

Spacecraft: Cassini

DSS: 25

Monitor File: S14HYGS2005\_269\_1031\_25\_MON.ecsv

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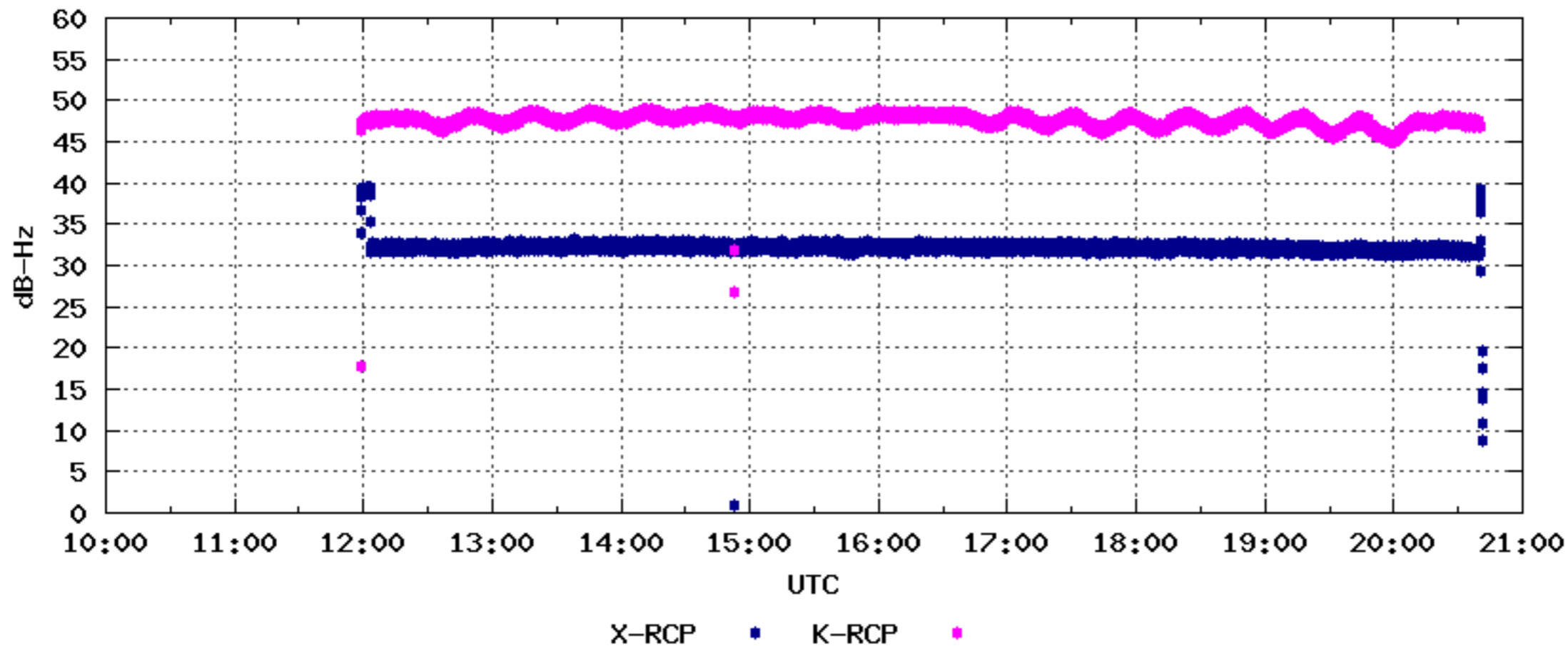
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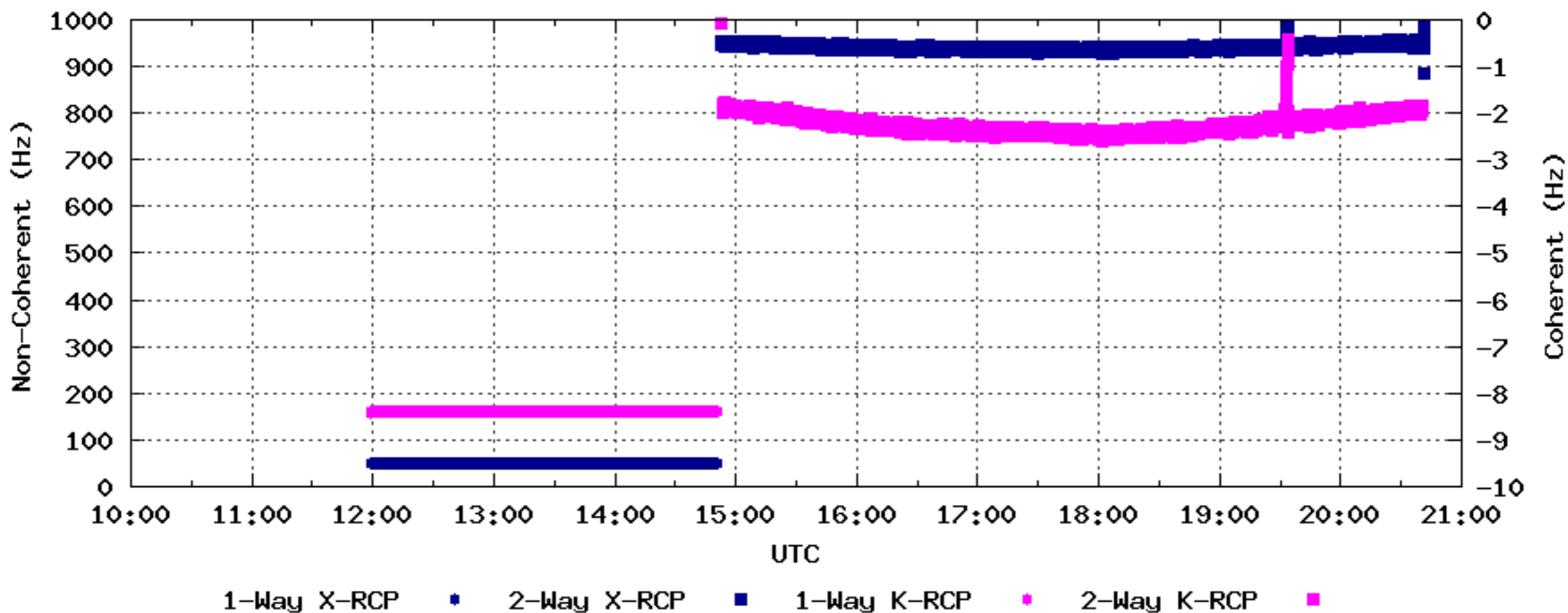
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02. Carrier Power to Noise Spectral Density Ratio ( $P_c/N_o$ ) and Residual Frequency
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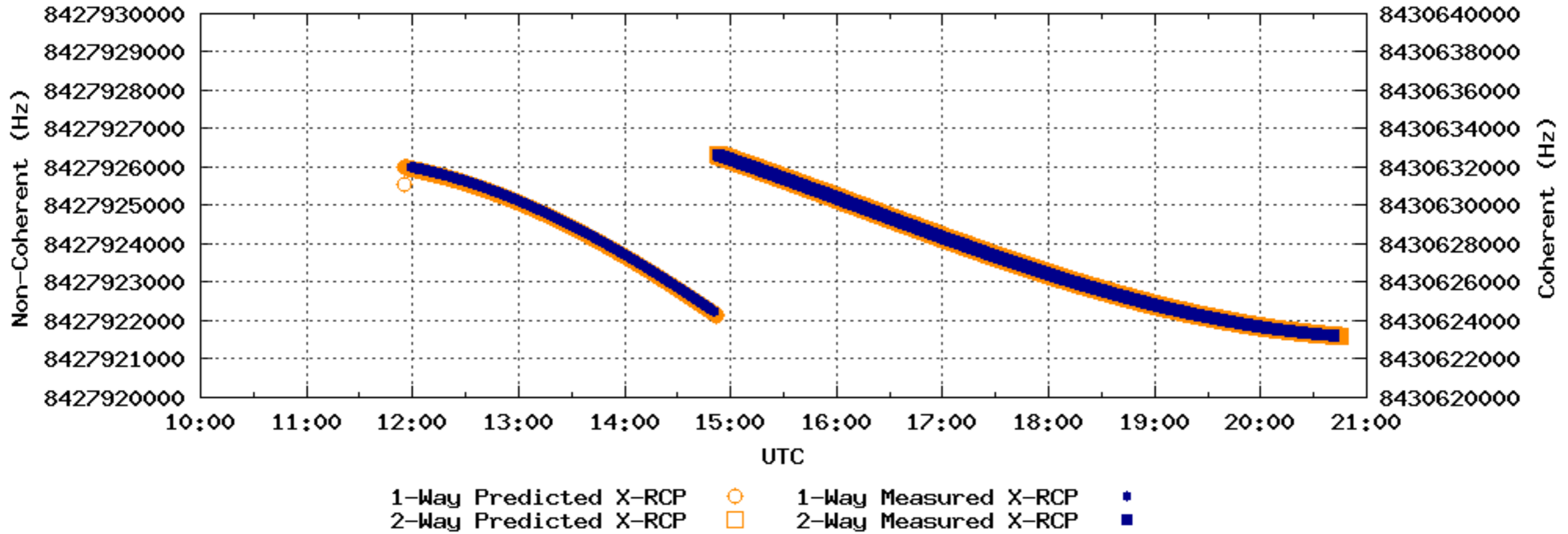
2005/269 D55-25 Carrier Power to Noise Spectral Density Ratio (Pc/No)



