Rain fall detection
CS-10

26 Jan 2007

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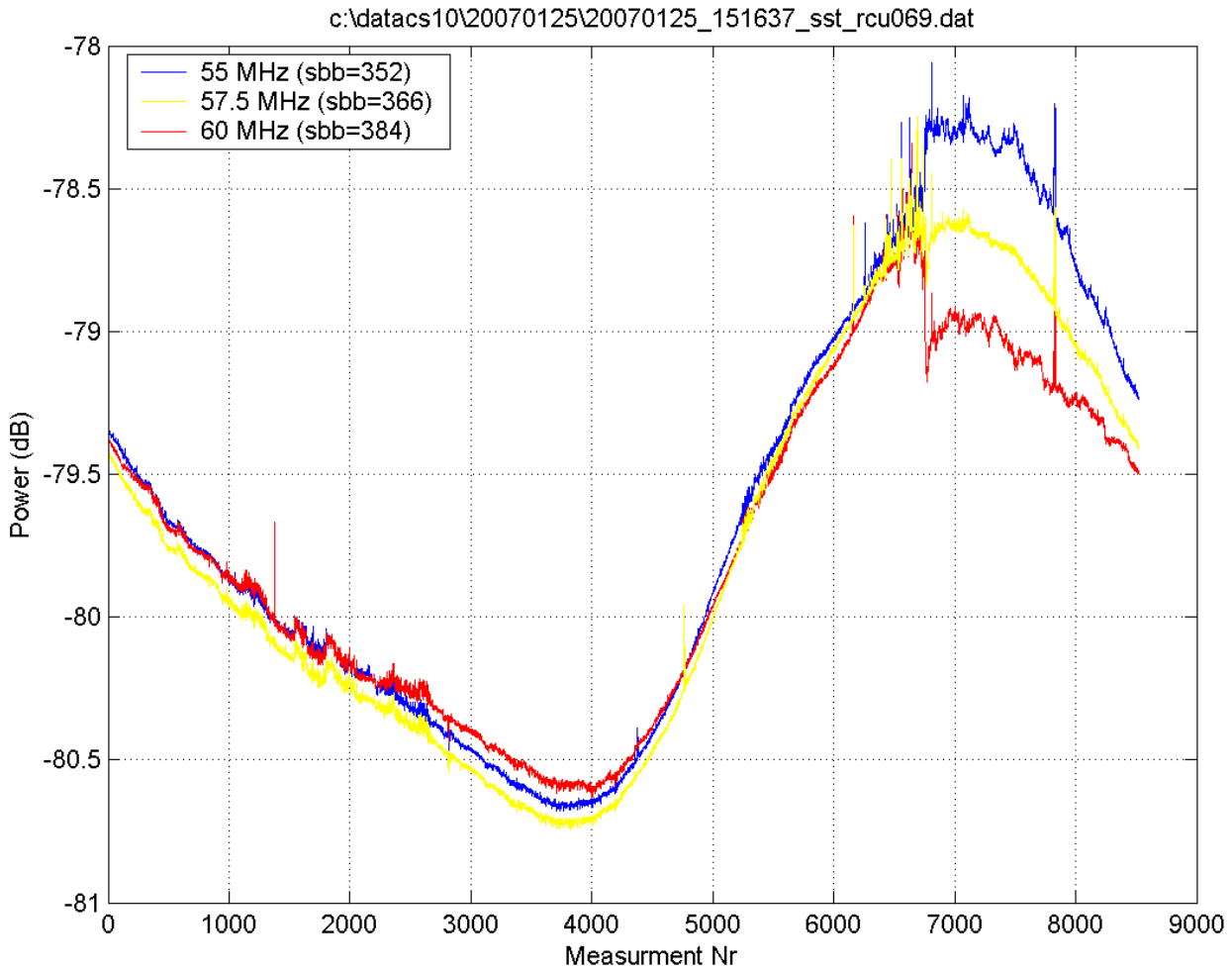
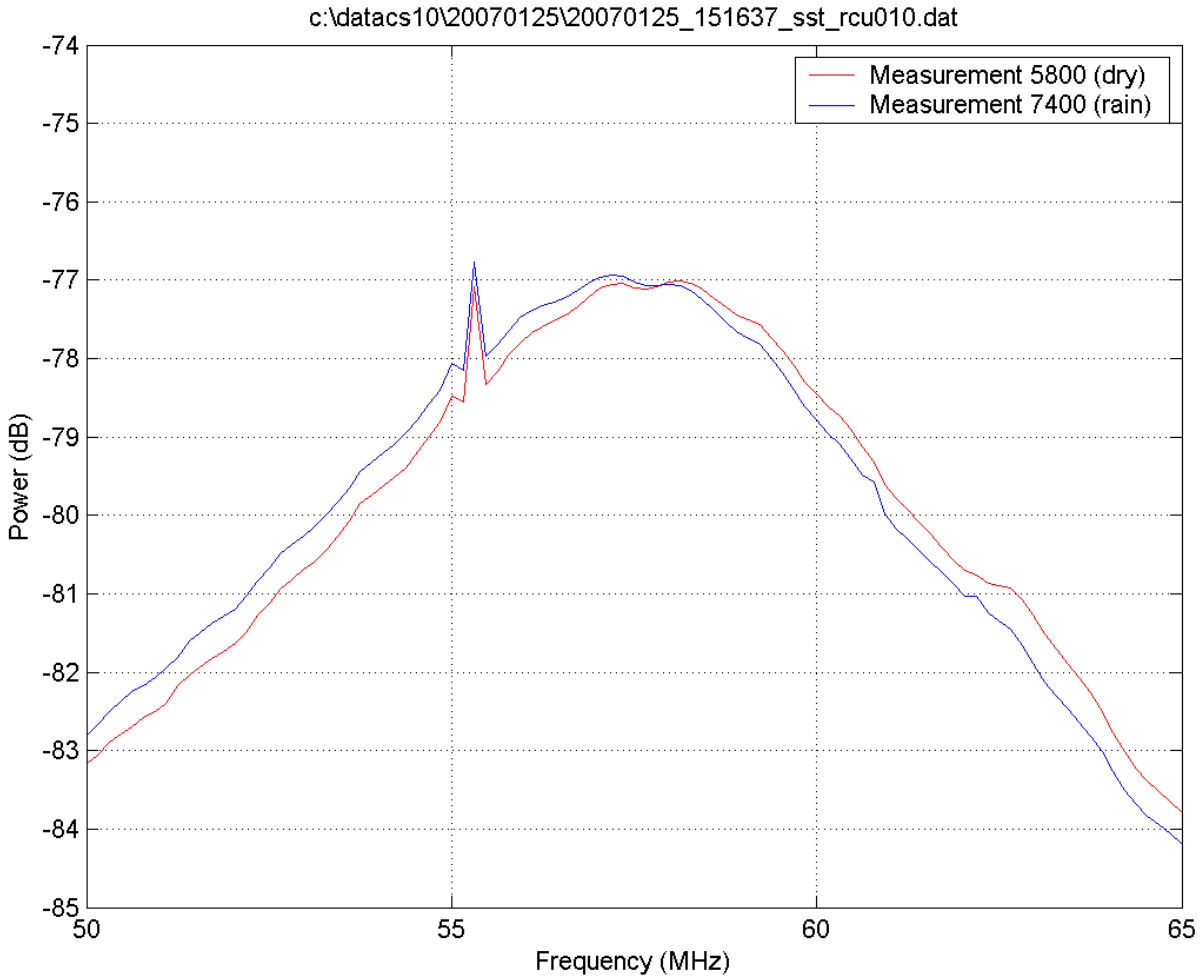
24 hours, rcu069, int=10s, LBA resonance shift

