

Spacecraft: Cassini

DSS: 35

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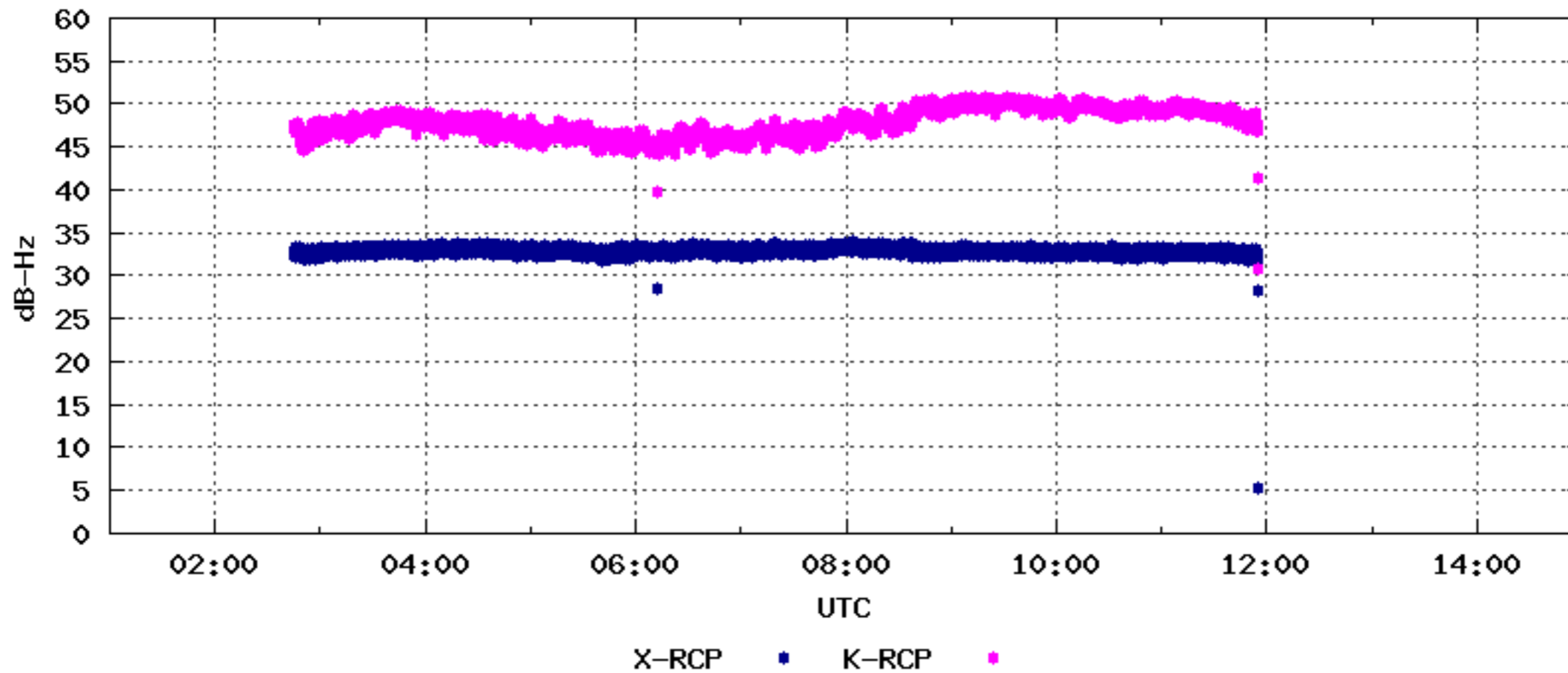
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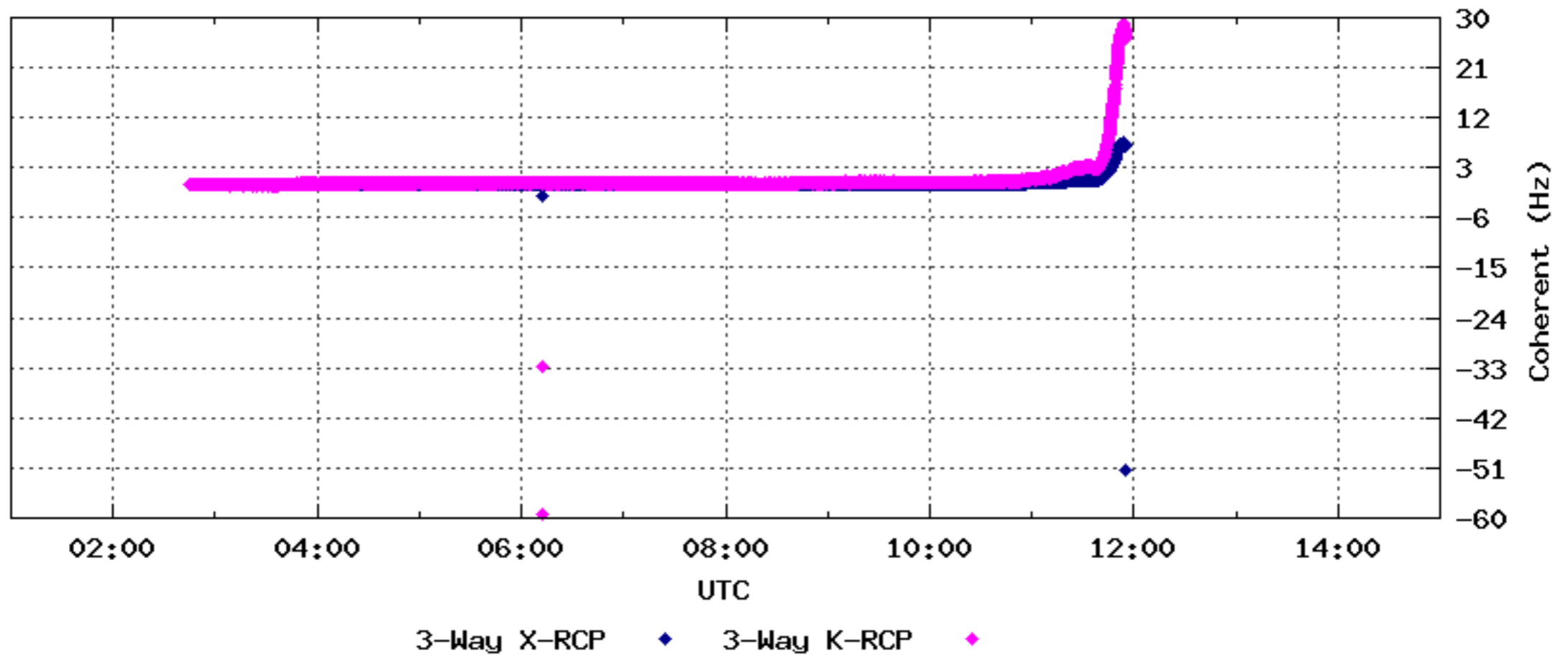
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02. Carrier Power to Noise Spectral Density Ratio ( $P_c/N_o$ ) and Residual Frequency
03. X-Band Measured Carrier Frequency, Predicted Carrier Frequency, and Residual Frequency
04. Ka-Band Measured Carrier Frequency, Predicted Carrier Frequency, and Residual Frequency
05. Carrier Power to Noise Spectral Density Ratio ( $P_c/N_o$ ) and Carrier Power
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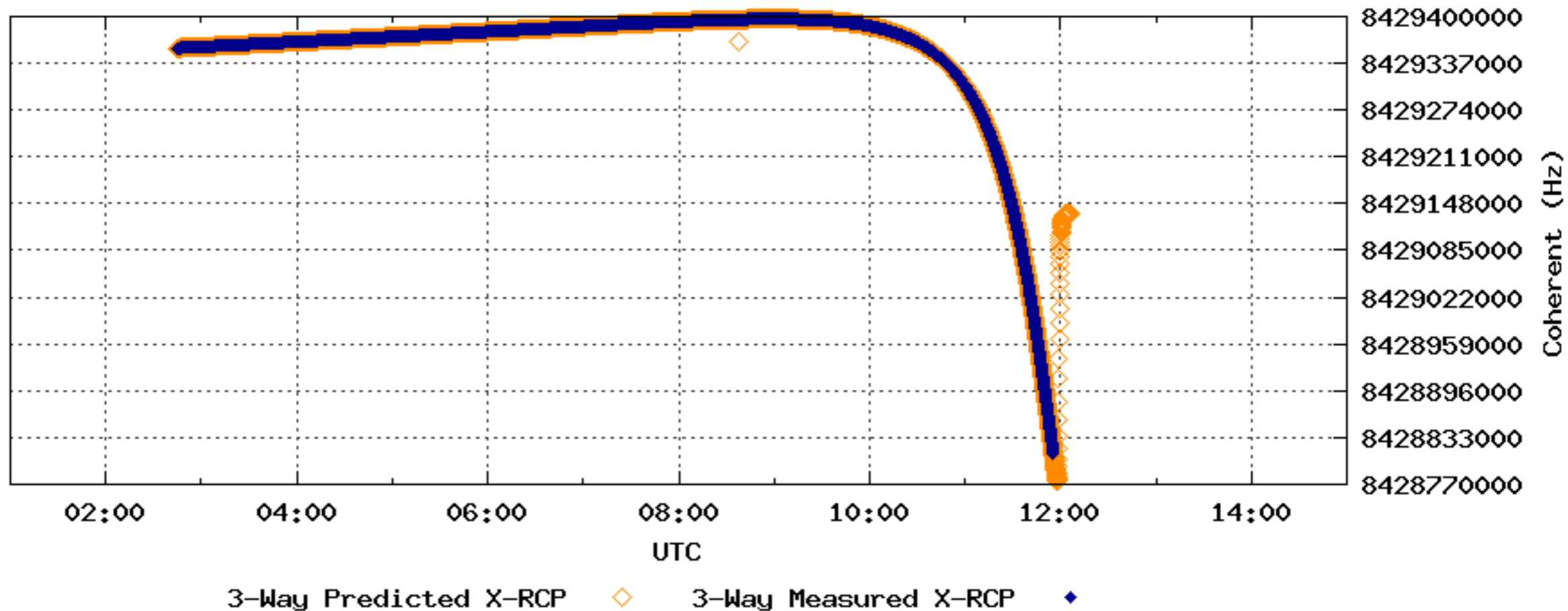
2017/258 D55-35 Carrier Power to Noise Spectral Density Ratio (Pc/No)