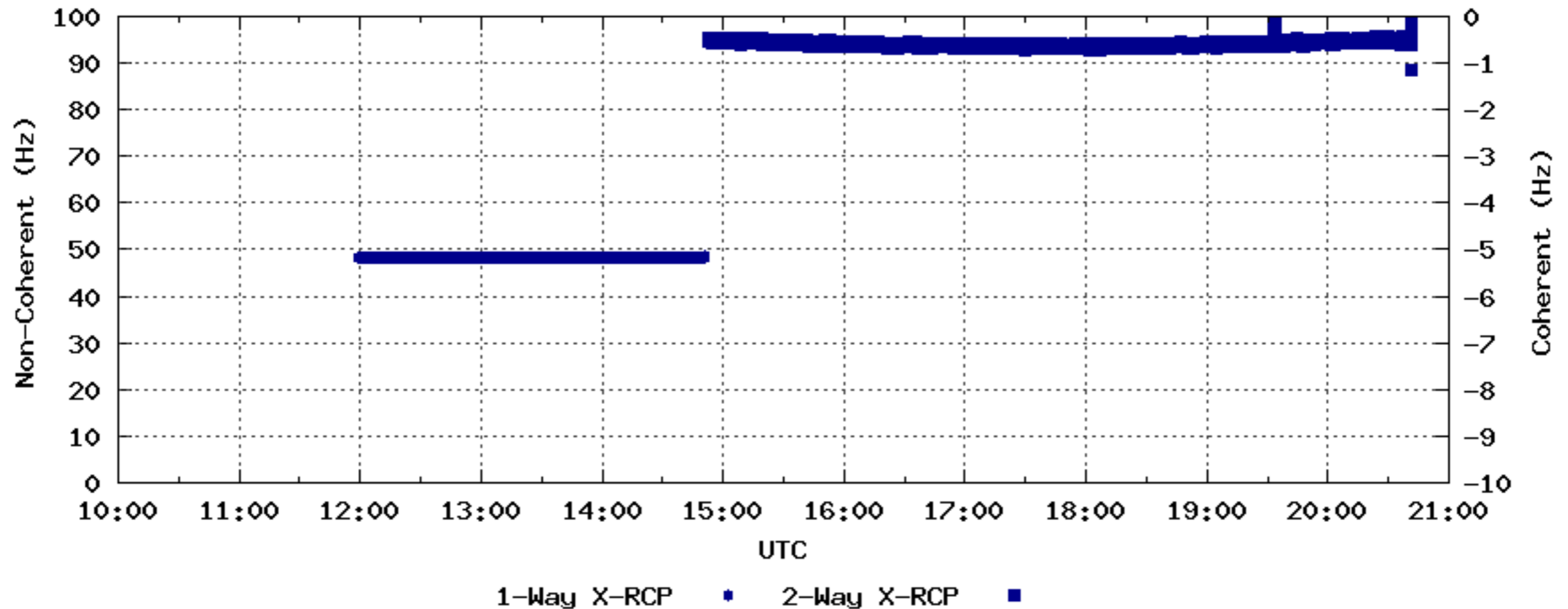
2005/269 D55-25 Carrier Frequency Residual (Measured - Predicted)



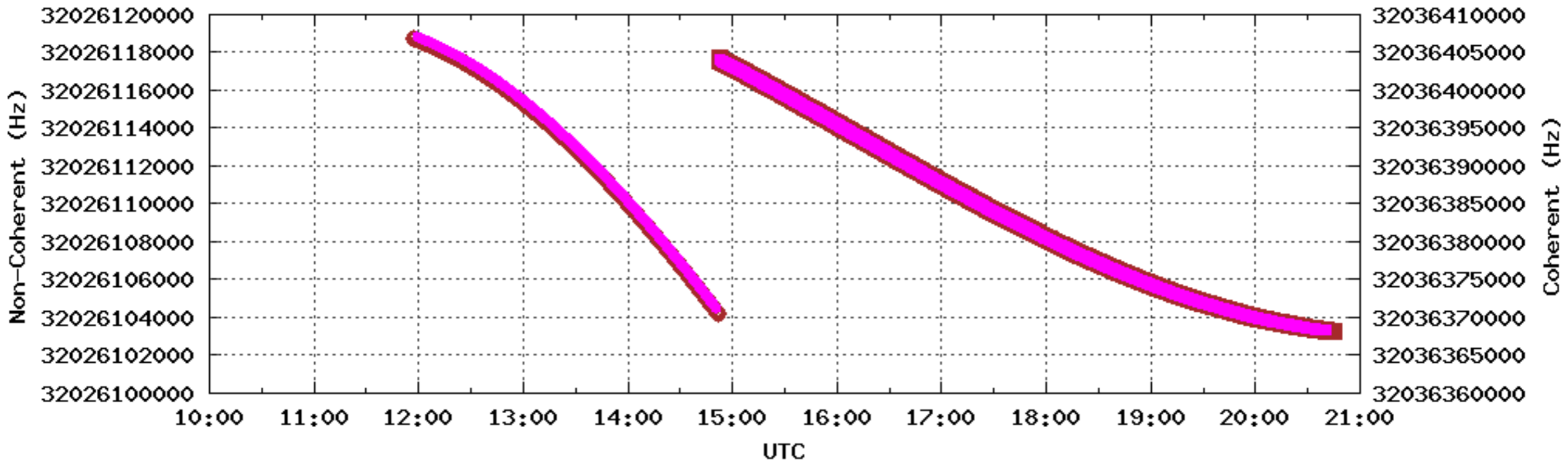
2005/269 DSS-25 X-Band Measured and Predicted Carrier Frequency



2005/269 DSS-25 X-Band Residual Frequency (Measured - Predicted)