note: The gain @ 57.5 MHz is reduced 1.5 dB for this plot.

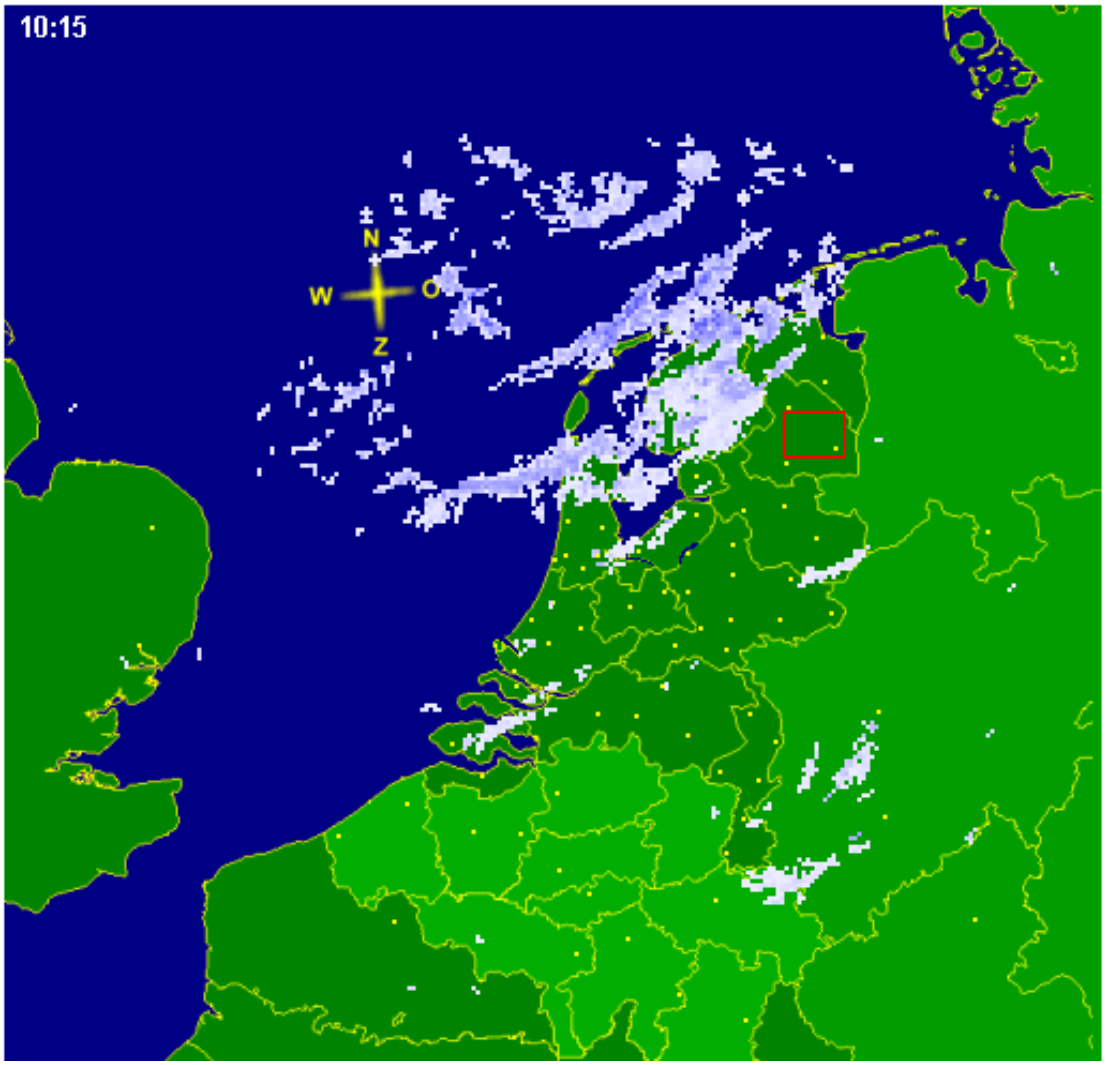


rcu010, LBA resonance shift

