TBB Busy Week
30.3. − 3.4.2009

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for the LOFAR-CR Team

Main Topic: Data Acquisition

- **Get the TBB dump-to-CEP to work**
  - In a convenient fashion
  - With the necessary meta-information
- **Old way: dump to LCU**
  - Reliable
  - Slow: 15min for 0.5 GByte -> 4h for a full dump of 1 TBB
  - Inconvenient: files wind up on the LCU

Main Topic: Data Acquisition

- ## Results:
  - Encountered several problems with the $tbb2h5$ application
    1. Most of them are solved now.
    2. Remaining issues: Processing speed and memory usage
  - Problems with the time-stamps in the TBB data
  - Missing information on the Nyquist zone
- ## ToDo:
  - Fix TBB time-stamps (on the RSPs)
  - Fix $tbb2h5$
  - Write scripts for controlling more stations at once
  - Get the TBBs included in MAC

TBB-Triggering

- Arthur familiarized himself with the triggering on the TBBs

- Triggering works in general
  - Found some bugs (channels not triggering, driver crashed)
  - Need to stop recording after single trigger for test purposes
- Needs more tests

Dynamic Spectra

- Sander and Jean-Mathias generated dynamic spectra from TBB data
  - First step for triggering on strong bursts
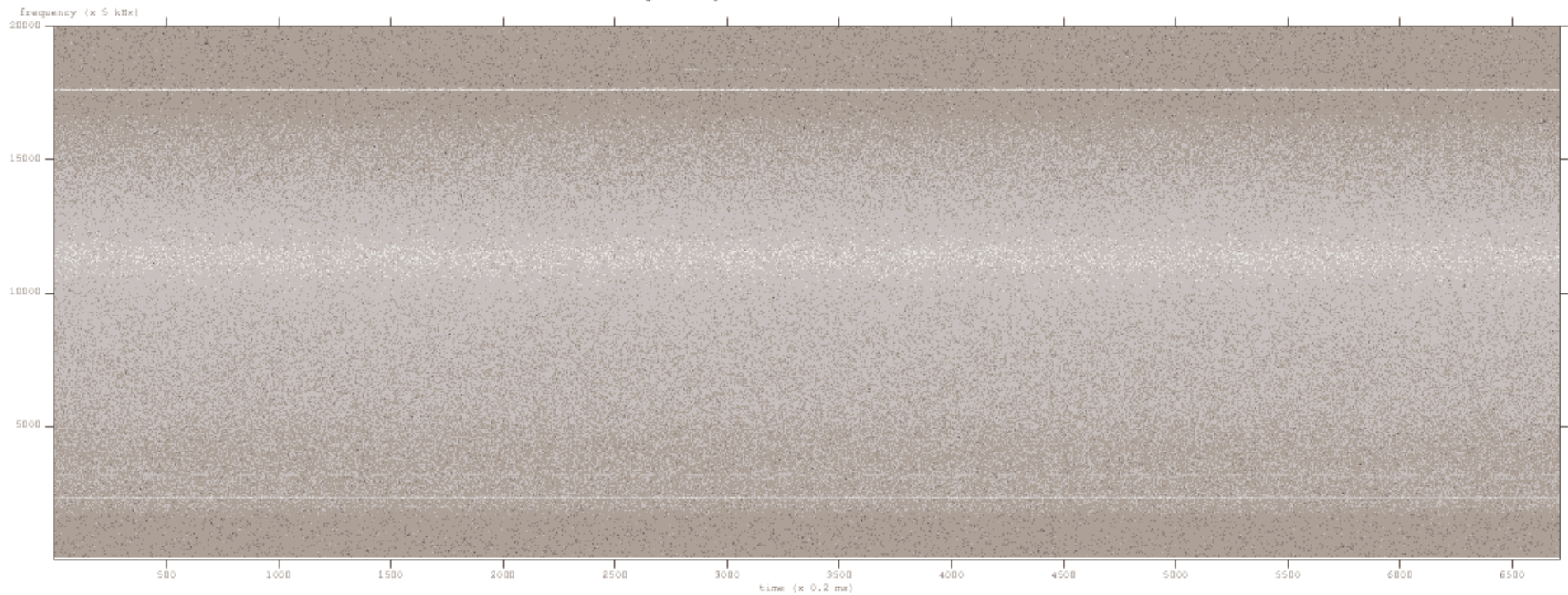- Next step: dynamic spectra from "pulsar data"