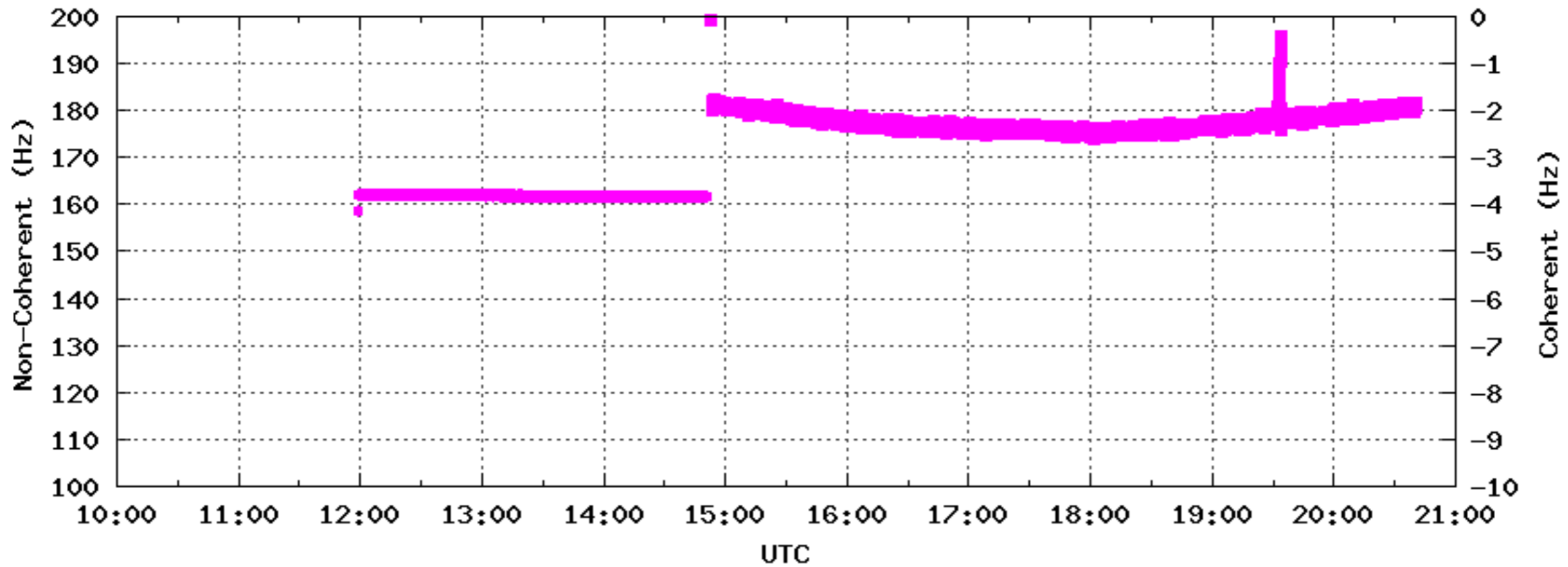


2005/269 DSS-25 K-Band Measured and Predicted Carrier Frequency



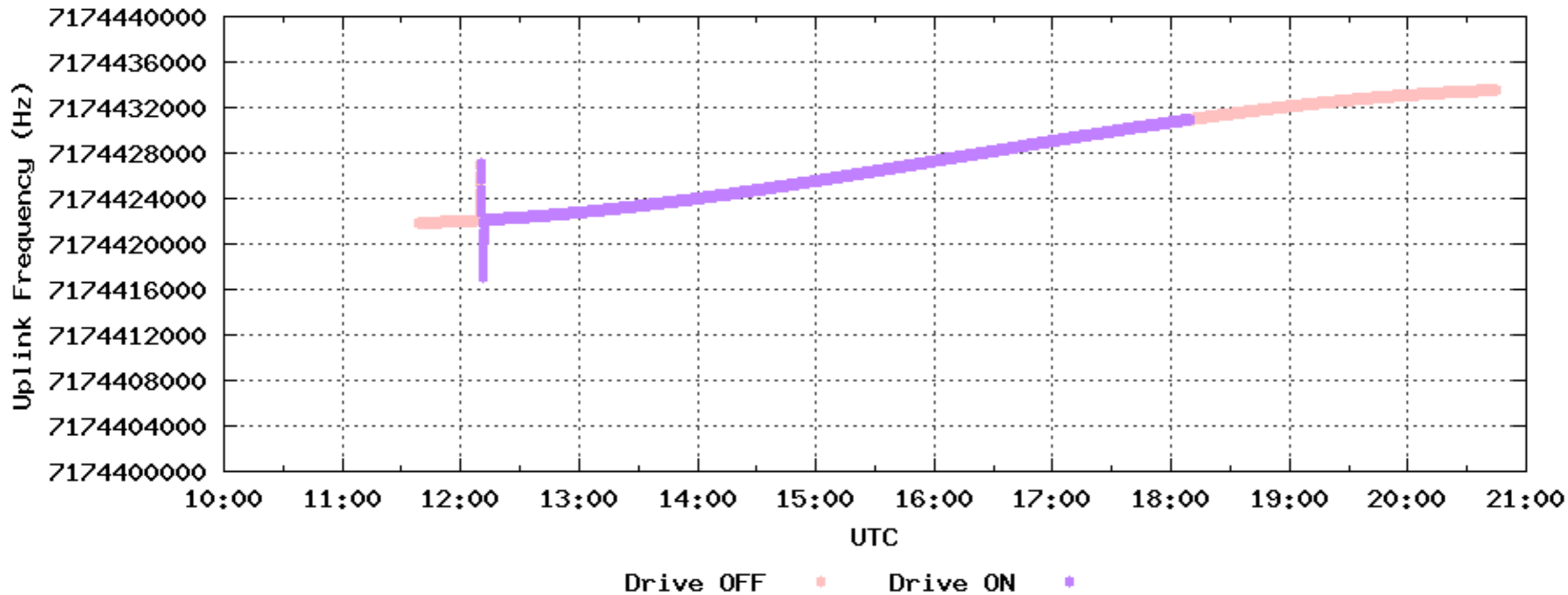
1-Way Predicted K-RCP ○ 1-Way Measured K-RCP ●  
 2-Way Predicted K-RCP □ 2-Way Measured K-RCP ■

2005/269 DSS-25 K-Band Residual Frequency (Measured - Predicted)