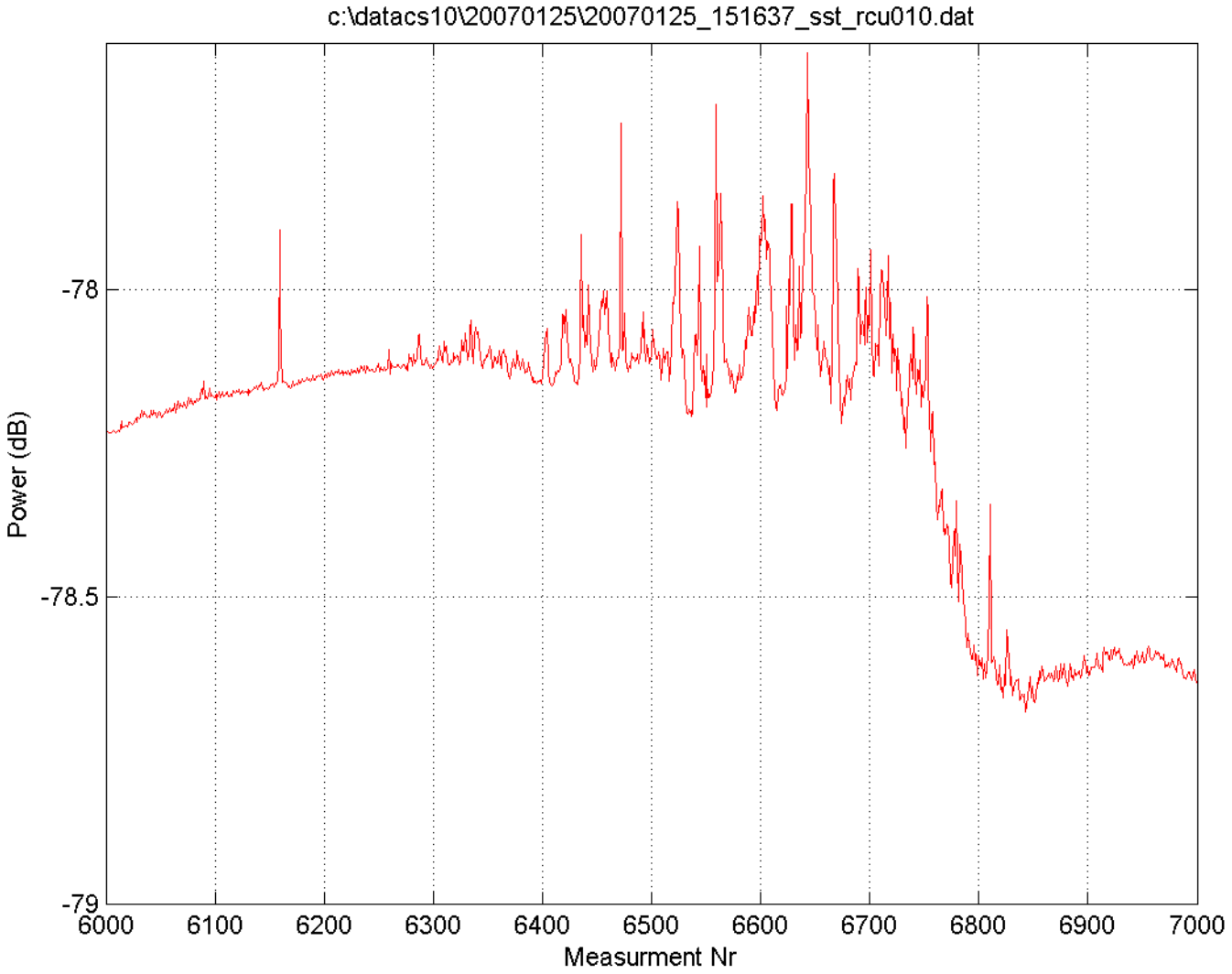
note: The resonance shifts **down** when it rains. The peak at 55.5 MHz doesn't change



