

RFI Test on the FAST Site

(as of March 2024)

1. Test Time:

2024-03-31- 01:00-04:59 & 12:00-16:59

2. Test Spot:

At the bottom of the 7H feed support tower



Fig.1 RFI test spot at the bottom of the 7H feed support tower.

3. Test Operator:

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4. Test Instruments:

Log-periodic antenna (R&S HL033, 80MHz-2GHz, 6.5dBi) ;

Low noise amplifier (87405B, Gain: 24dB, Noise Factor:5dB) ;

Spectrum analyzer (Agilent N9000A, DNAL: -147dBm/1Hz RBW)

5. Test Results:

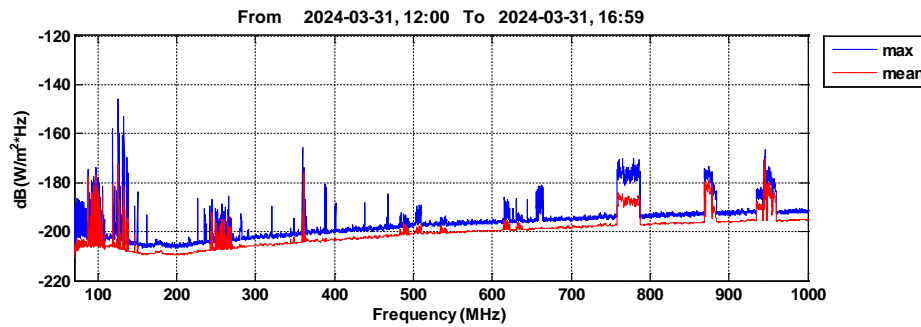


Fig.2 RFI scan of 70-1000MHz in daytime.

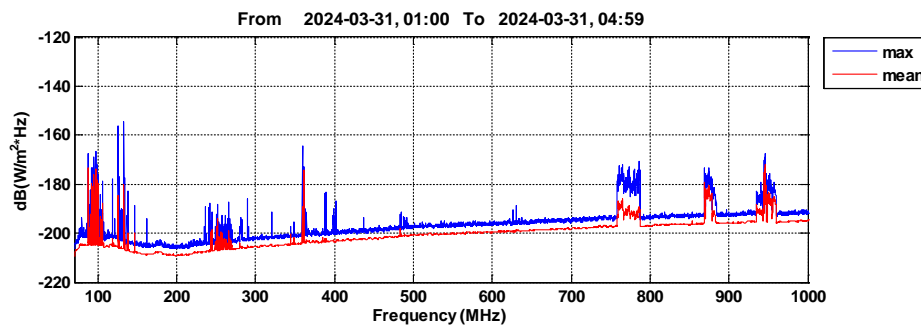


Fig.3 RFI scan of 70-1000MHz in night time.

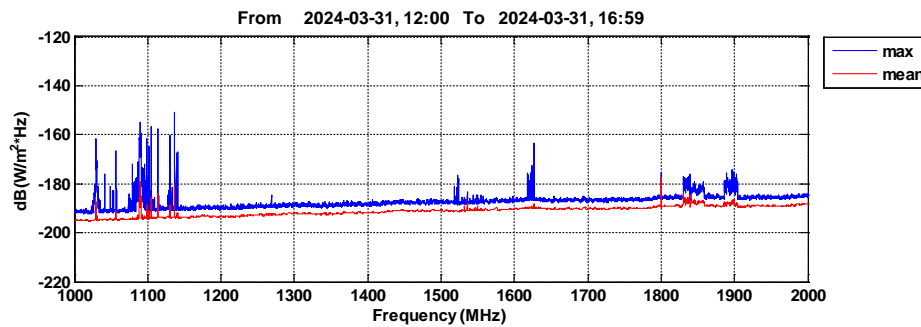


Fig.4 RFI scan of 1000-2000MHz in daytime.