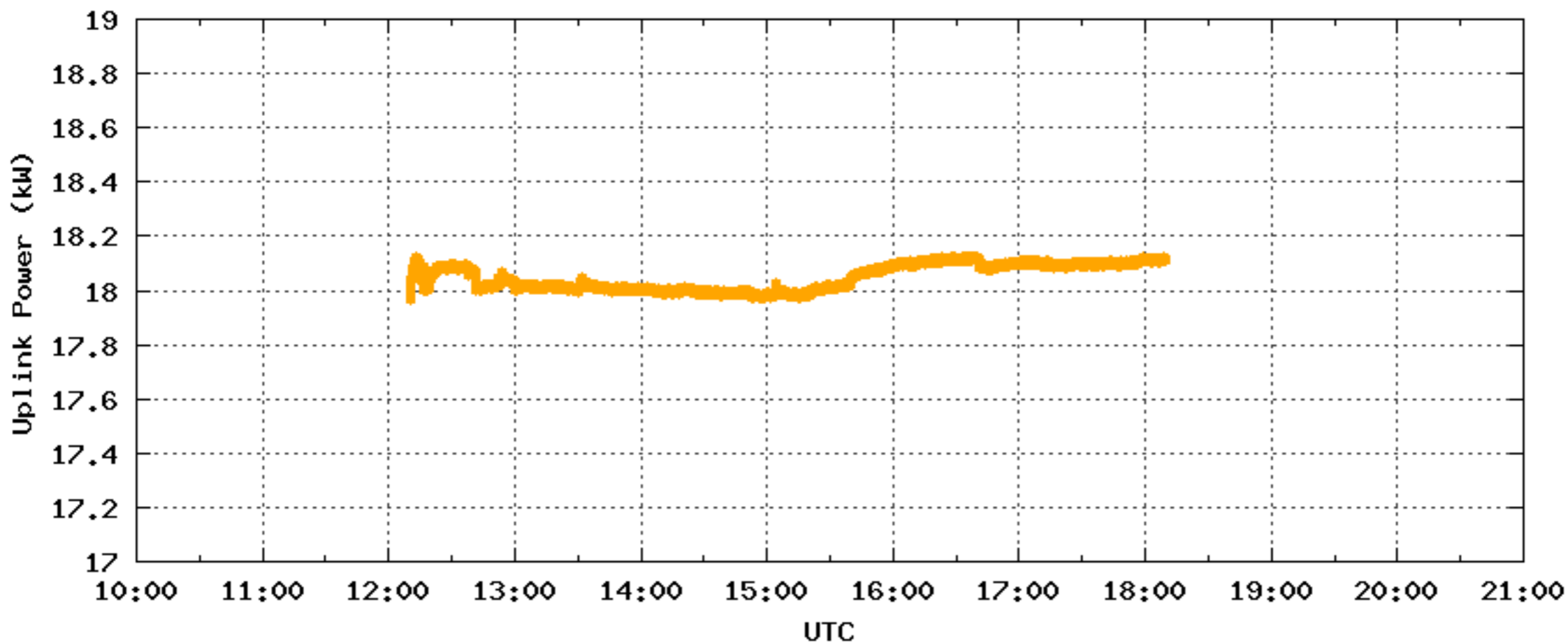


1-Way K-RCP ● 2-Way K-RCP ■

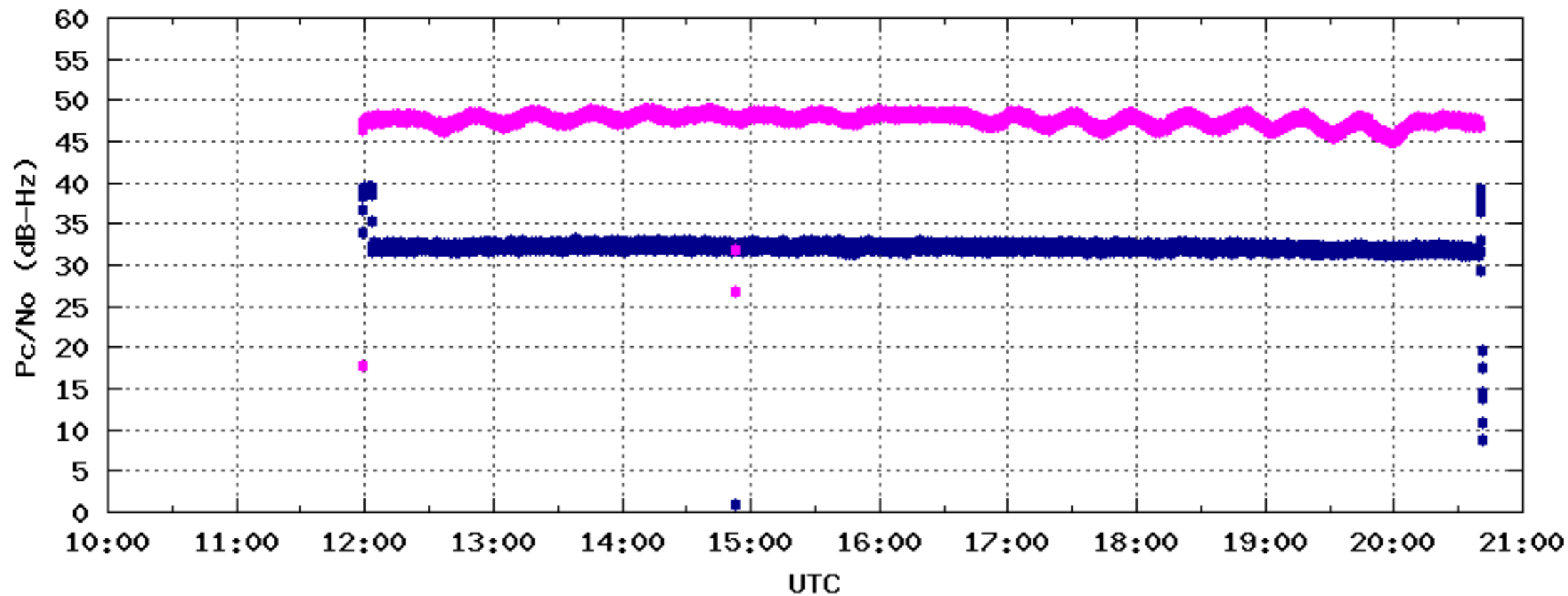
2005/269 DSS-25 Uplink Frequency



2005/269 DSS-25 Uplink Power (with TXR ON and when > 1)

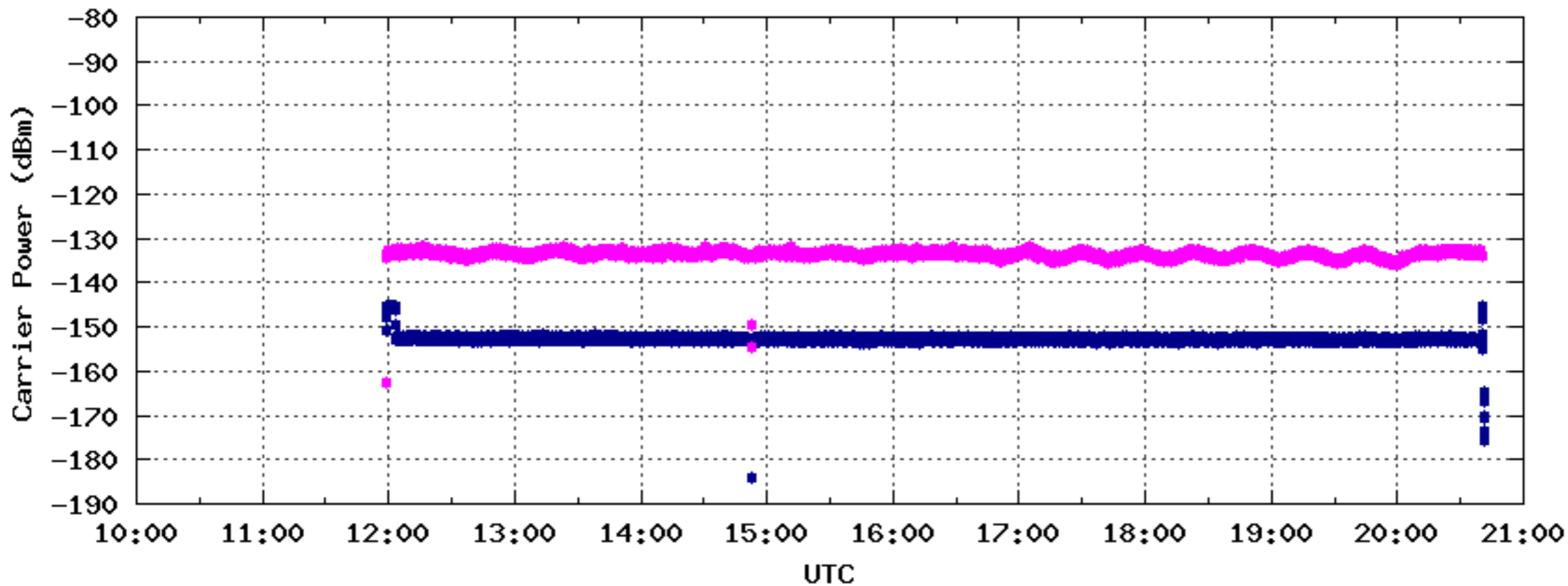


2005/269 D55-25 Carrier Power to Noise Spectral Density Ratio (Pc/No)