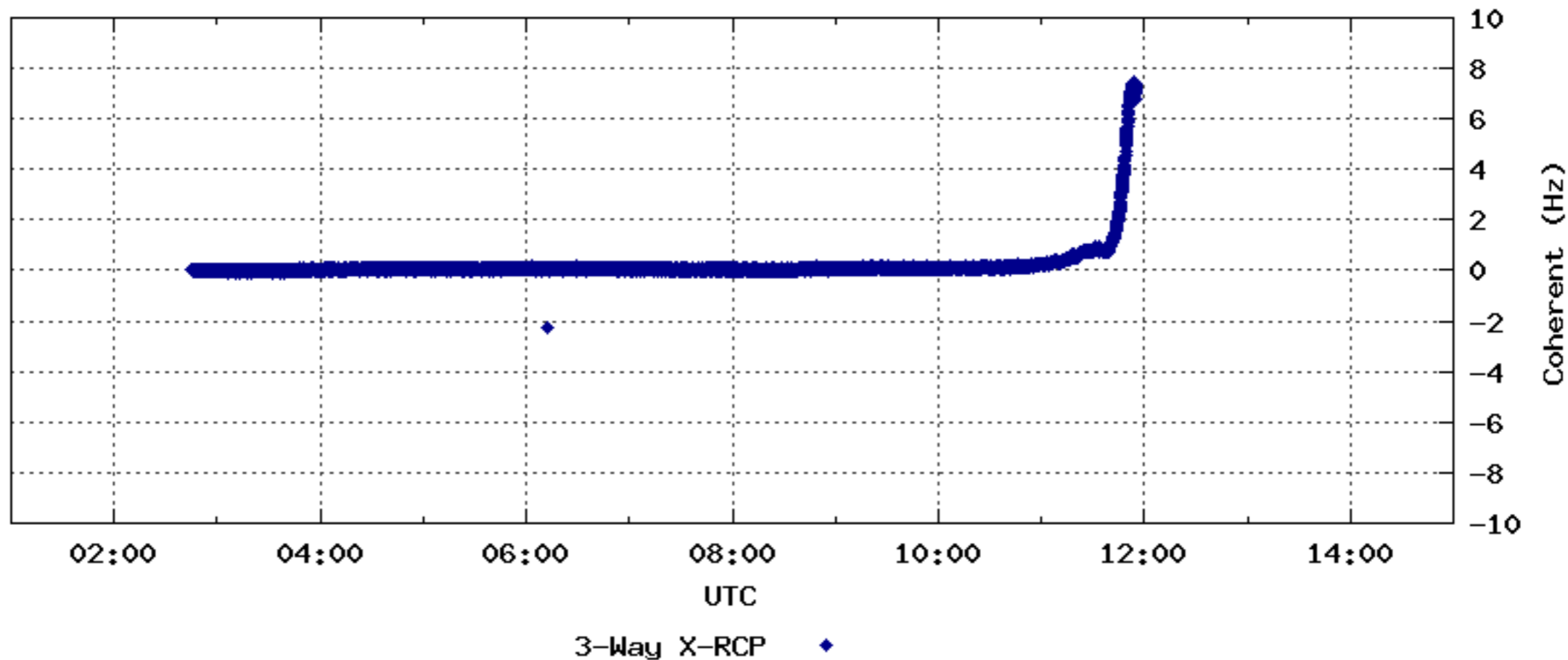
2017/258 D55-35 Carrier Frequency Residual (Measured - Predicted)



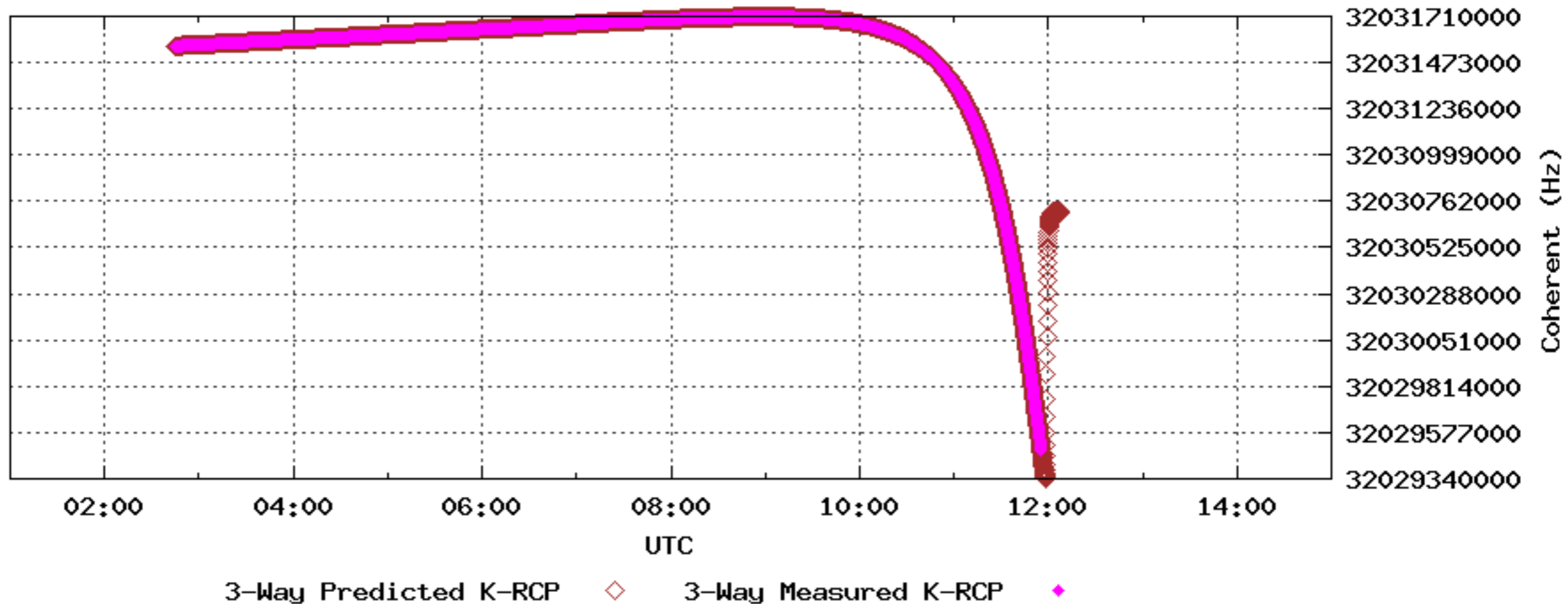
2017/258 DSS-35 X-Band Measured and Predicted Carrier Frequency



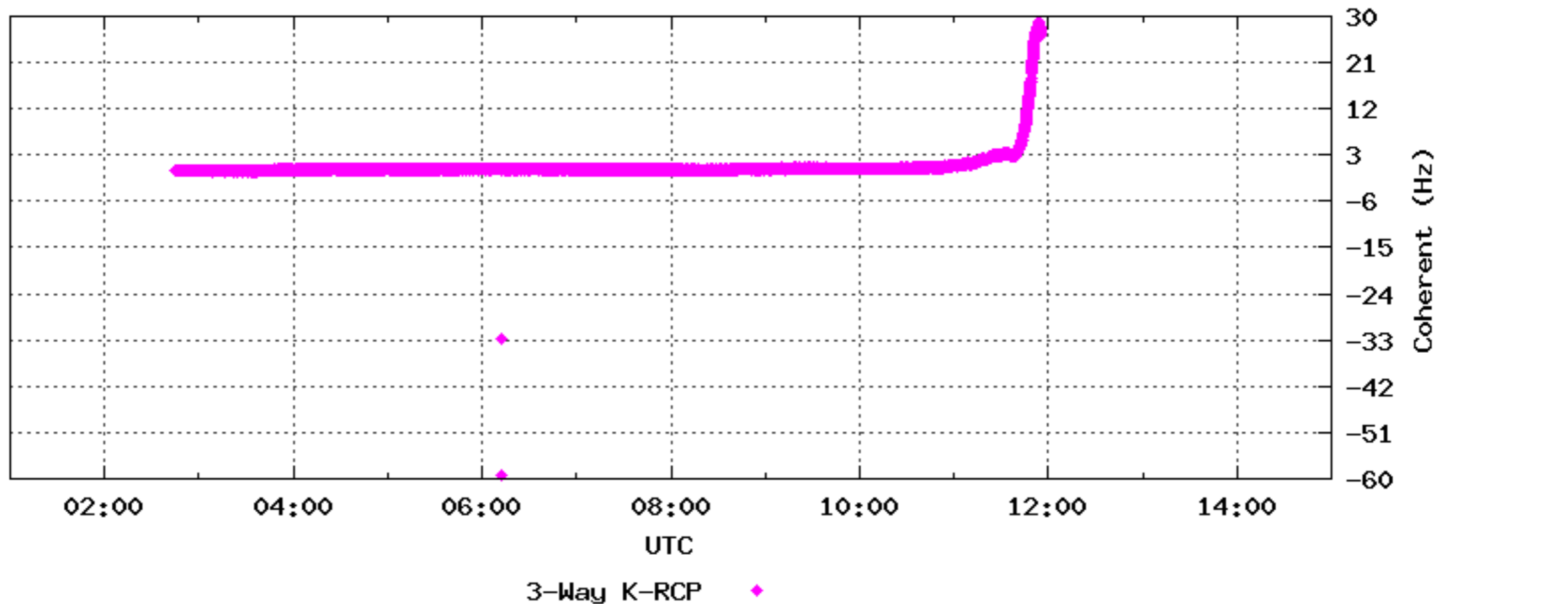
2017/258 DSS-35 X-Band Residual Frequency (Measured - Predicted)