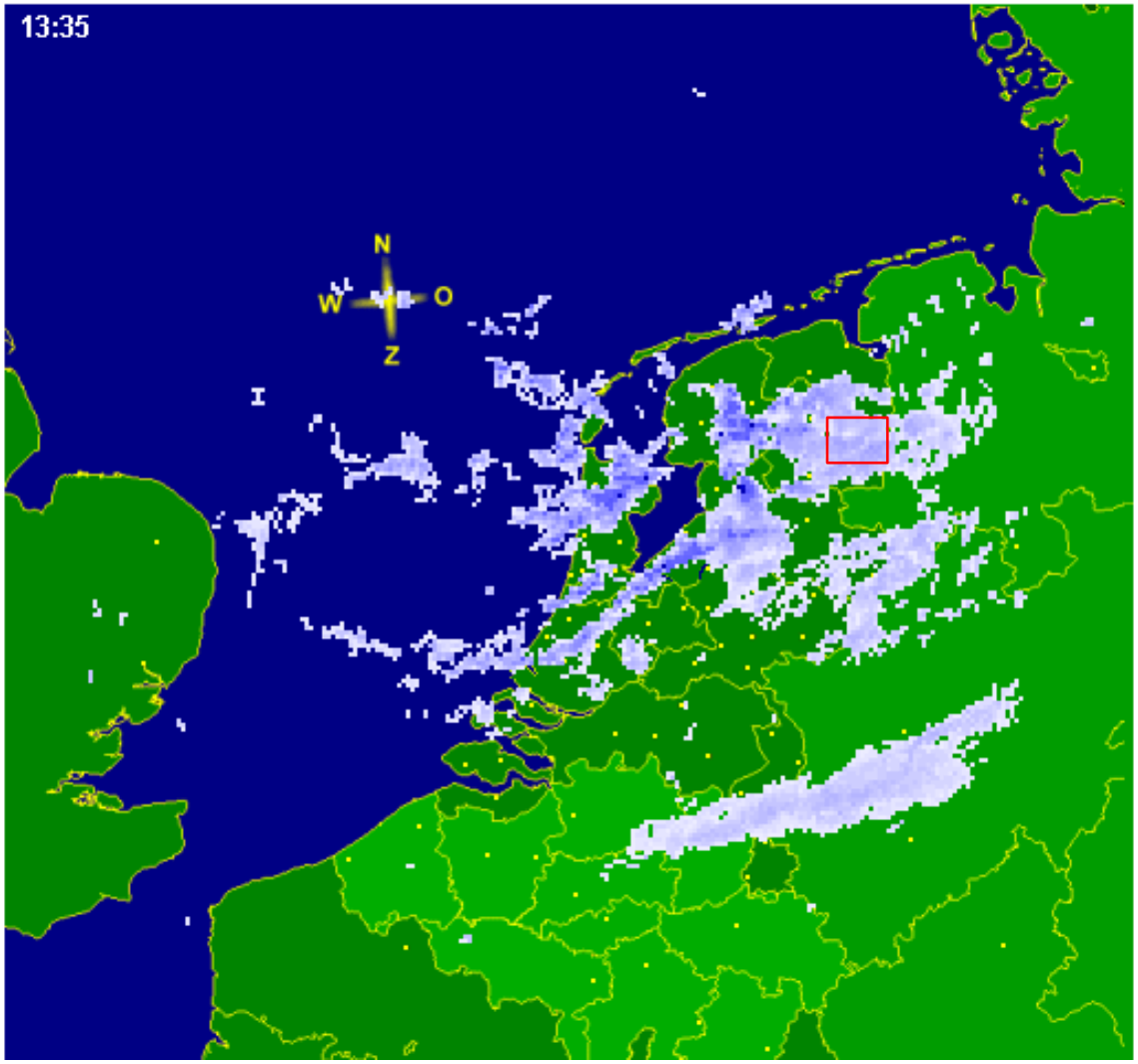
20070126, 9:15 UTC, meas. 6480



24 hours, rcu010, int=10s, F=60MHz (sbb=384)

