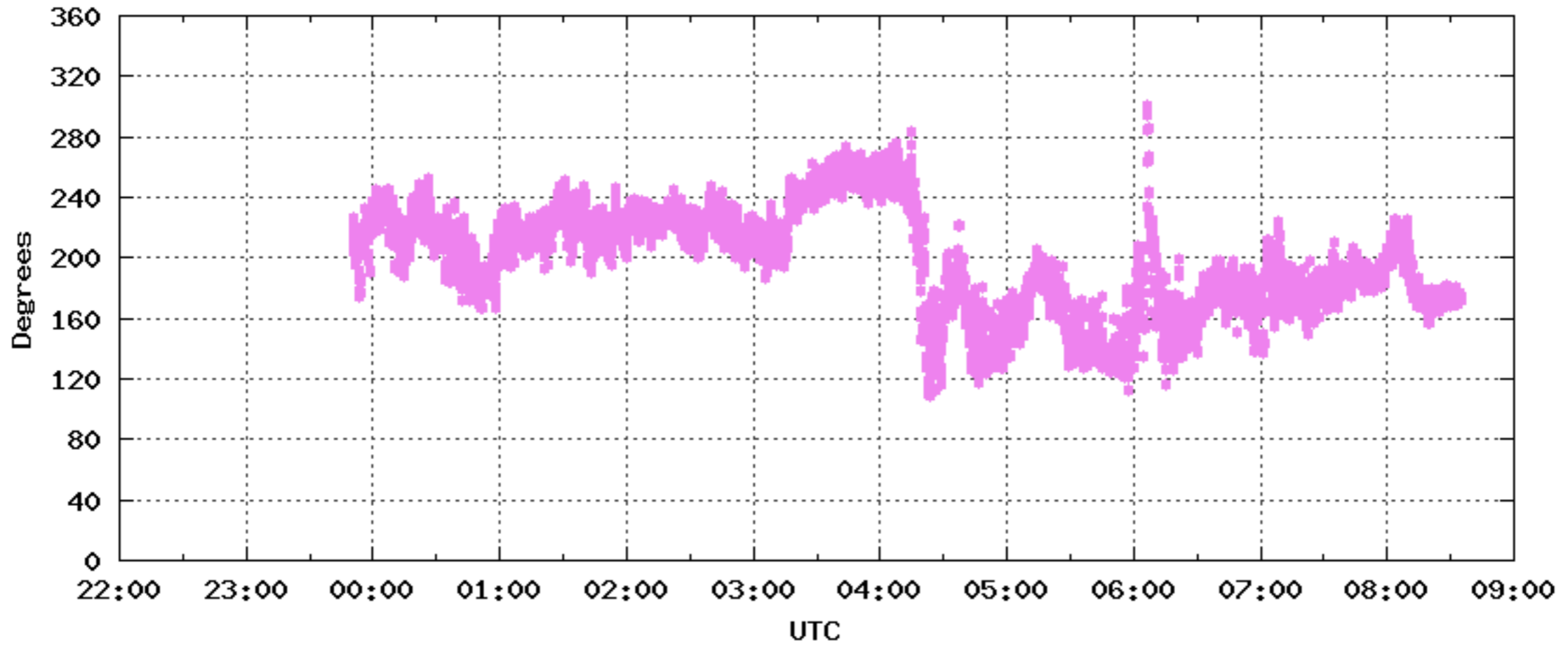
2016/205 D55-14 Barometric Pressure and Precipitation Rate