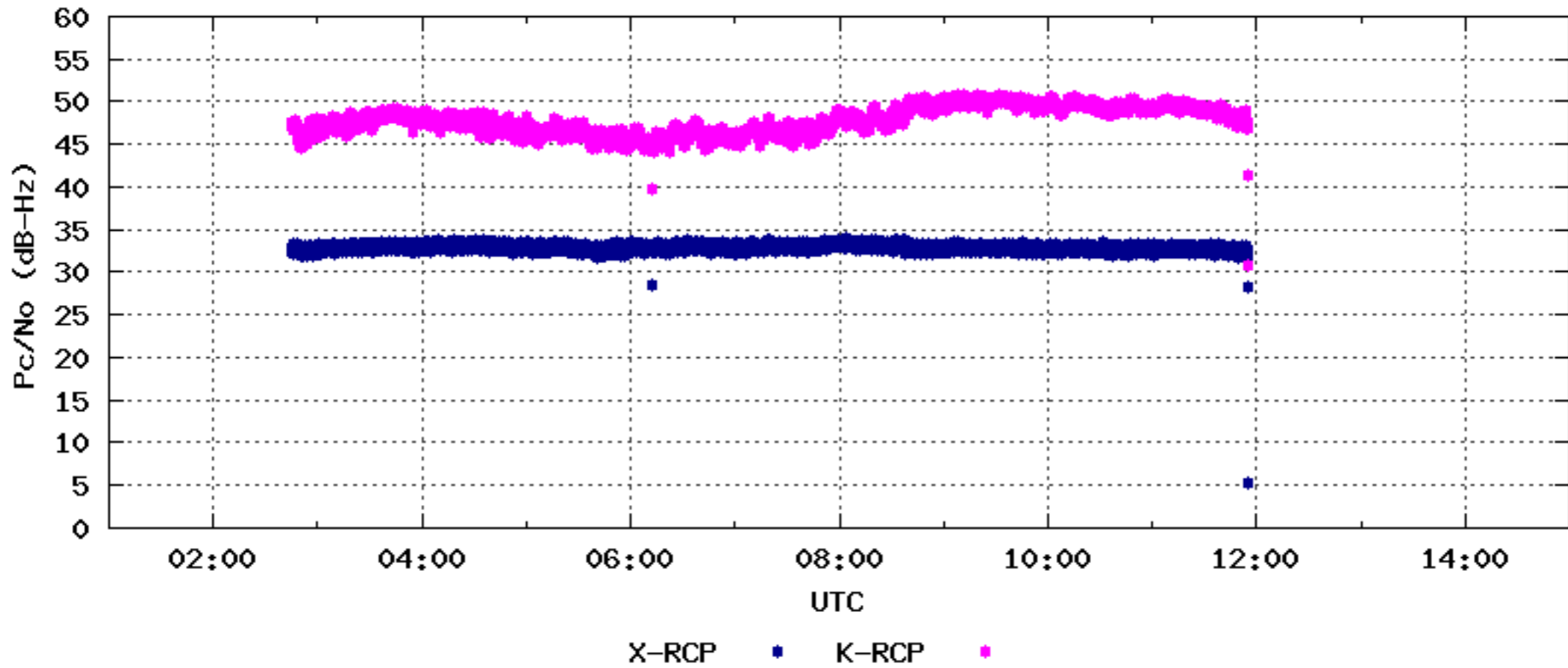
2017/258 DSS-35 K-Band Measured and Predicted Carrier Frequency



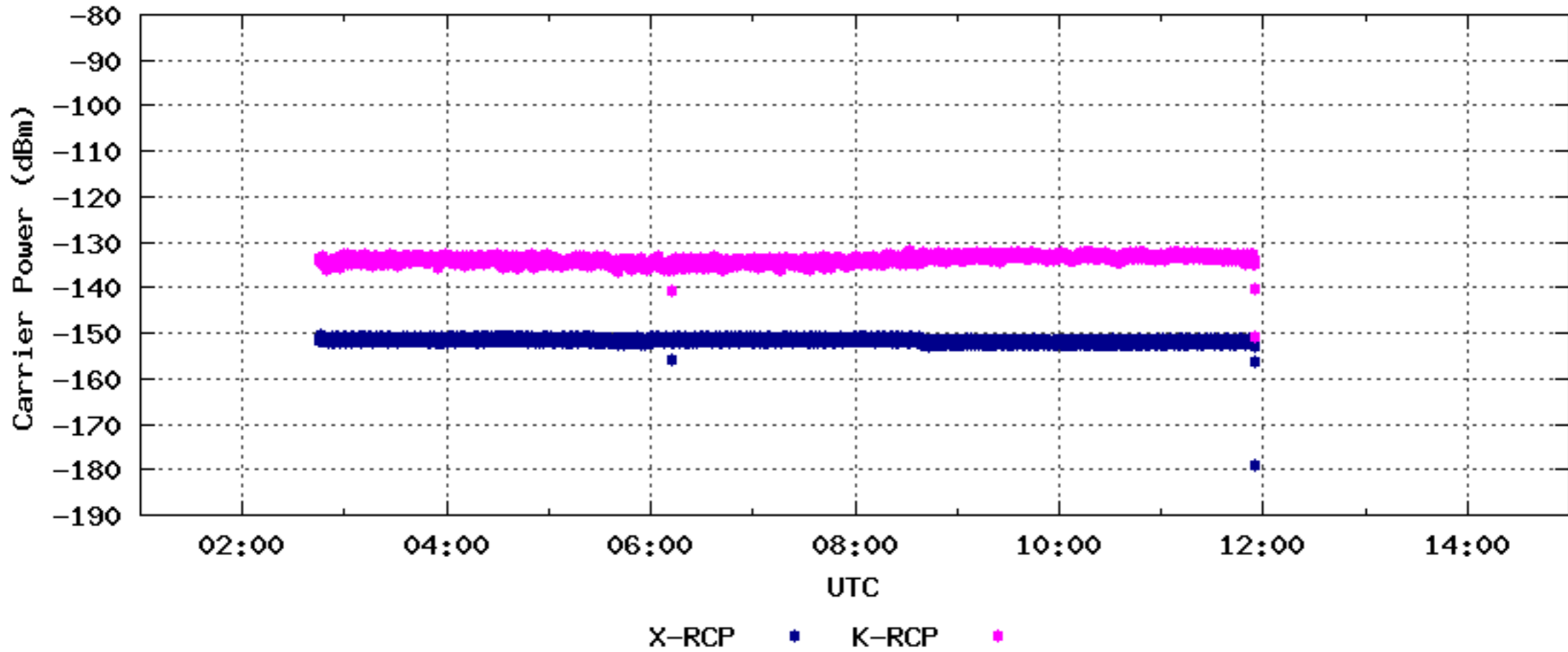
2017/258 DSS-35 K-Band Residual Frequency (Measured - Predicted)



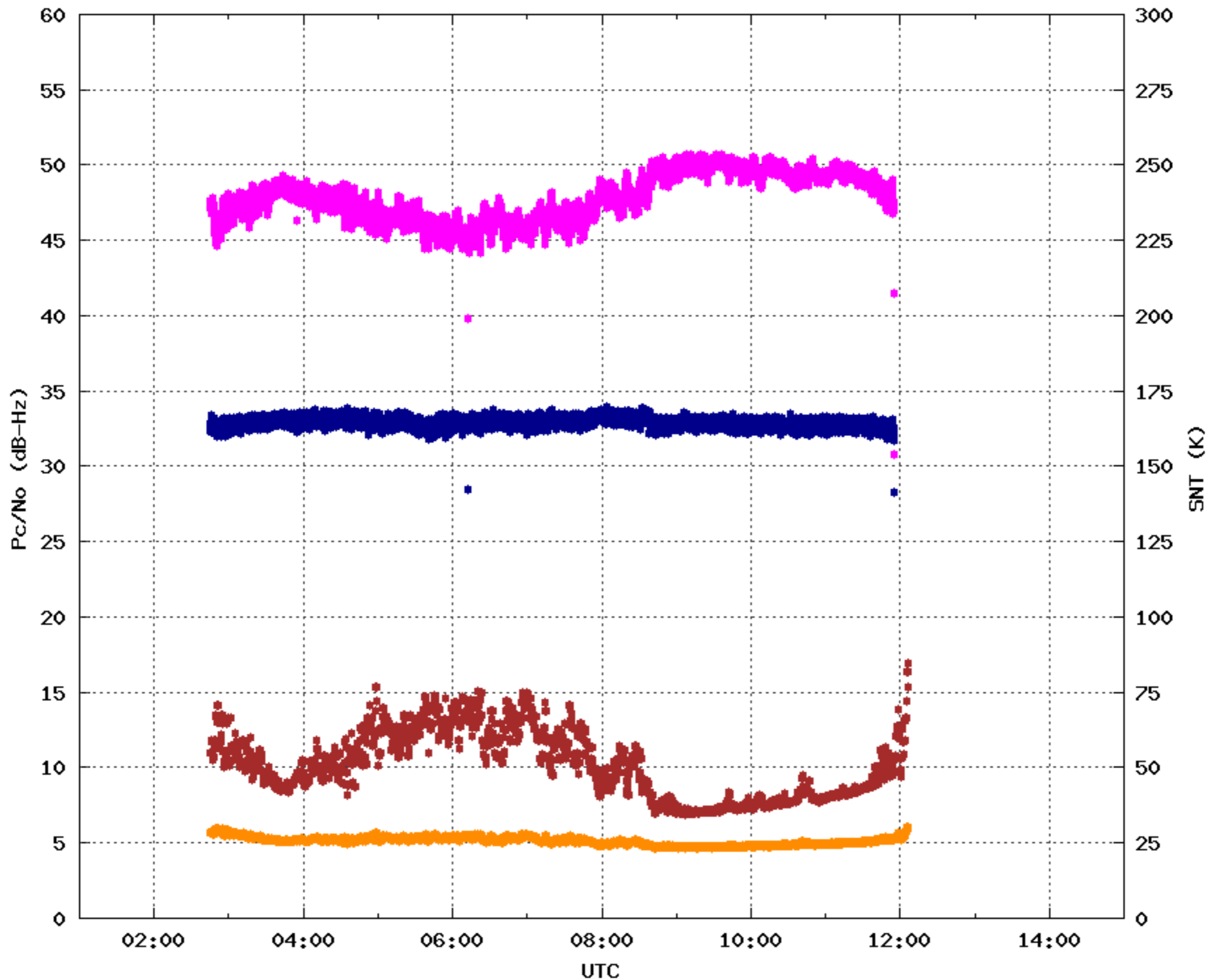
2017/258 D55-35 Carrier Power to Noise Spectral Density Ratio (Pc/No)