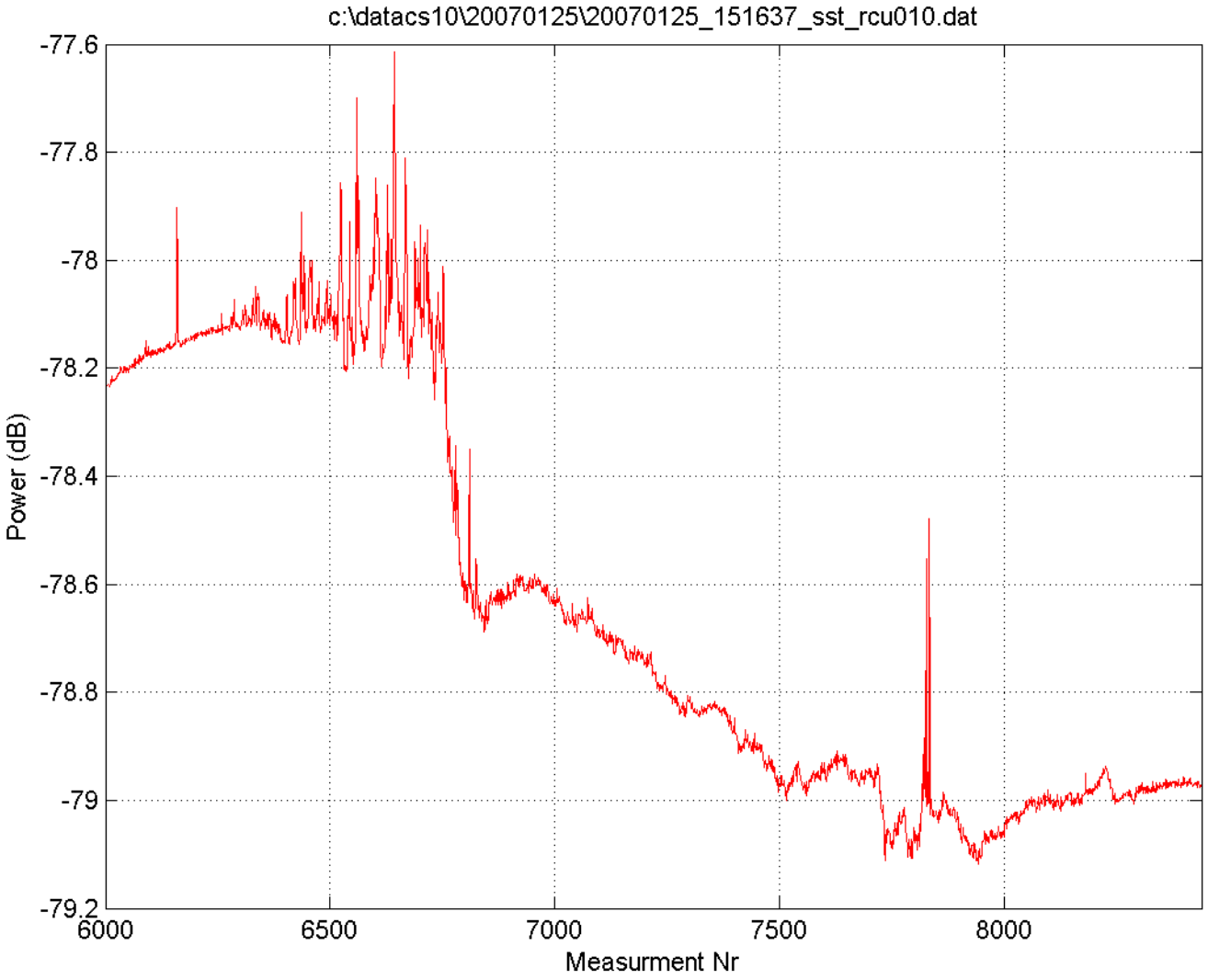


20070126, 12:35 UTC, meas. 7674

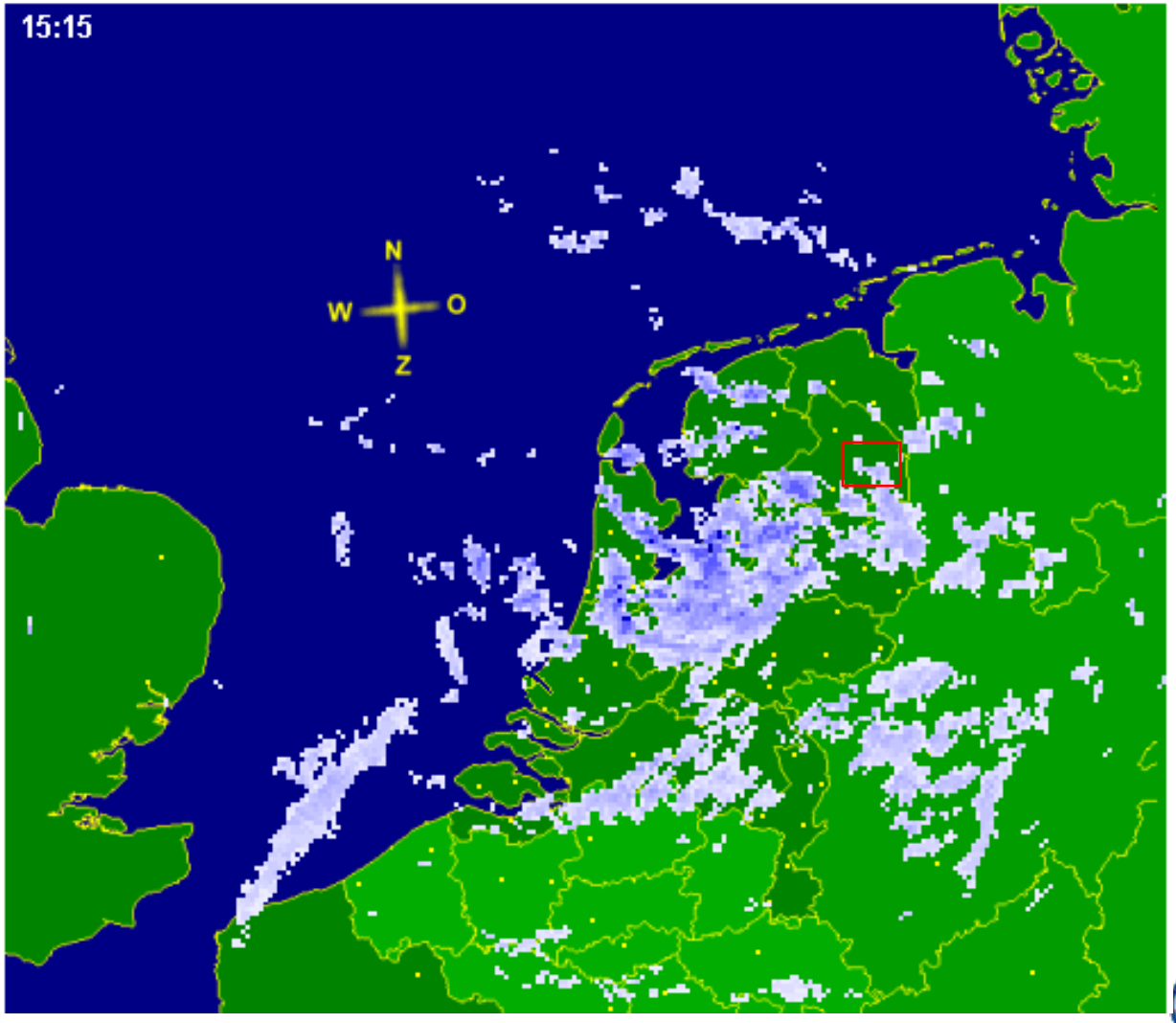