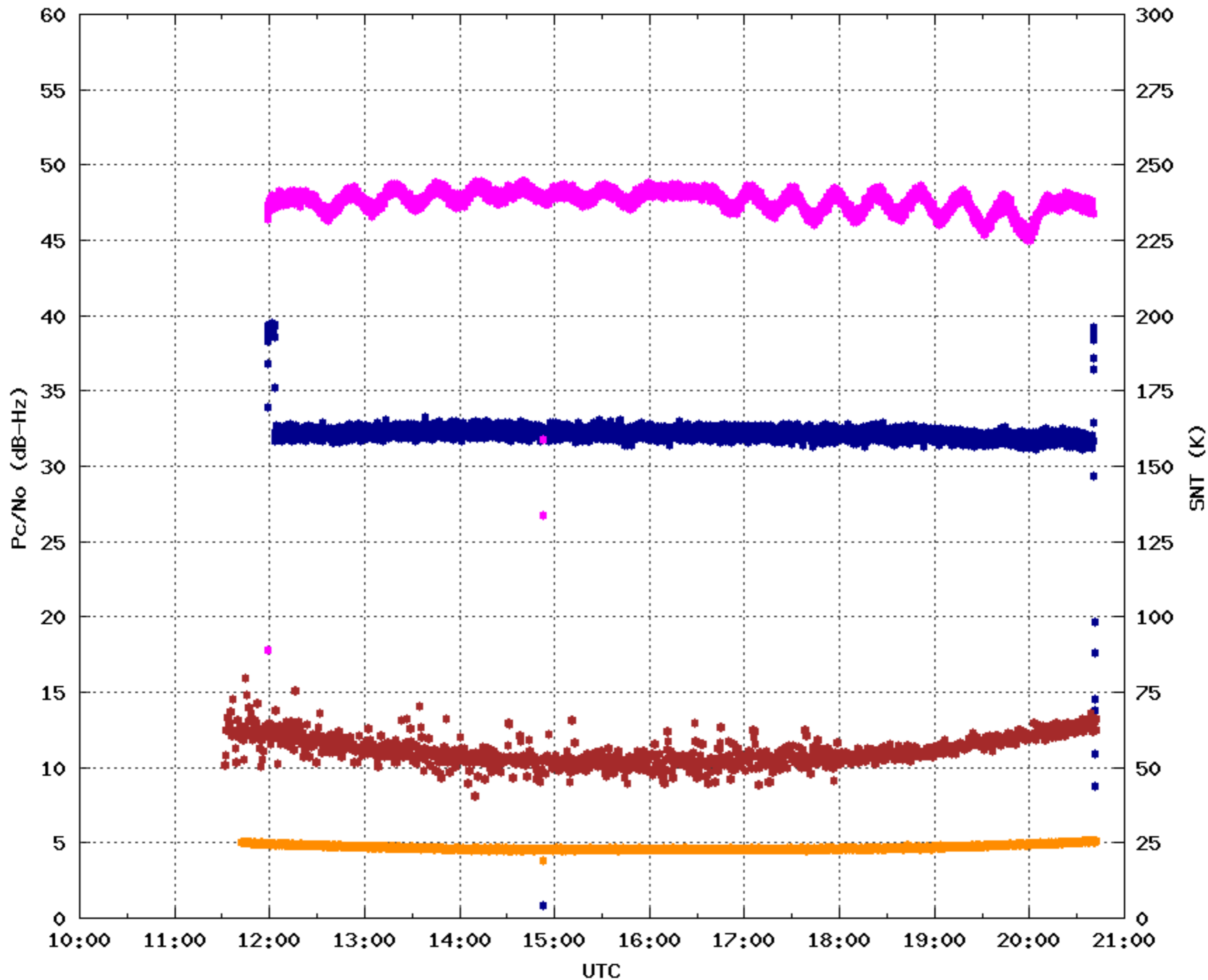
X-RCP    K-RCP

2005/269 D55-25 Carrier Power

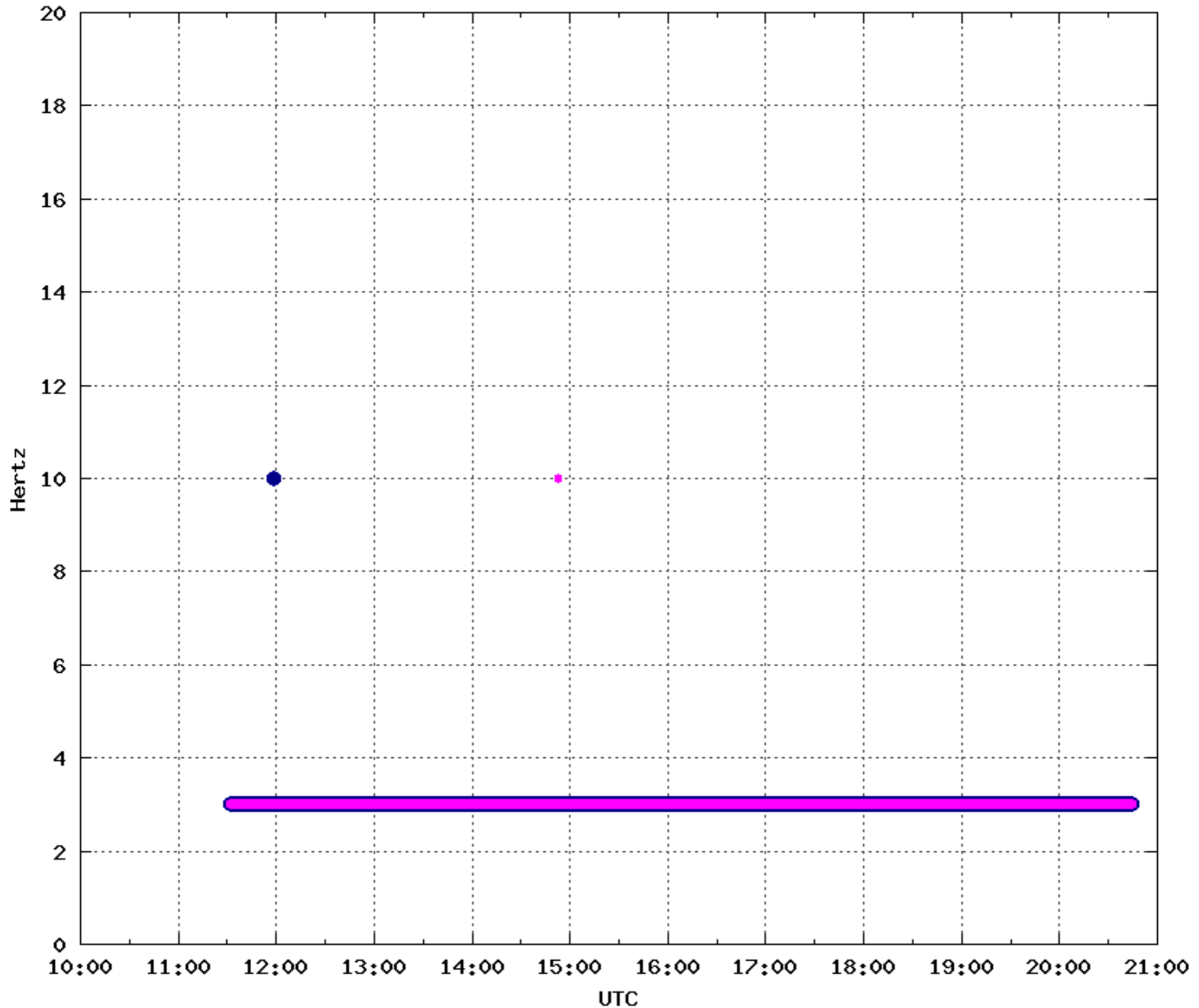


X-RCP    K-RCP

2005/269 D55-25 Carrier Power to Noise Spectral Density Ratio and System Noise Temperature