2017/258 D55-35 Carrier Power

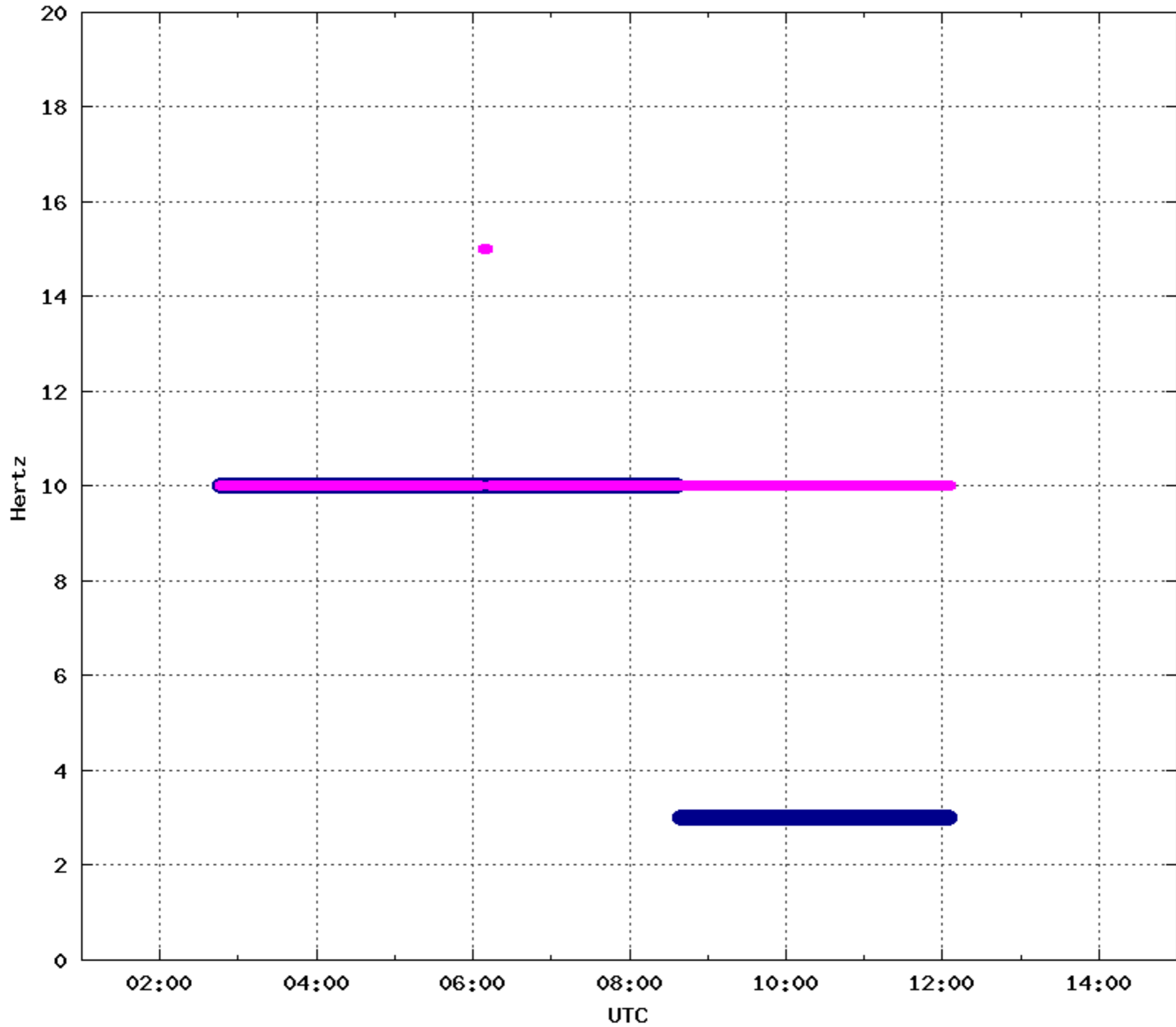


2017/258 D55-35 Carrier Power to Noise Spectral Density Ratio and System Noise Temperature



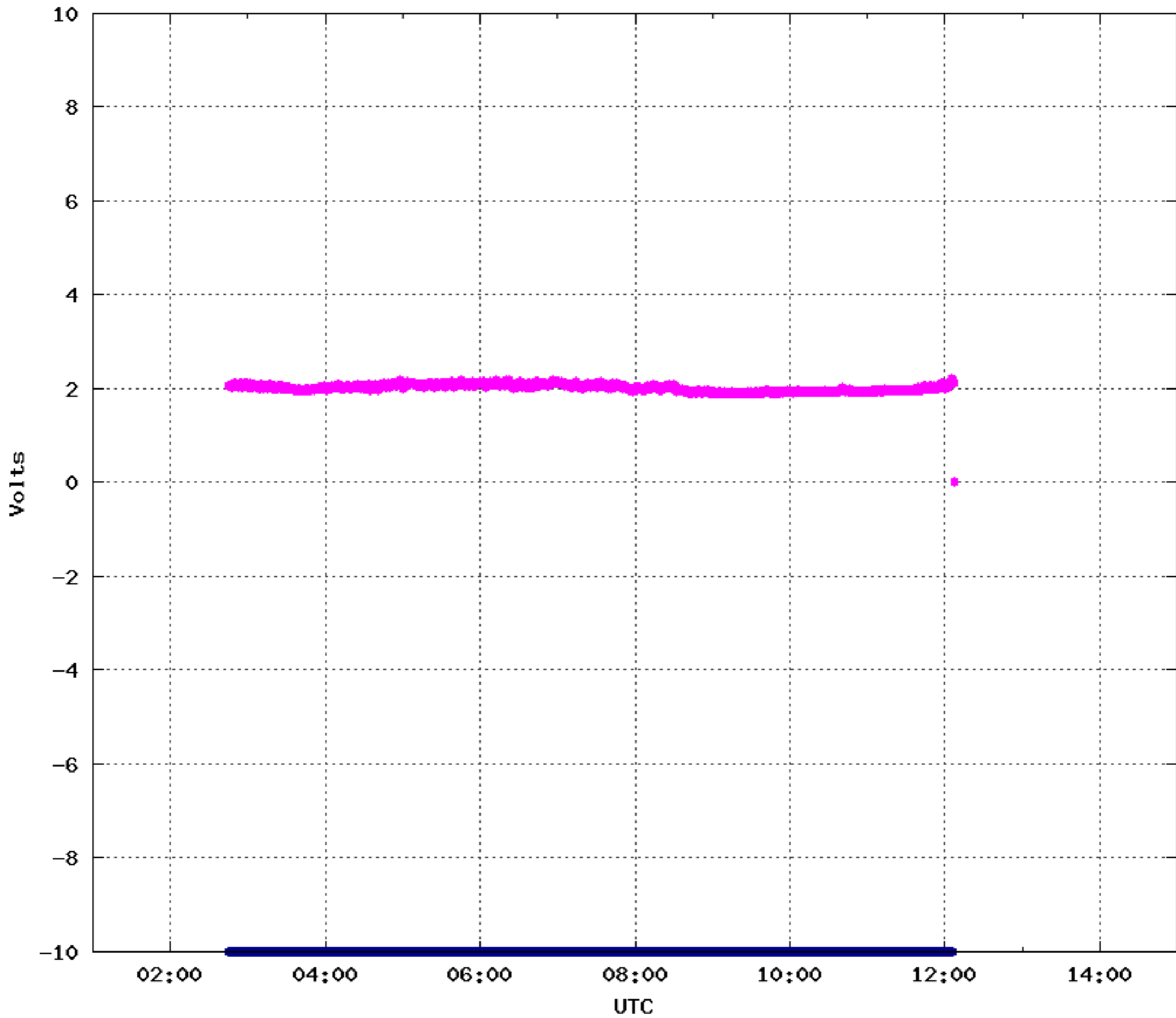
Pc/No X-RCP    ■    SNT X-RCP    ■    Pc/No K-RCP    ■    SNT K-RCP    ■

# 2017/258 DSS-35 Carrier Loop Tracking Bandwidth



X-RCP ● K-RCP ●

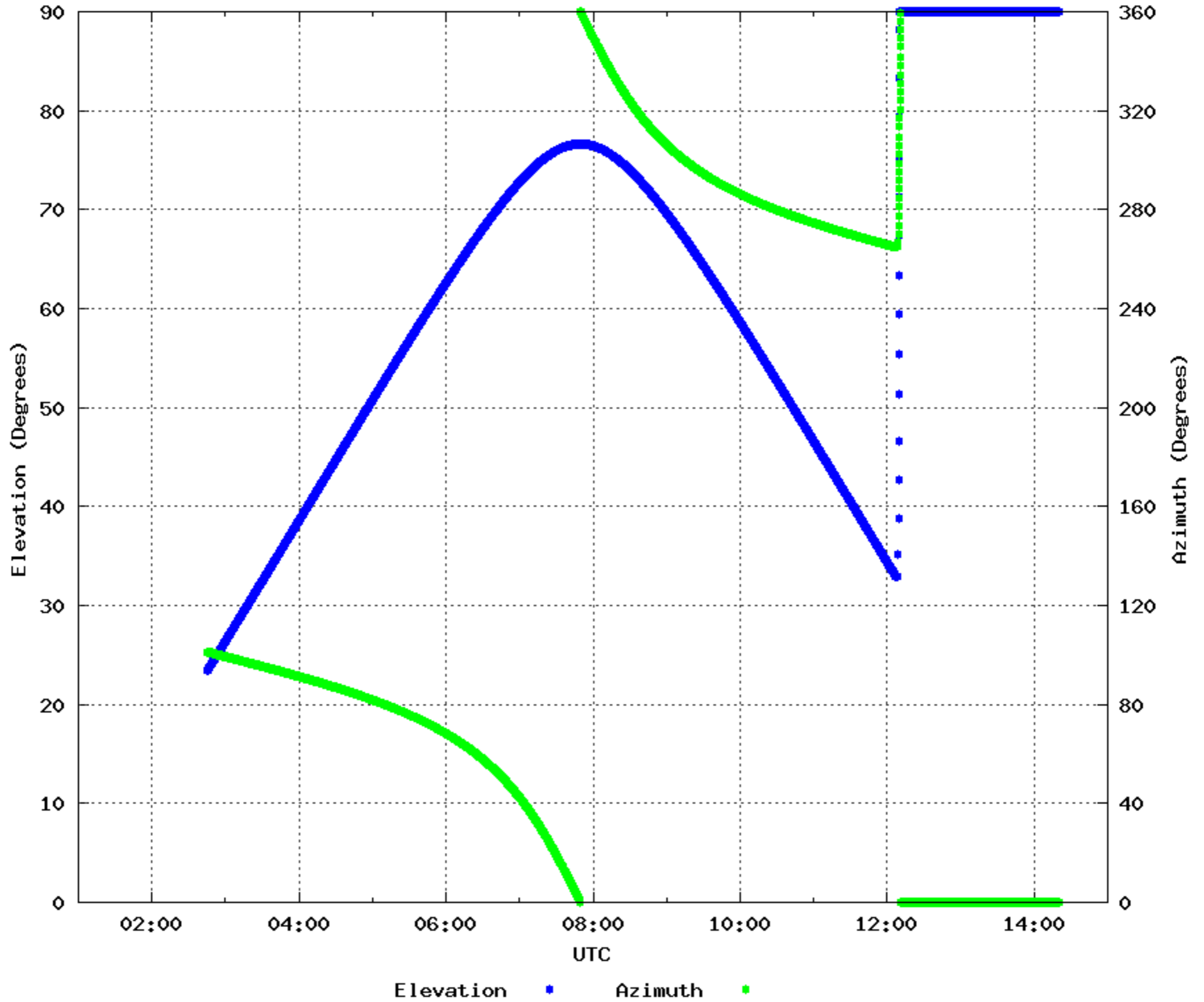
2017/258 DSS-35 Total Power Automatic Gain Control (AGC) Voltage