LOFAR

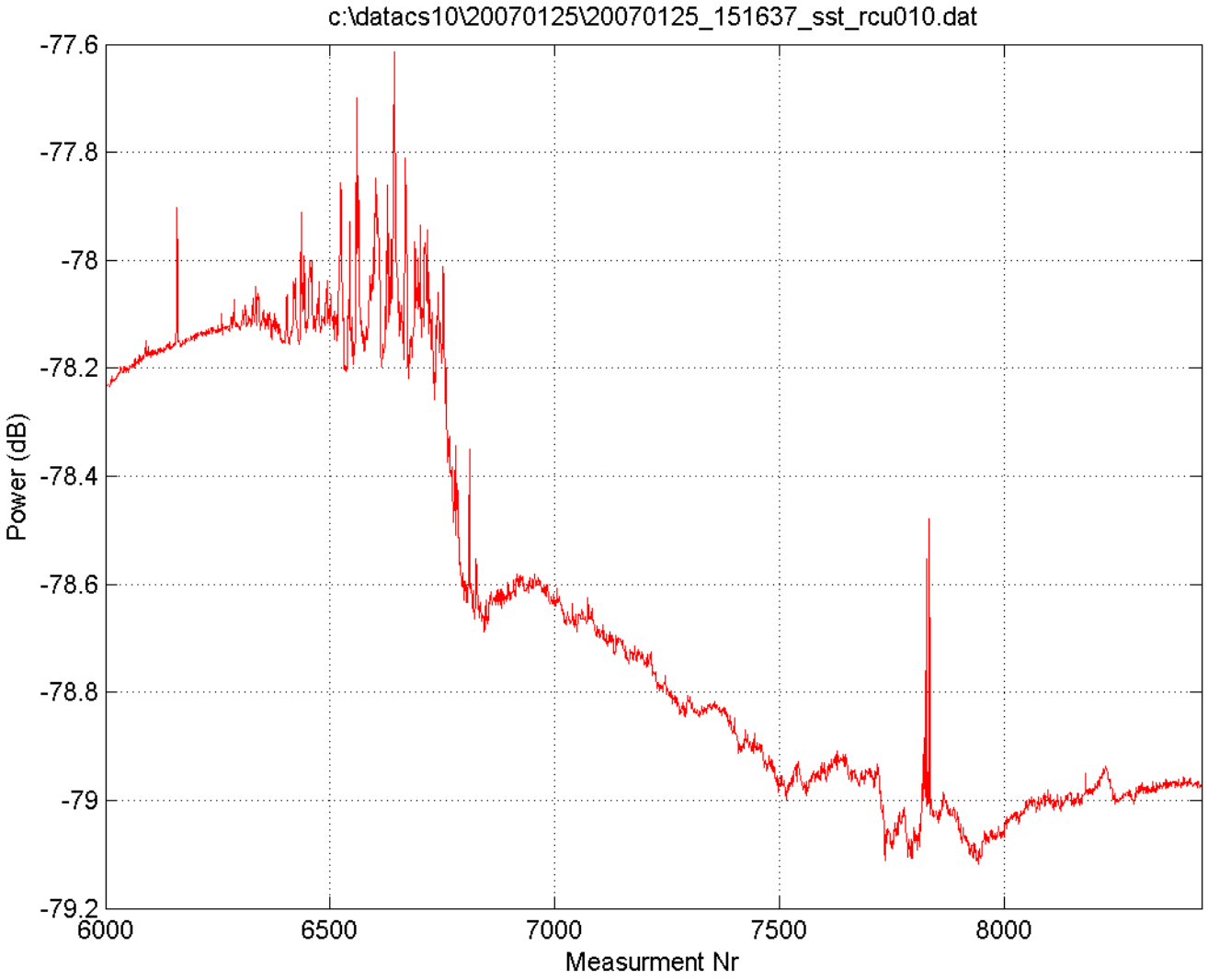
24 hours, rcu010, int=10s, F=60MHz (sbb=384)