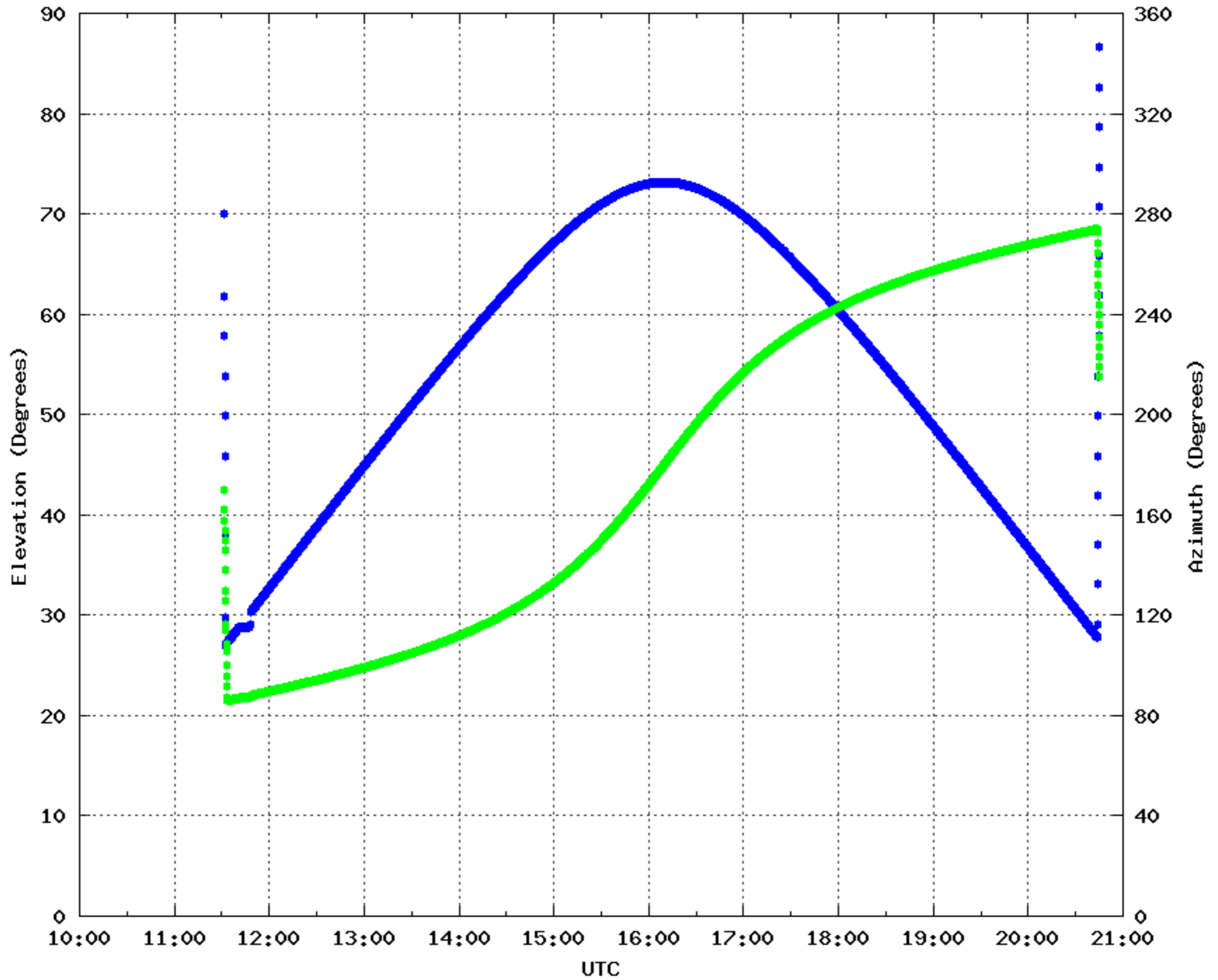
# 2005/269 DSS-25 Carrier Loop Tracking Bandwidth