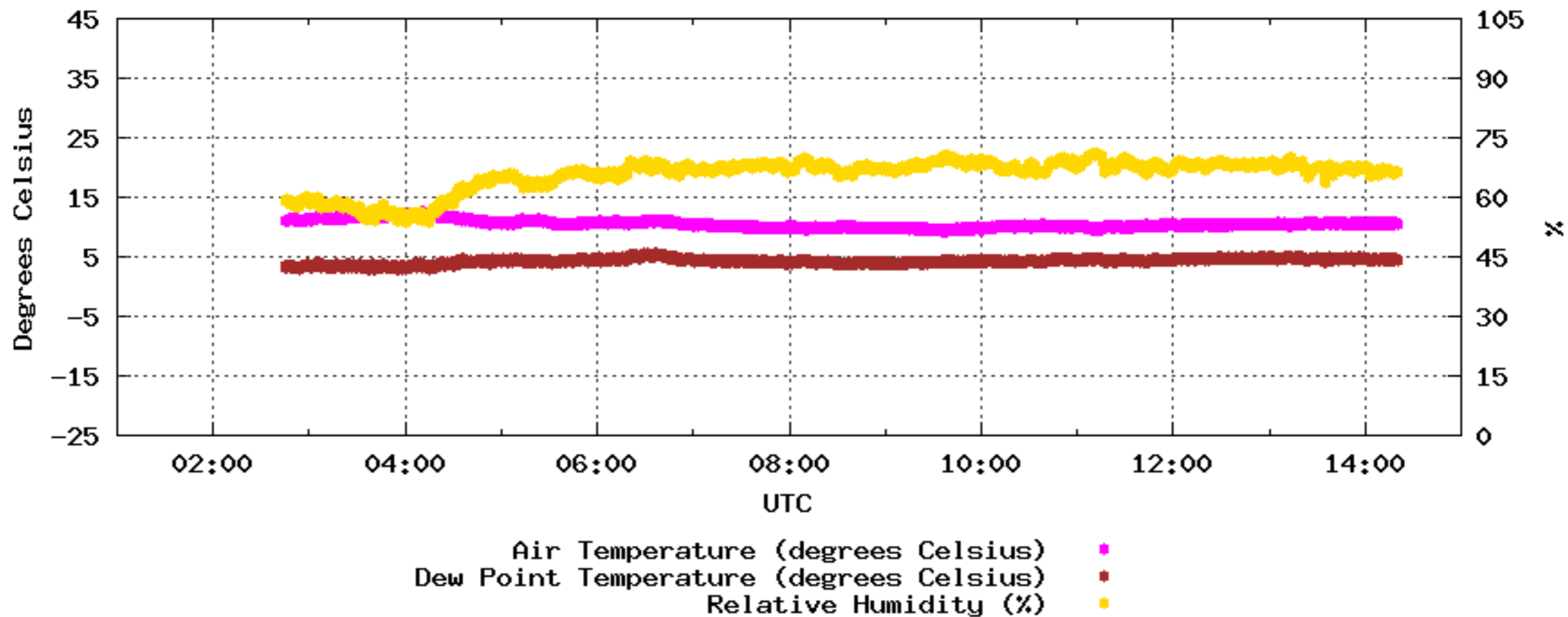
X-RCP ■ K-RCP ■



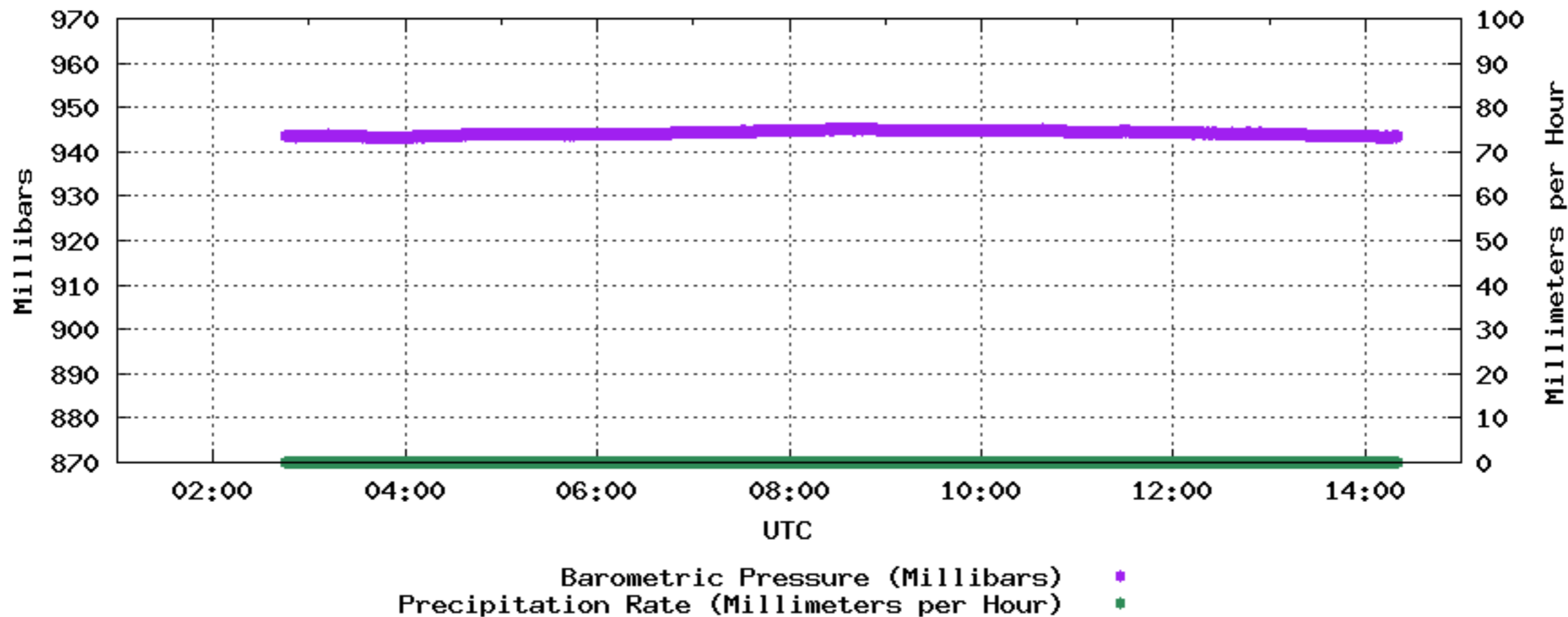
2017/258 DSS-35 Elevation & Azimuth



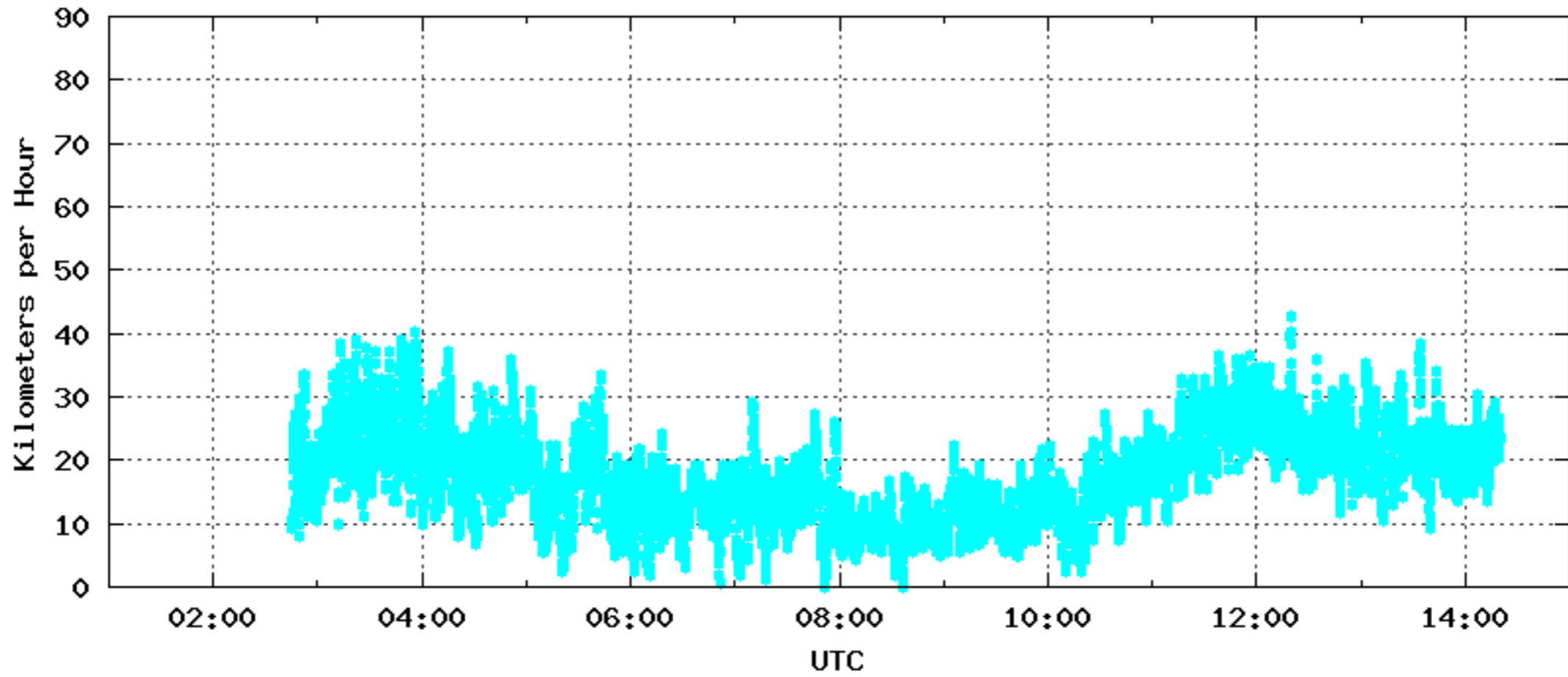
2017/258 D55-35 Air Temperature, Dew Point Temperature, and Relative Humidity