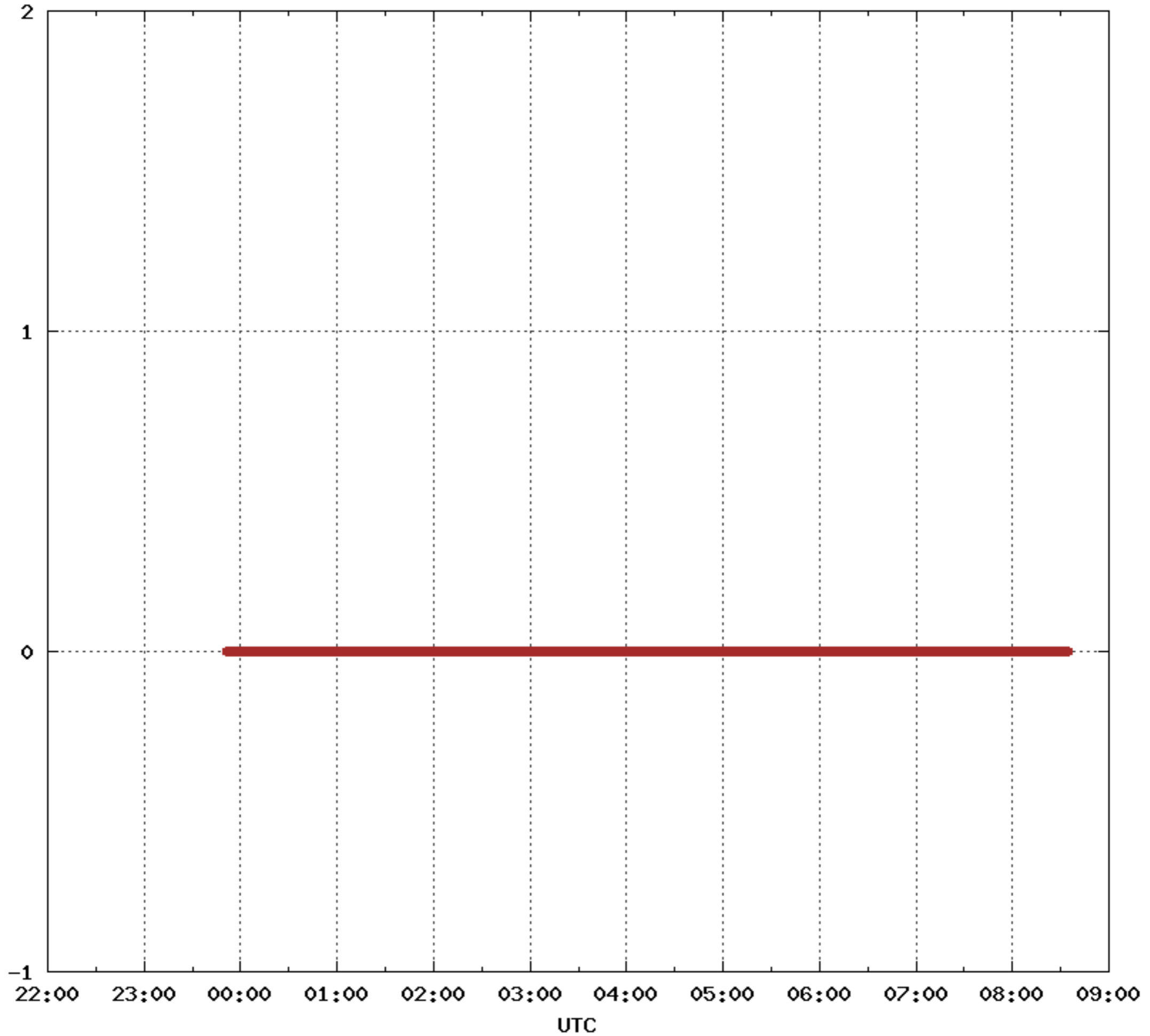
2016/205 DSS-14 Wind Speed



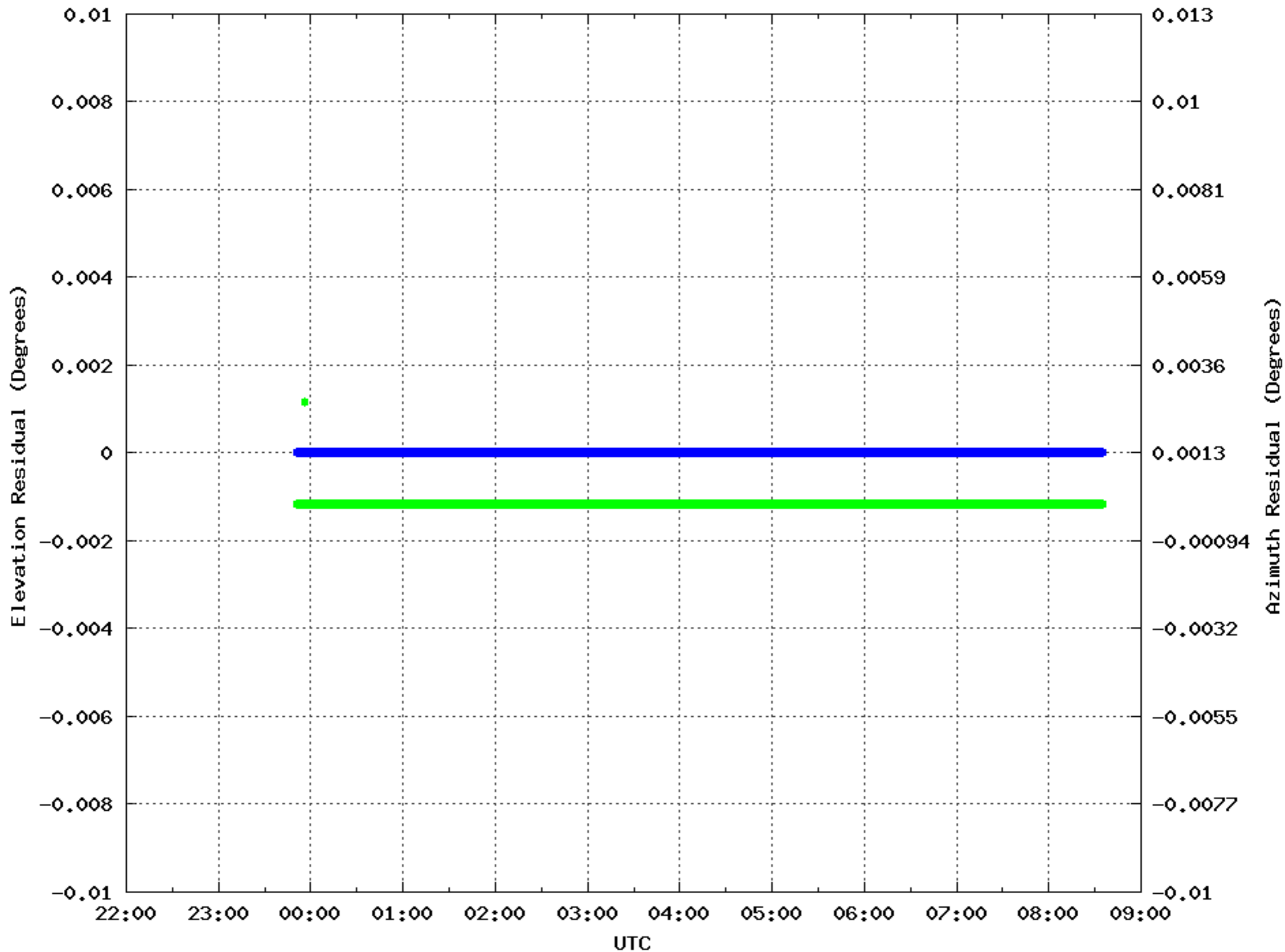
2016/205 DSS-14 Wind Direction



2016/205 D55-14 Conscan Drive Status (ON = 1; OFF = 0)



2016/205 D55-14 Elevation & Azimuth Residuals



Elevation Residual ■ Azimuth Residual ■

02. Carrier Power to Noise Spectral Density Ratio (Pc/No) and Residual Frequency

Top:

Carrier Power to Noise Spectral Density Ratio (M-1315, M-1815, M-2315, M-2815)
filtered by Carrier Tracking Loop Status (M-1302, M-1802, M-2302, M-2802)
categorized by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

Bottom:

Residual Frequency (M-1305, M-1805, M-2305, M-2805)
filtered by Carrier Tracking Loop Status (M-1302, M-1802, M-2302, M-2802)
categorized by Predicts Mode (M-1248, M-1748, M-2248, M-2748)
and by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

03. X-Band - Measured Carrier Frequency, Predicted Carrier Frequency,
and Residual Frequency

Top:

Predicted Frequency including Doppler Shift (M-1320, M-1820, M-2320, M-2820)
categorized by Predicts Mode (M-1248, M-1748, M-2248, M-2748)
and by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

Measured Carrier Frequency (M-1304, M-1804, M-2304, M-2804)
filtered by Carrier Tracking Loop Status (M-1302, M-1802, M-2302, M-2802)
categorized by Predicts Mode (M-1248, M-1748, M-2248, M-2748)
and by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

Bottom:

Residual Frequency (M-1305, M-1805, M-2305, M-2805)
filtered by Carrier Tracking Loop Status (M-1302, M-1802, M-2302, M-2802)
categorized by Predicts Mode (M-1248, M-1748, M-2248, M-2748)
and by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

04. S-Band - Measured Carrier Frequency, Predicted Carrier Frequency,
and Residual Frequency

Top:

Predicted Frequency including Doppler Shift (M-1320, M-1820, M-2320, M-2820)
categorized by Predicts Mode (M-1248, M-1748, M-2248, M-2748)
and by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

Measured Carrier Frequency (M-1304, M-1804, M-2304, M-2804)
filtered by Carrier Tracking Loop Status (M-1302, M-1802, M-2302, M-2802)
categorized by Predicts Mode (M-1248, M-1748, M-2248, M-2748)
and by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

Bottom:

Residual Frequency (M-1305, M-1805, M-2305, M-2805)
filtered by Carrier Tracking Loop Status (M-1302, M-1802, M-2302, M-2802)
categorized by Predicts Mode (M-1248, M-1748, M-2248, M-2748)
and by Downlink Band (M-1245, M-1745, M-2245, M-2745)

and Polarization (M-1267, M-1767, M-2267, M-2767)

05. Uplink Frequency and Power

Top:

Uplink Frequency (M-1049)
filtered by Transmitter Status (M-1070)

Bottom:

Uplink Power (M-1067)
filtered by Transmitter Status (M-1070)

06. Carrier Power to Noise Spectral Density Ratio (P_c/N_o) and Carrier Power

Top:

Carrier Power to Noise Spectral Density Ratio (M-1315, M-1815, M-2315, M-2815)
filtered by Carrier Tracking Loop Status (M-1302, M-1802, M-2302, M-2802)
categorized by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

Bottom:

Carrier Power (M-1310, M-1810, M-2310, M-2810)
filtered by Carrier Tracking Loop Status (M-1302, M-1802, M-2302, M-2802)
categorized by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

07. Carrier Power to Noise Spectral Density Ratio (P_c/N_o) and System Noise Temperature

Carrier Power to Noise Spectral Density Ratio (M-1315, M-1815, M-2315, M-2815)
filtered by Carrier Tracking Loop Status (M-1302, M-1802, M-2302, M-2802)
categorized by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

System Noise Temperature (M-1318, M-1818, M-2318, M-2818)
categorized by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

08. Carrier Loop Tracking Bandwidth

Carrier Loop Tracking Bandwidth (M-1299, M-1799, M-2299, M-2799)
categorized by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

09. AGC Voltage

AGC Voltage (M-1325, M-1825, M-2325, M-2825)
categorized by Downlink Band (M-1245, M-1745, M-2245, M-2745)
and Polarization (M-1267, M-1767, M-2267, M-2767)

10. Azimuth & Elevation

Elevation Angle (M-0304)
Azimuth Angle (M-0305)

11. Weather: Air Temperature, Dew Point Temperature, Relative Humidity,
Precipitation Rate, and Barometric Pressure

Top:

Air Temperature (M-0394)

Dew Point (M-0397)

Relative Humidity (M-0409)

Bottom:

Barometric Pressure (M-0400)

Precipitation Rate (M-0406)

12. Wind Speed and Direction

Top:

Wind Speed (M-0388)

Bottom:

Wind Direction (M-0391)

13. Conscan Drive Status

Conscan Drive Status (M-0308)

14. Azimuth & Elevation Residuals

Elevation Residuals (M-0307)

Azimuth Residuals (M-0306)