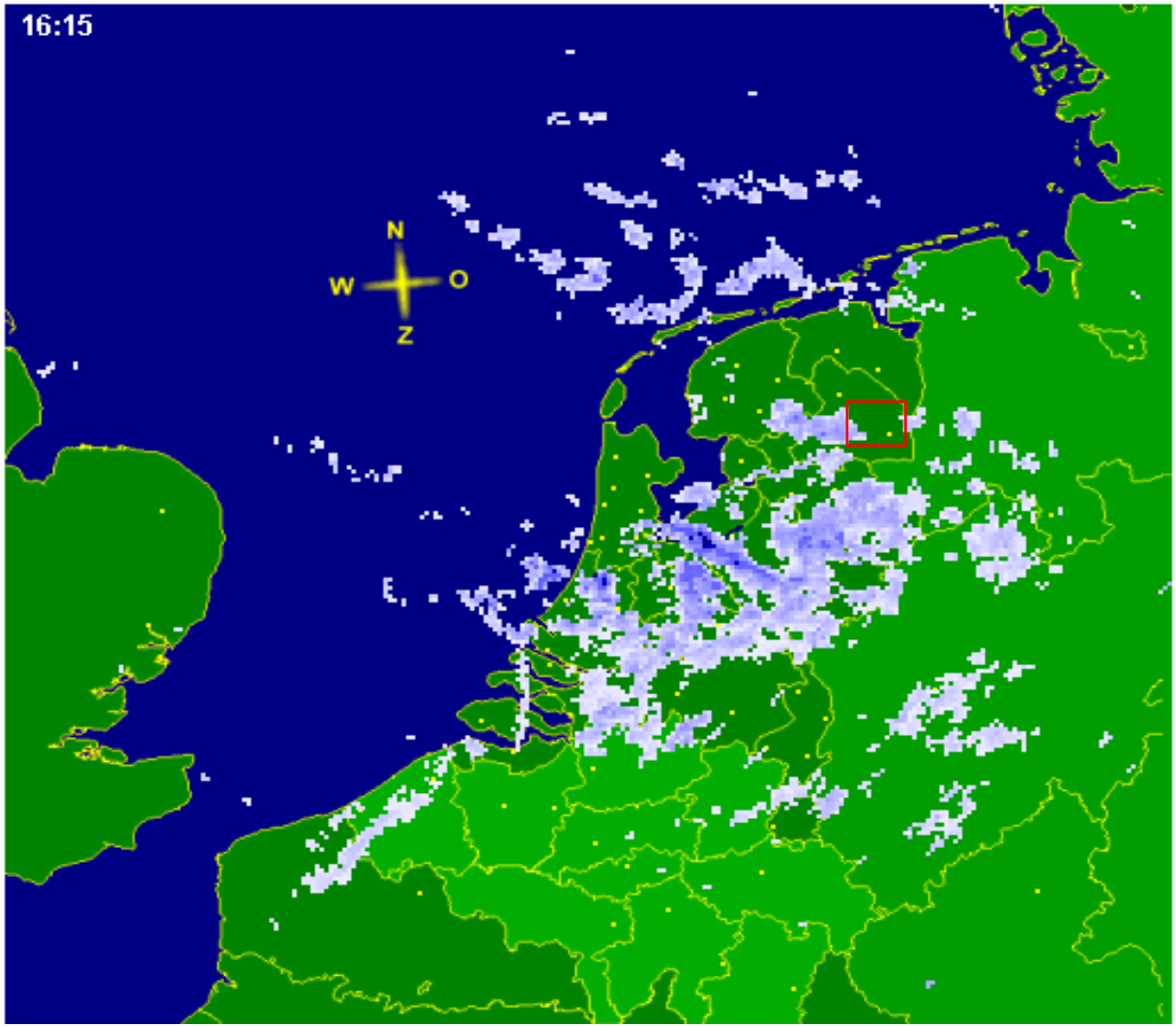
20070126, 14:15 UTC, meas. 8280



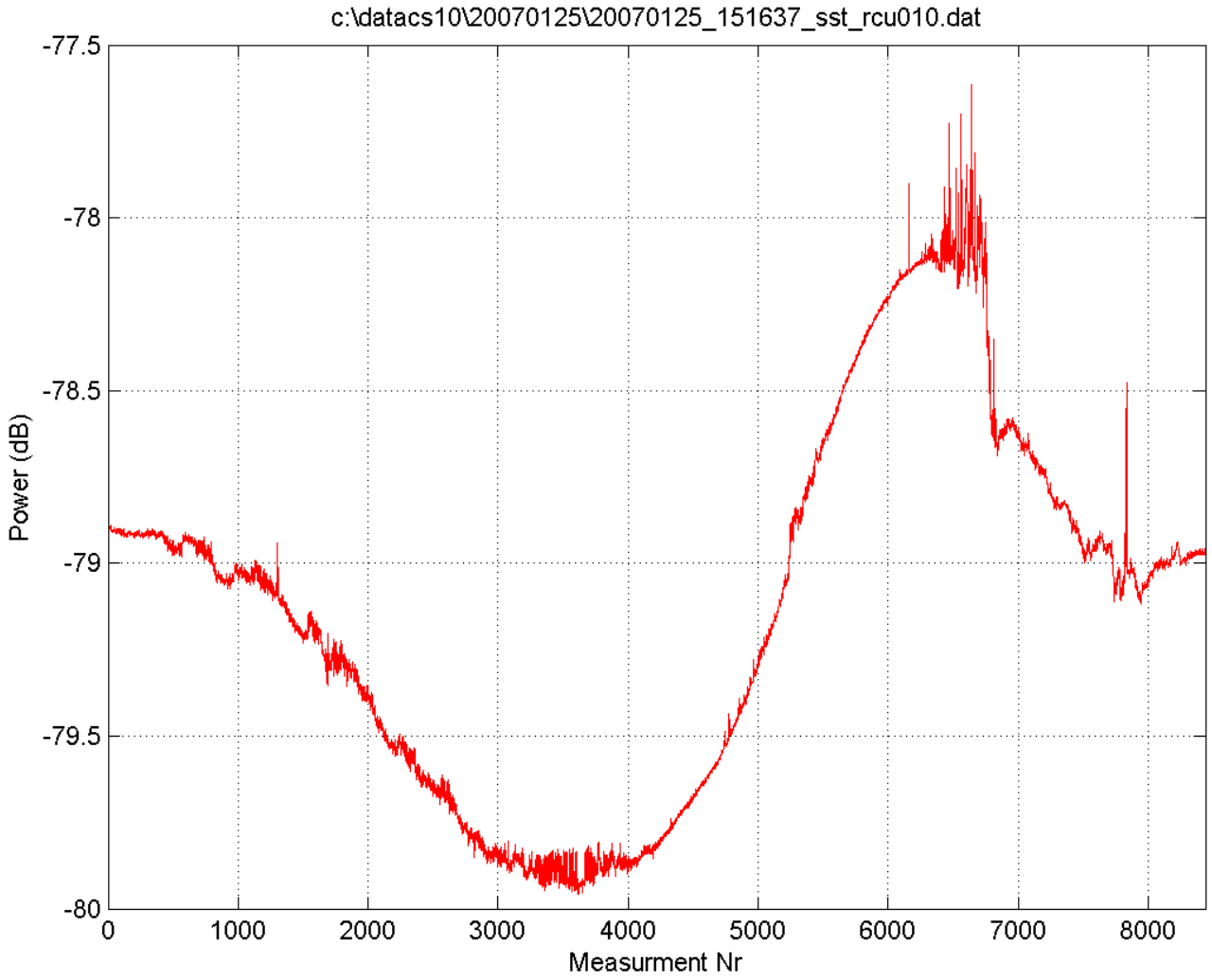
24 hours, rcu010, int=10s, F=60MHz (sbb=384)



20070126, 15:15 UTC, meas. 8640



24 hours, rcu010, int=10s, F=60MHz (sbb=384)



Conclusions

- Rain fall causes a shift in the resonance peak of the LBA
- The resonance shifts down when it rains
- It takes some time for the noise power to recover after rain fall has stopped

Remark: The ground below the antennas was frozen before the rain fall started.

LOFAR