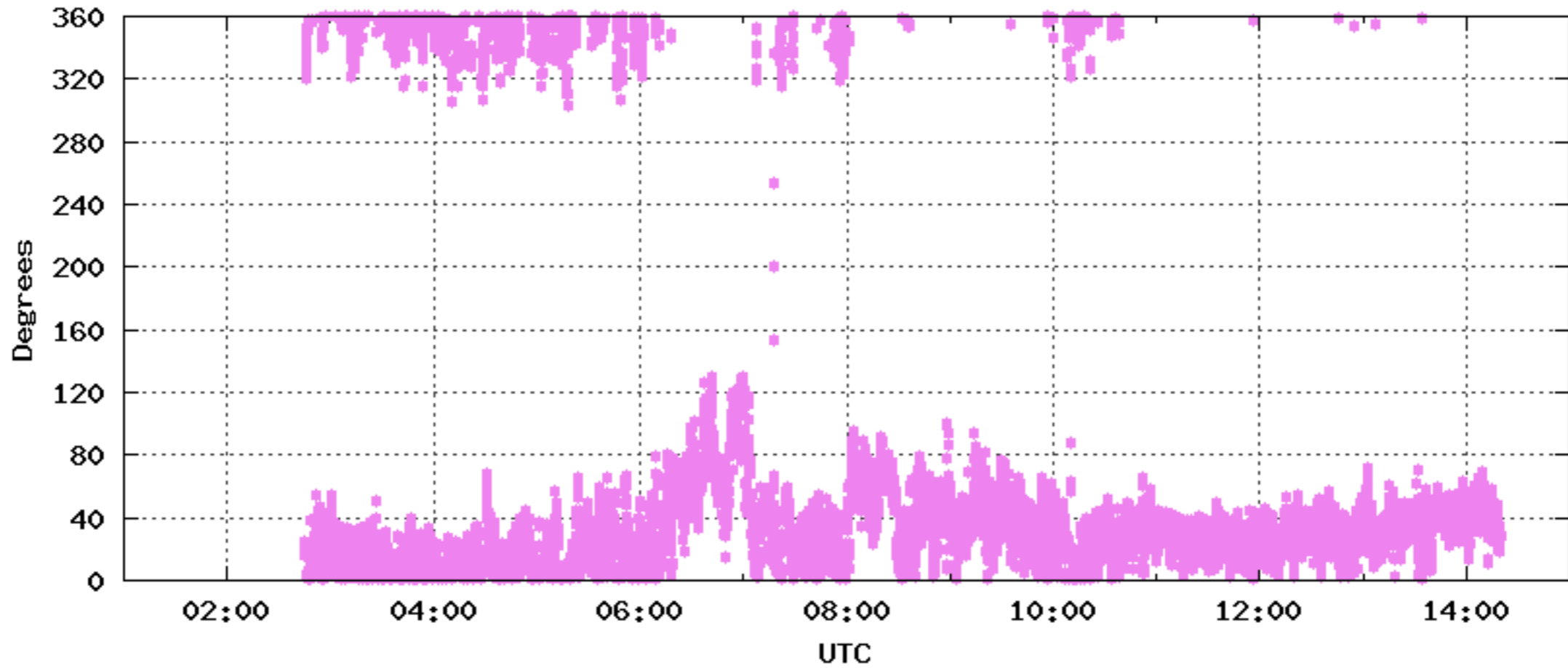
2017/258 D55-35 Barometric Pressure and Precipitation Rate