X-RCP ● K-RCP ●

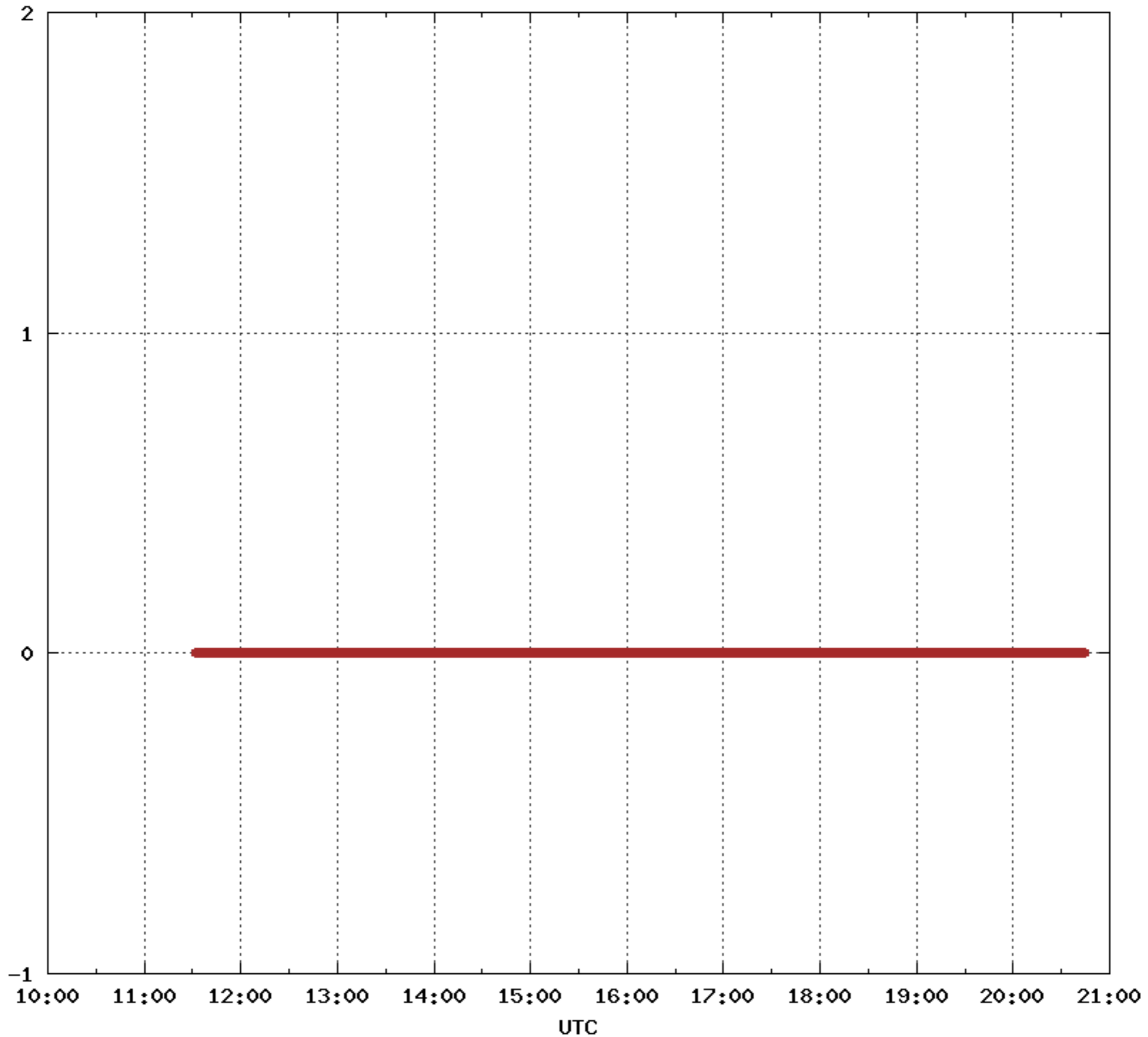


2005/269 DSS-25 Elevation & Azimuth

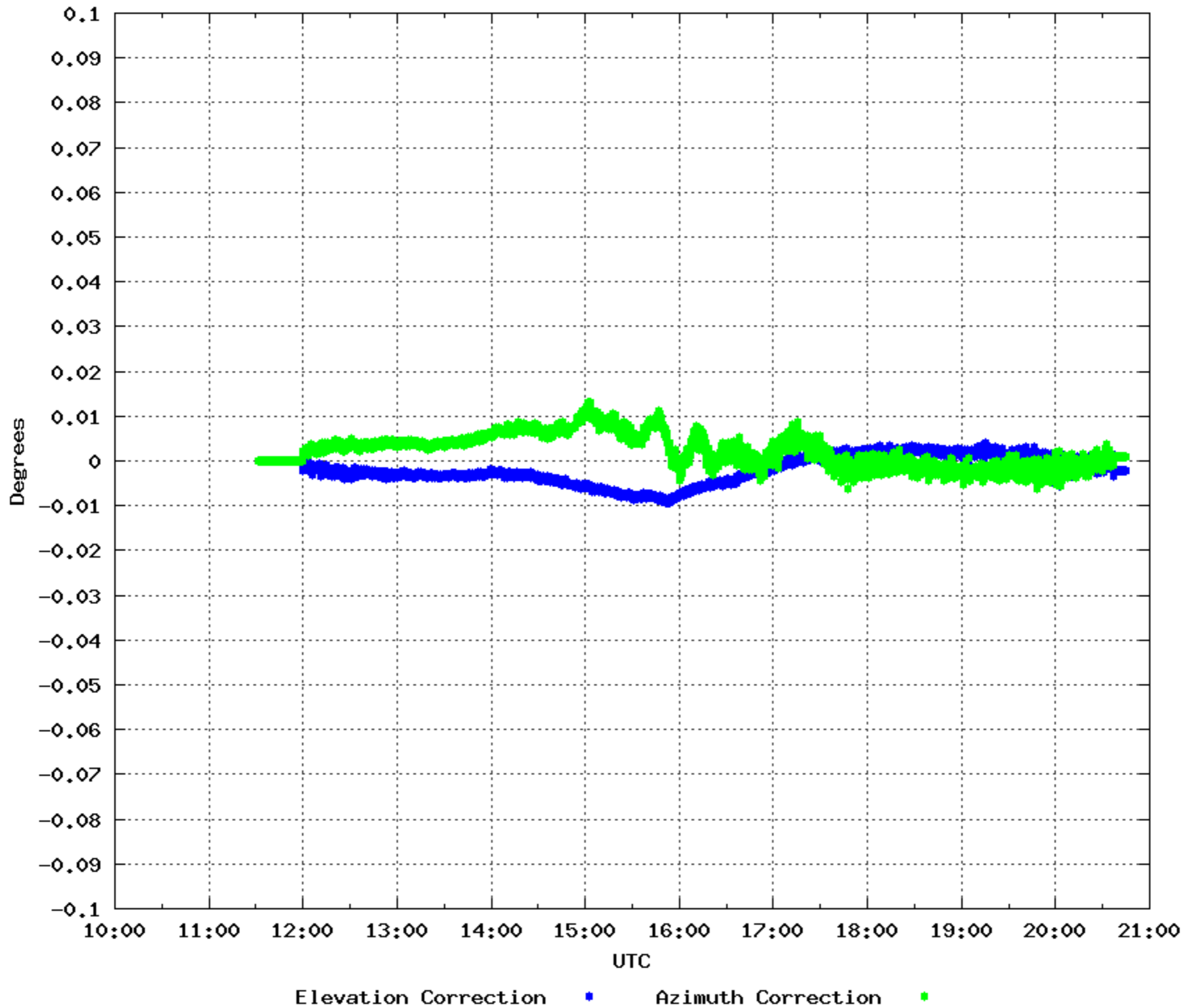


Elevation ■ Azimuth ■

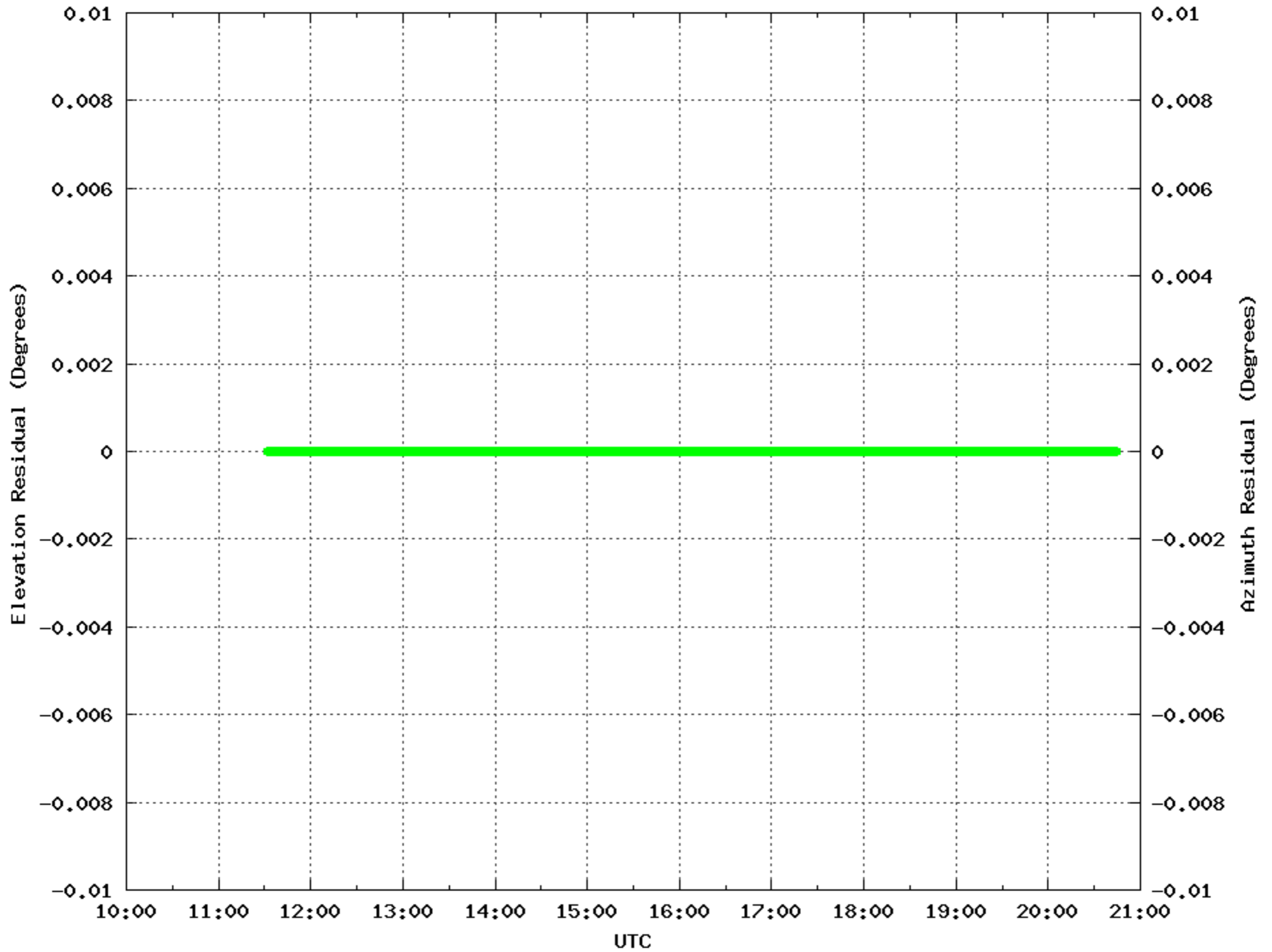
2005/269 D55-25 Conscan Drive Status (ON = 1; OFF = 0)