Dynamic Spectrum

Dynamic spectrum of TBB data from an LBA

Dynamic Spectrum (FM-band zoom)
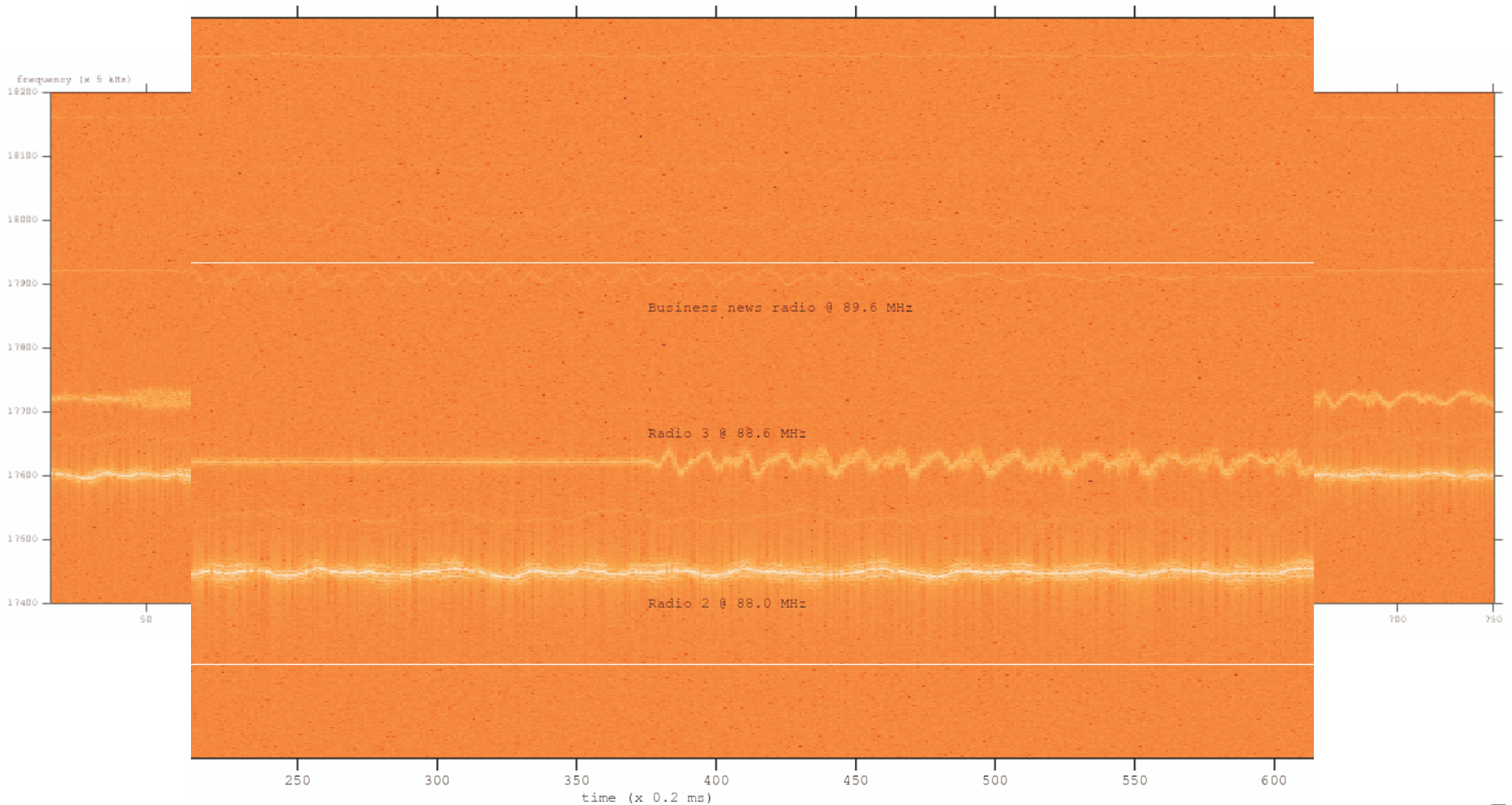
Dynamic spectrum of TBB data from an LBA

frequency (x 5 kHz)

Business news radio @ 89.6 MHz

Radio 3 @ 88.6 MHz

Radio 2 @ 88.0 MHz

time (x 0.2 ms)

- Lars and Sef continued on the imaging of TBB-data
  - Lots of debuging
  - No (really) working display tool for casa images: convert to FITS
- Kalpana continued on CEP based triggering
  - Still waiting for data…

Summary

- ■ **My main goal (convenient TBB-dumps) was not reached.**
  - ● Software was not in the state that I assumed.
  - ● Several problems solved, some more discovered
  - ● Biggest remaining issue: Memory usage of tbb2h5

- ■ **We (our new students) got familiarized with the system.**
  - ● We now know where we are.

- ■ **Next TBB busy week: Early June**