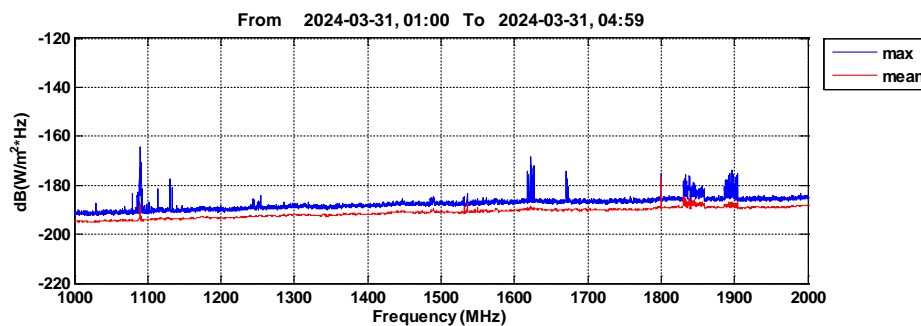


Fig.5 RFI scan of 1000-2000MHz in nighttime.

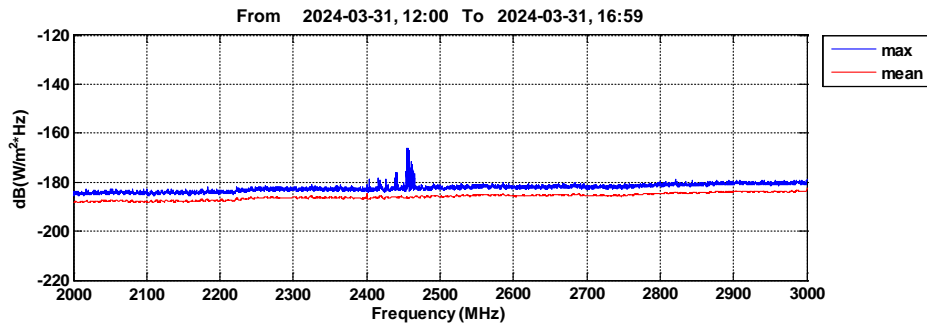


Fig. 6 RFI scan of 2000-3000MHz in daytime.

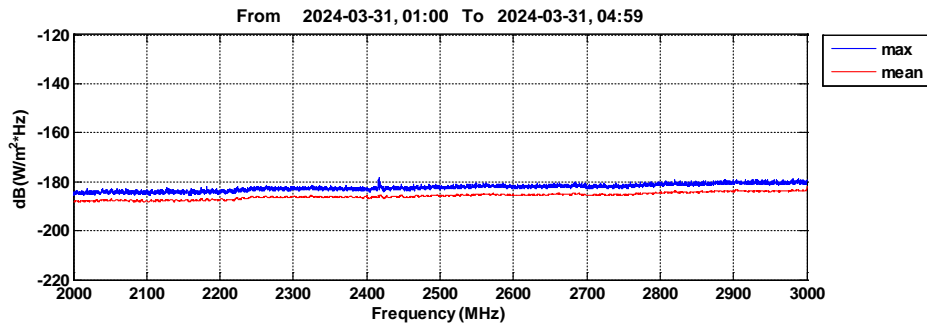


Fig. 7 RFI scan of 2000-3000MHz in nighttime.

Table: List of Known Sources of RFI

| | |
|------------------------------------|----------------------------------|
| Frequency/band (MHz) | business |
| 87-108 | FM radio |
| 117-137 | civil aviation |
| 245-270 | FLTSATCOM |
| 361-368 | Public security cluster intercom |
| 670.7-684.7、742.4-749.4 | Digital TV |
| 758-788、869-880、934-949、949-960 | FDD downlink |
| 1030-1140 | civil aviation |
| 1176、1207、1227、1268、1381、1561、2492 | Navigation satellite |
| 1467-1492 | ASIASTAR |
| 1525-1559 | INMARSAT global mobile services |
| 1616.06-1625.5 | IRIDIUM satellite phone |
| 1842-1859 | FDD downlink |
| 1887-1903 | TDD |