# 2005/269 D55-25 Monopulse Elevation & Azimuth Corrections



# 2005/269 D55-25 Elevation & Azimuth Residuals



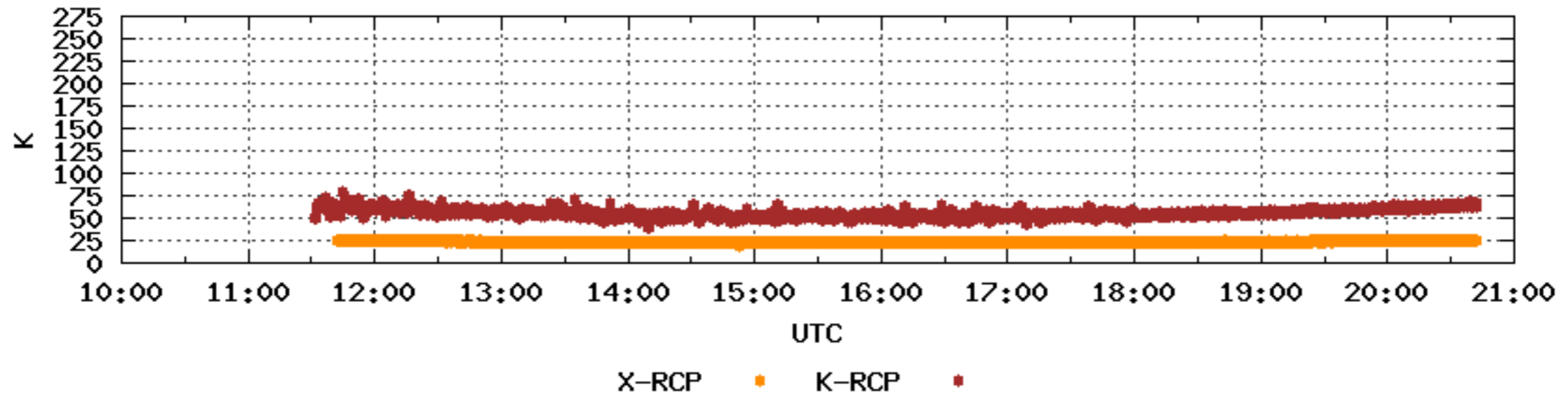
Elevation Residual



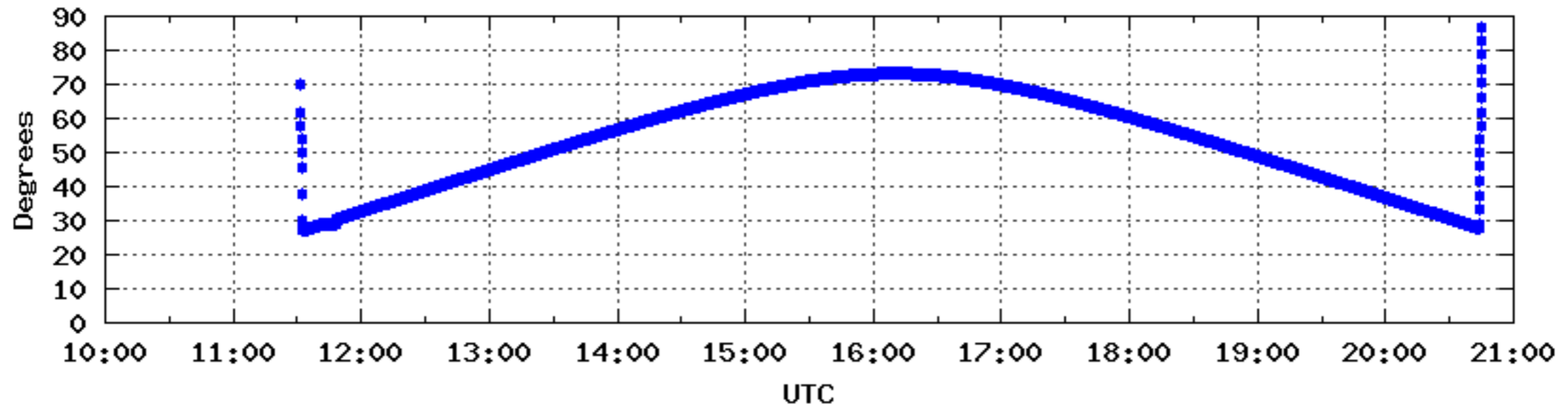
Azimuth Residual



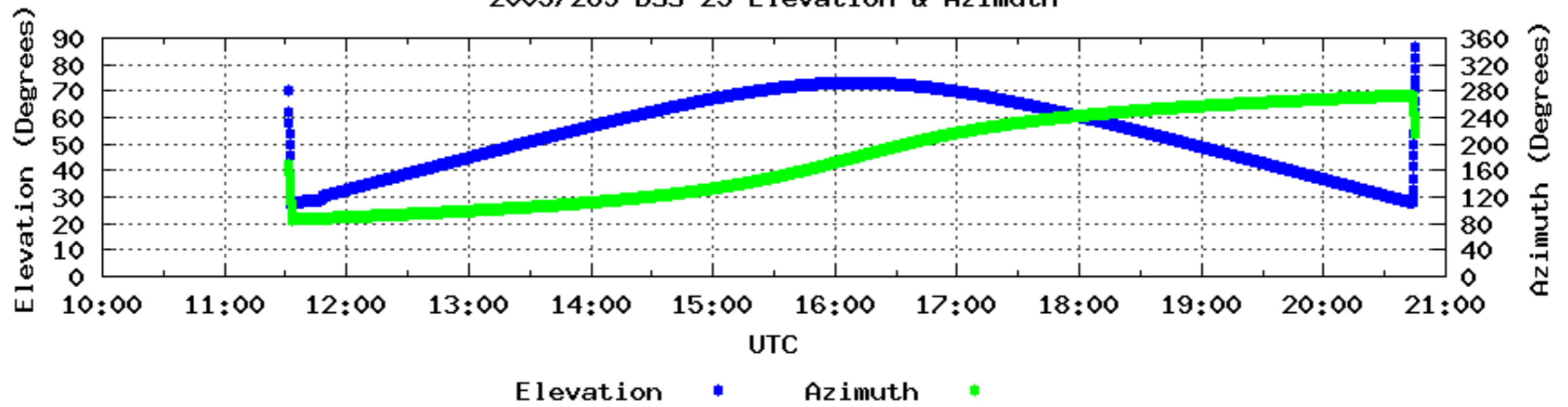
2005/269 DSS-25 System Noise Temperature



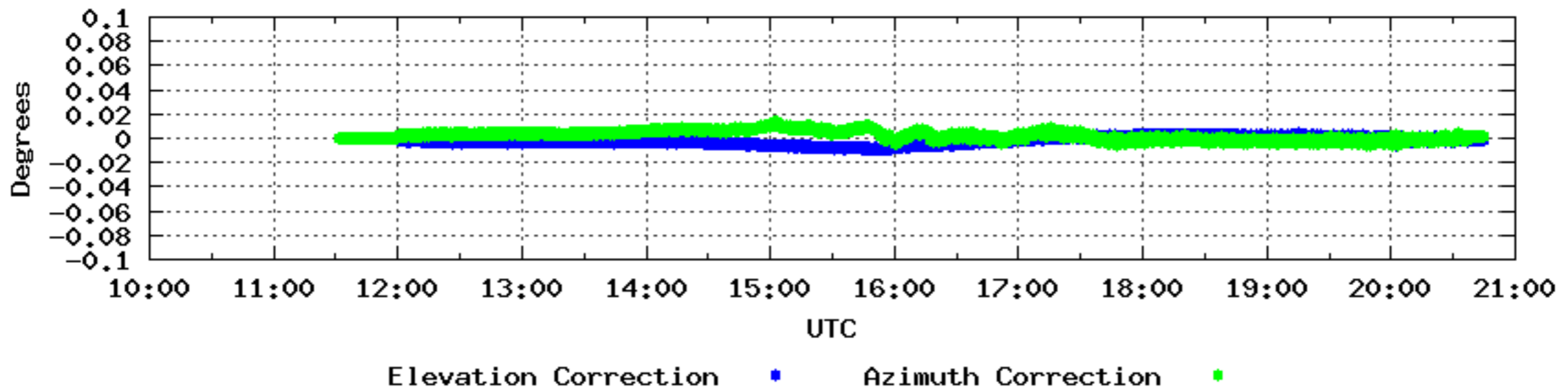
2005/269 DSS-25 Elevation Angle



2005/269 DSS-25 Elevation & Azimuth



2005/269 DSS-25 Monopulse Elevation & Azimuth Corrections



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. 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. Azimuth & Elevation

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

#### 10. Conscan Drive Status

Conscan Drive Status (M-0308)

#### 11. Azimuth & Elevation Monopulse Corrections



Elevation Corrections (M-0815)  
Azimuth Corrections (M-0814)

## 12. Azimuth & Elevation Residuals

Elevation Residuals (M-0307)  
Azimuth Residuals (M-0306)

## 13. 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)

## 14. 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)