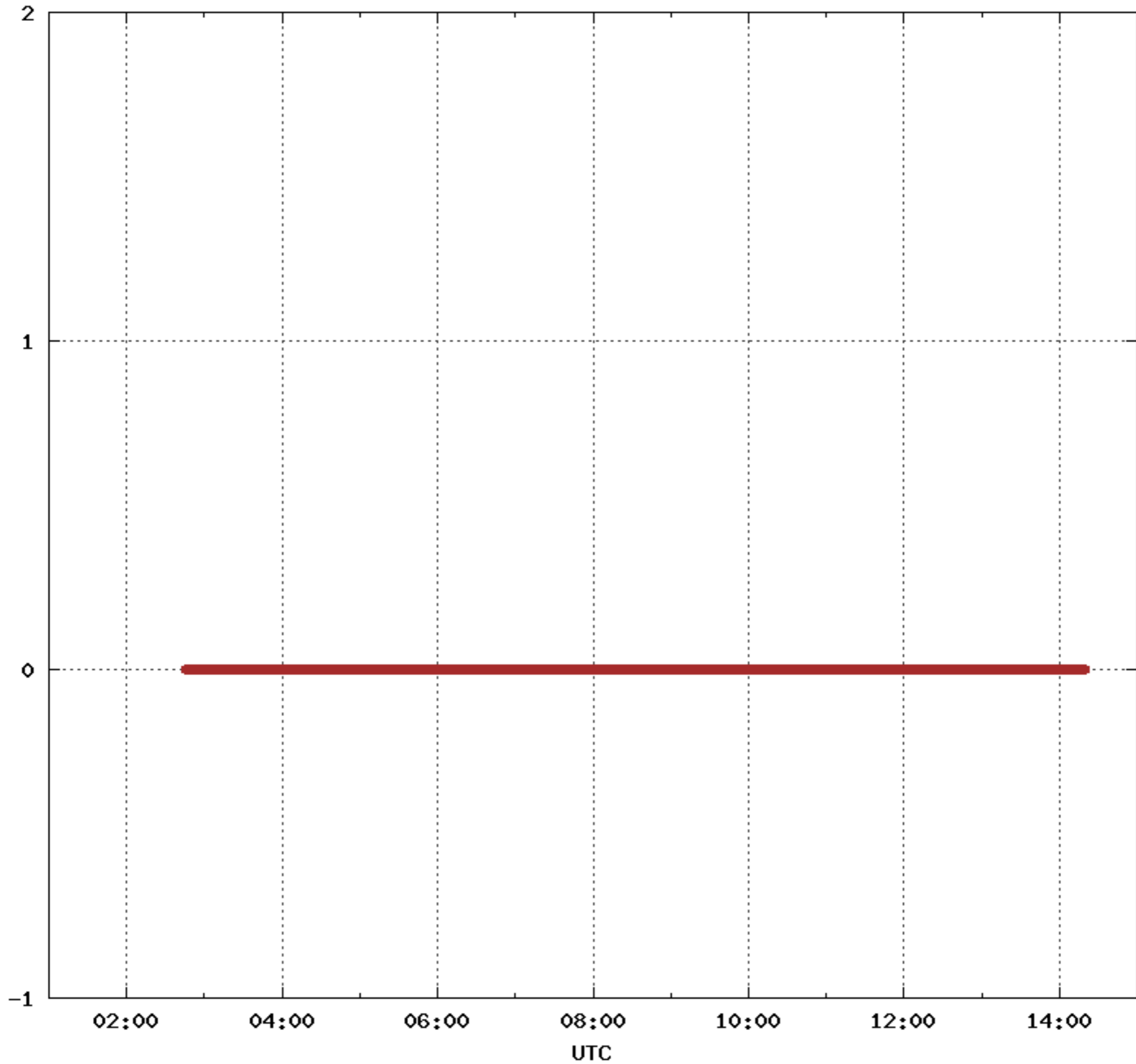
2017/258 DSS-35 Wind Speed



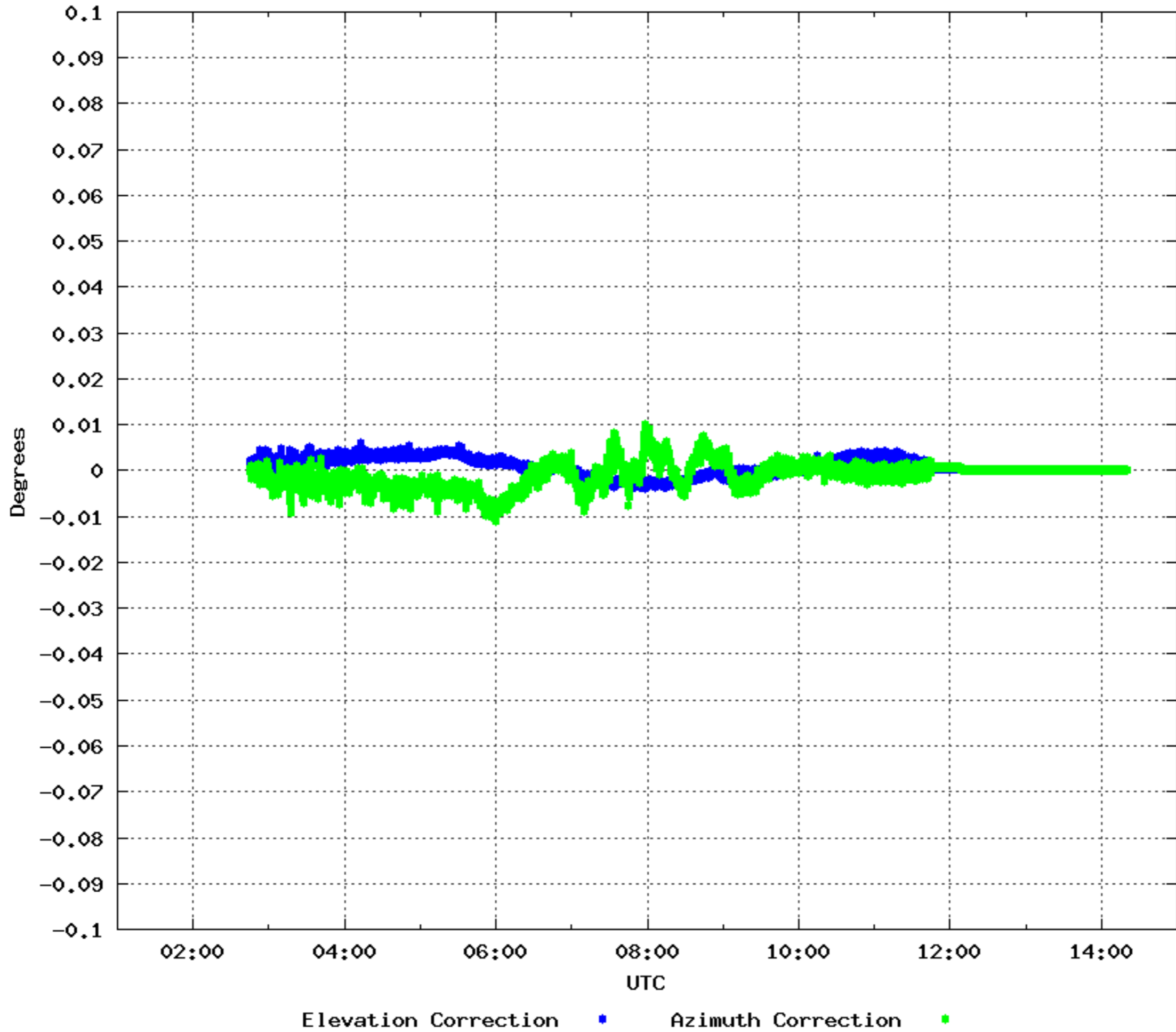
2017/258 DSS-35 Wind Direction



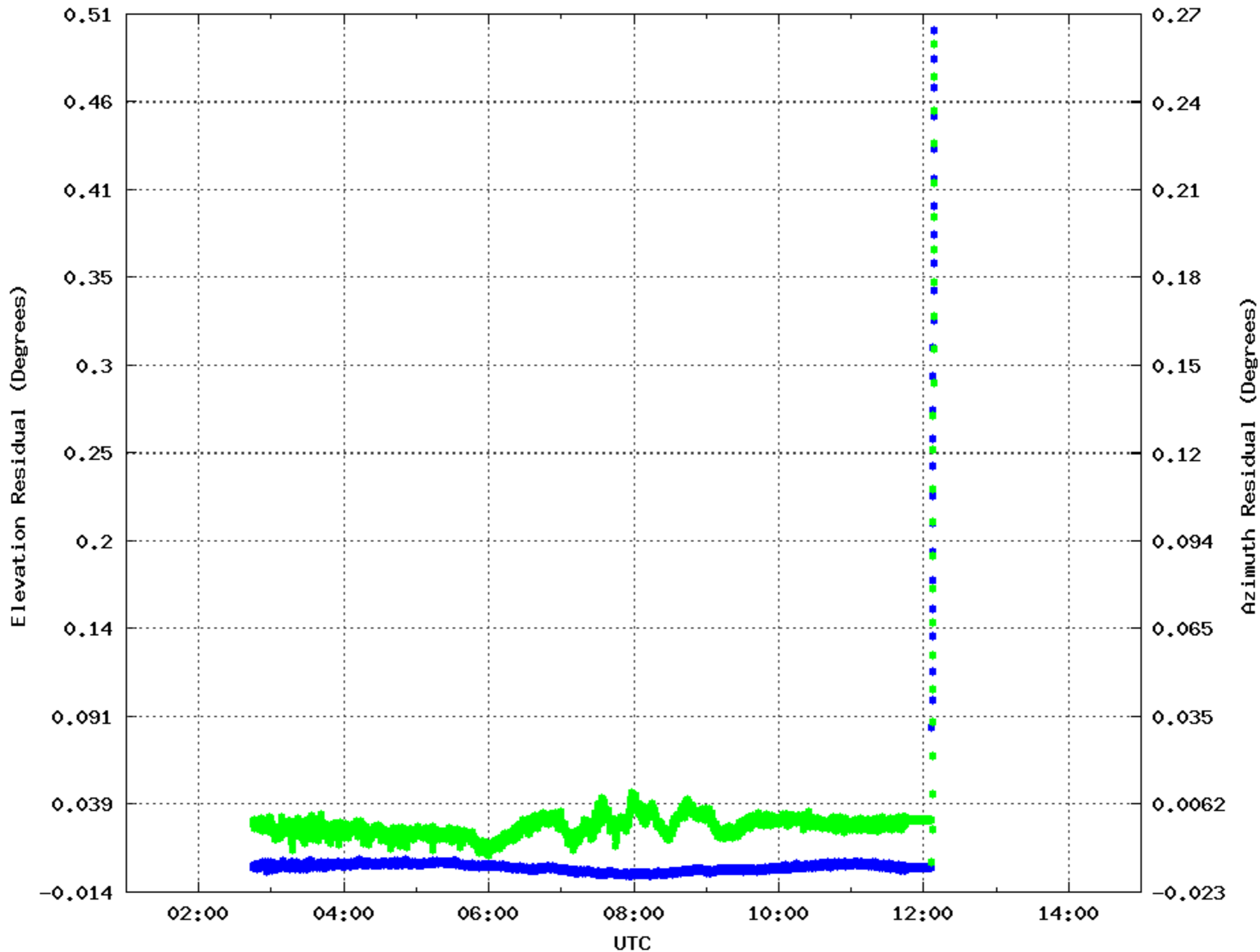
2017/258 D55-35 Conscan Drive Status (ON = 1; OFF = 0)



# 2017/258 D55-35 Monopulse Elevation & Azimuth Corrections

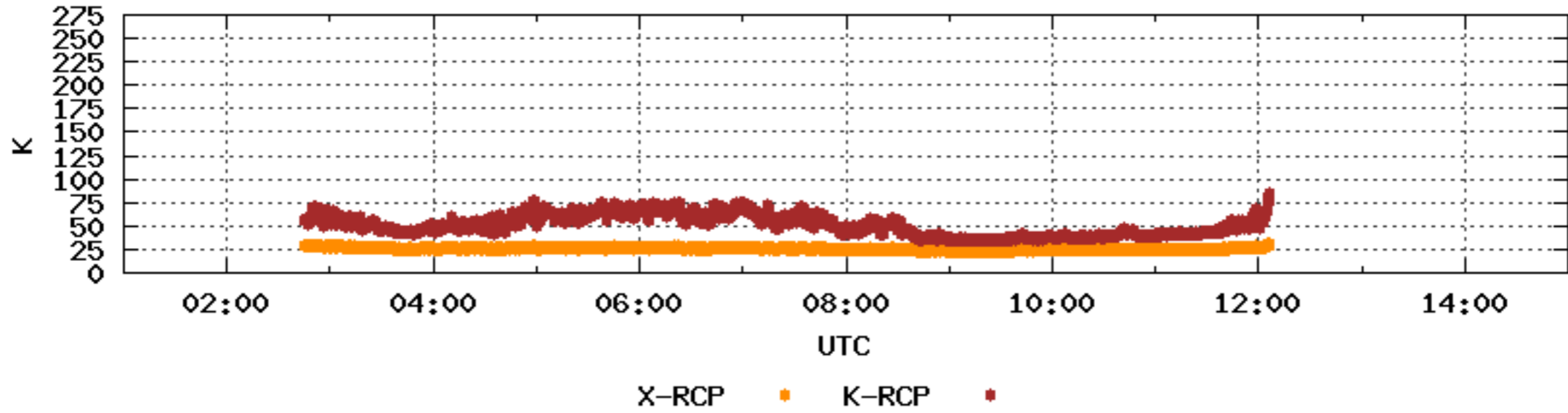


# 2017/258 D55-35 Elevation & Azimuth Residuals

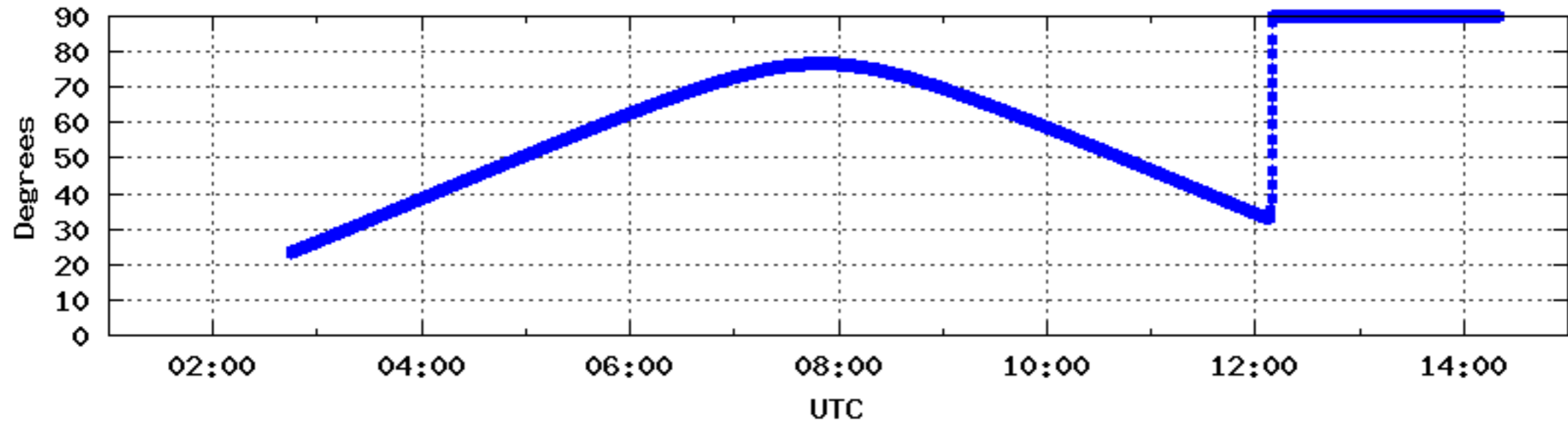


Elevation Residual    ■    Azimuth Residual    ■

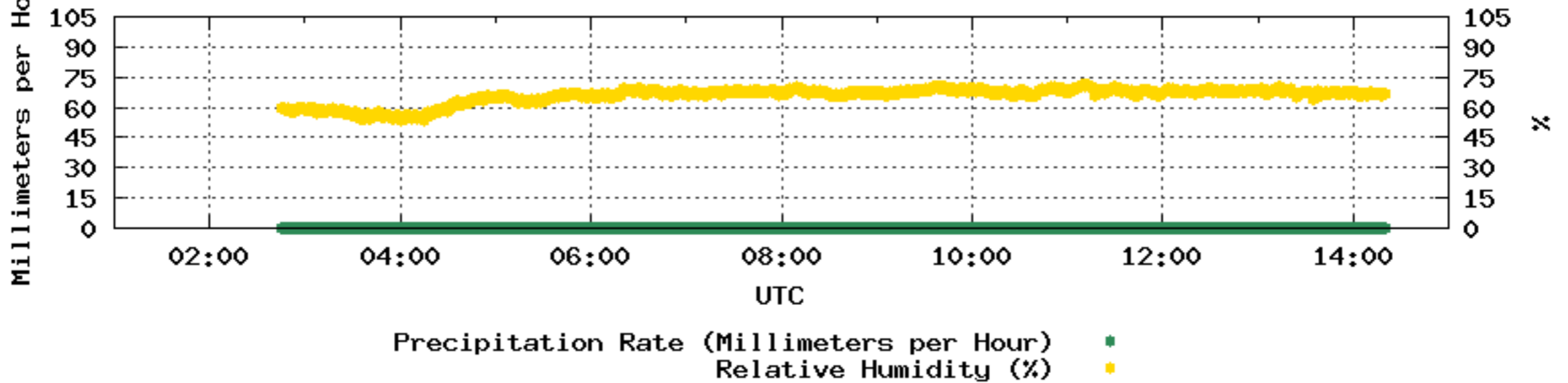
2017/258 DSS-35 System Noise Temperature



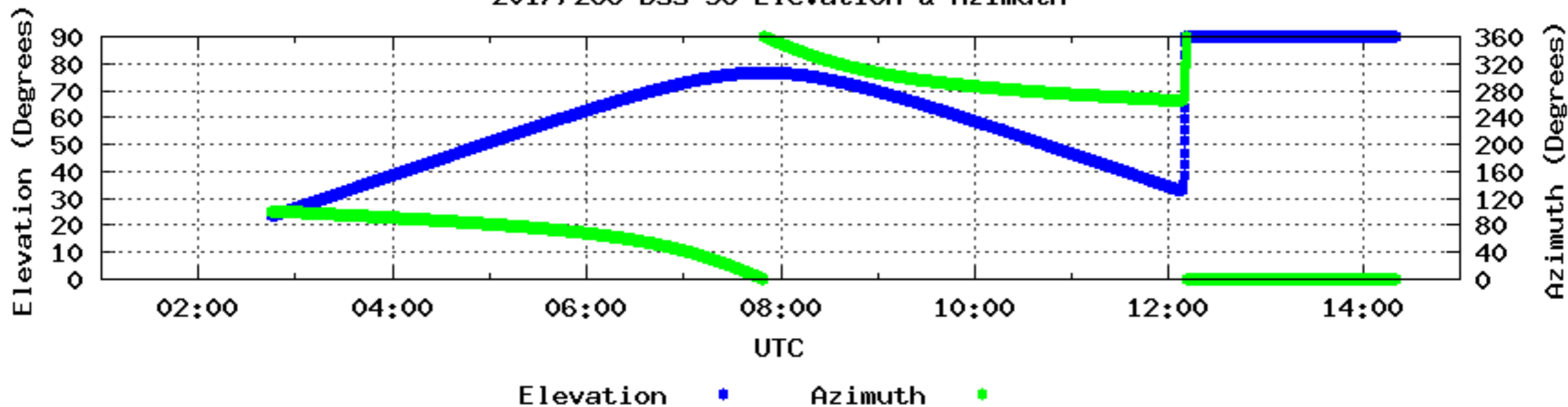
2017/258 DSS-35 Elevation Angle



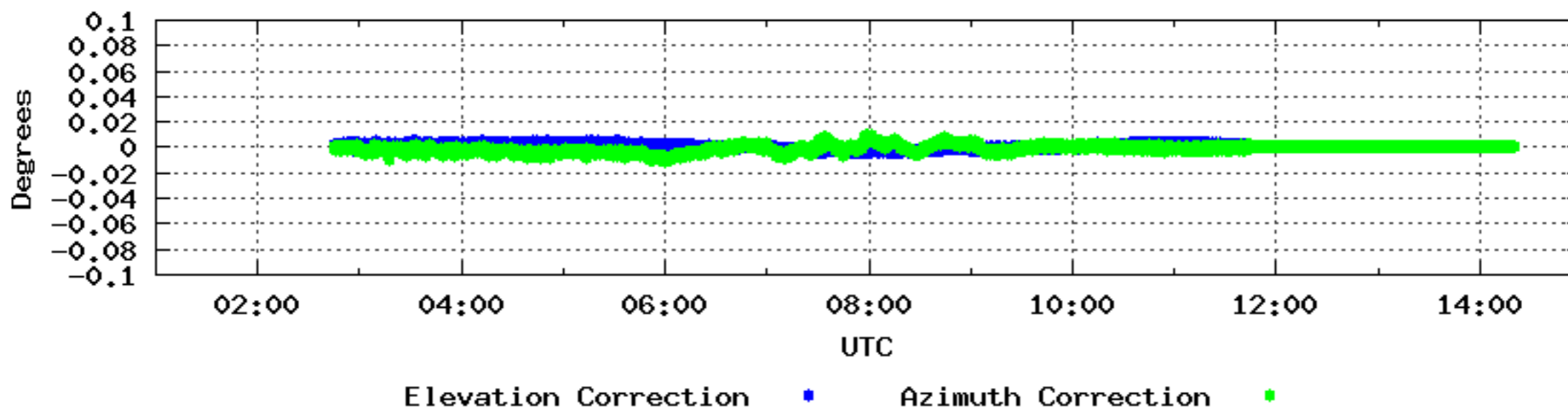
2017/258 DSS-35 Precipitation Rate and Relative Humidity



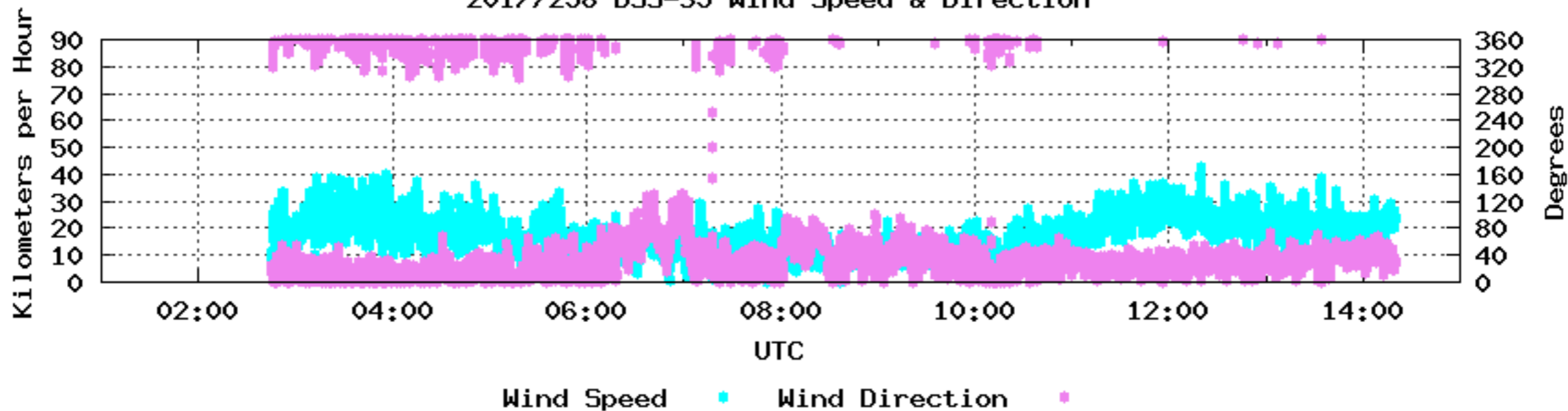
2017/258 DSS-35 Elevation & Azimuth



2017/258 DSS-35 Monopulse Elevation & Azimuth Corrections



2017/258 DSS-35 Wind Speed & Direction





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. Ka-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. 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)

06. 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)

07. 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)

08. 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)

09. Azimuth & Elevation

Elevation Angle (M-0304)

Azimuth Angle (M-0305)

10. 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)

11. Wind Speed and Direction

Top:

Wind Speed (M-0388)

Bottom:

Wind Direction (M-0391)

12. Conscan Drive Status

Conscan Drive Status (M-0308)

13. Azimuth & Elevation Monopulse Corrections

Elevation Corrections (M-0815)

Azimuth Corrections (M-0814)

14. Azimuth & Elevation Residuals

Elevation Residuals (M-0307)

Azimuth Residuals (M-0306)

15. System Noise Temperature, Elevation, Precipitation Rate, and  
Relative Humidity

Top:

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)

Middle:

Elevation Angle (M-0304)

Bottom:

Precipitation Rate (M-0406)

Relative Humidity (M-0409)

16. Elevation & Azimuth, Elevation & Azimuth Corrections, and Wind  
Speed and Direction

Top:

Elevation Angle (M-0304)

Azimuth Angle (M-0305)

Middle:

Elevation Corrections (M-0815)

Azimuth Corrections (M-0814)

Bottom:

Wind Speed (M-0388)

Wind Direction (M-0391)