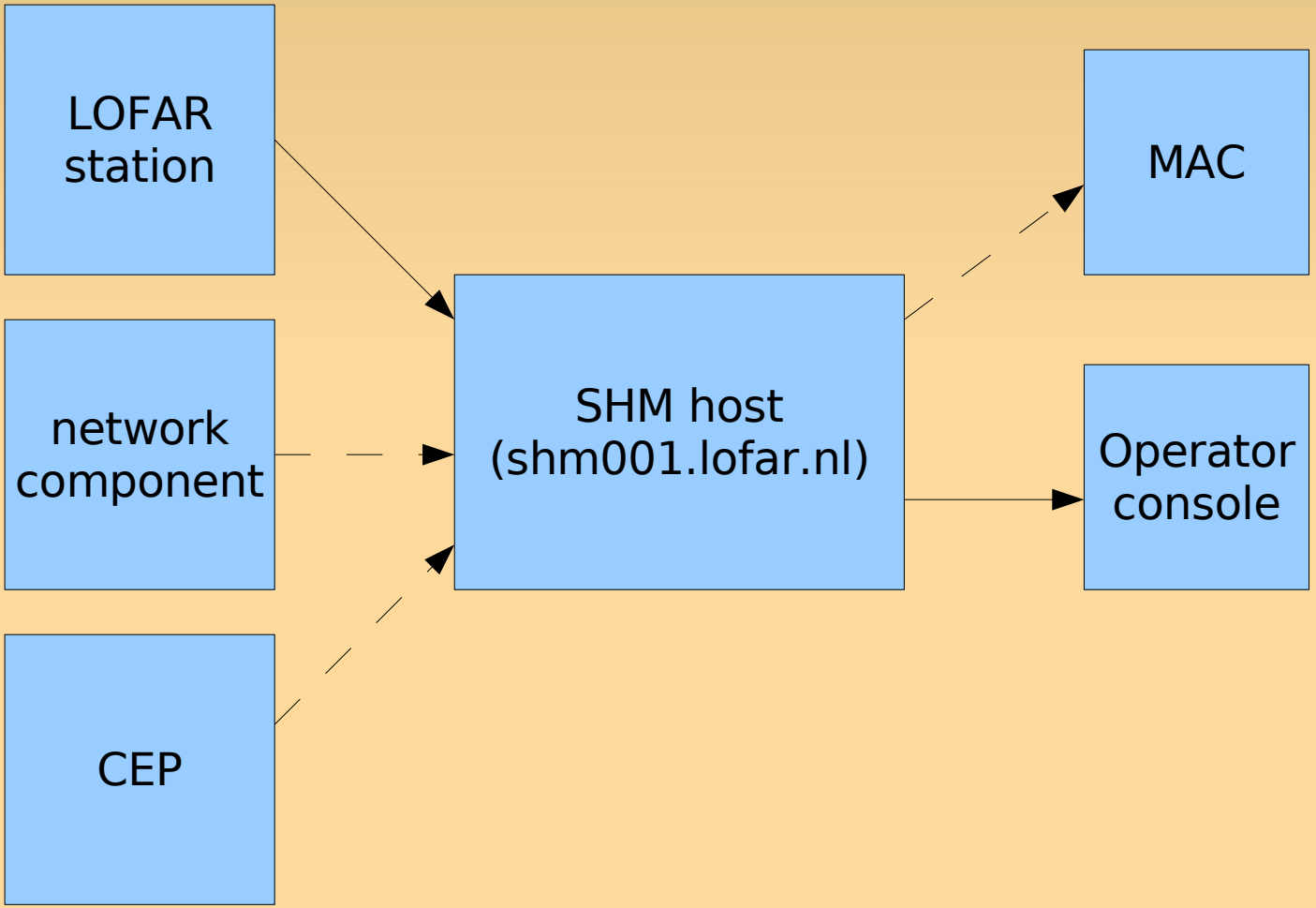
LOFAR System Health Management

- Goal
- Architecure
- Status
- Plans

LOFAR System Health Management Goal

- automatically detect system faults
  - communicate to scheduler
- minimize downtime
- minimize data loss

LOFAR System Health Management Architecture



LOFAR System Health Management Architecture

- LOFAR station software
  - MACInformationServer ('MIS')
    - svn repository
    - dedicated port
    - swlevel 5 (normal operations)

LOFAR System Health Management Architecture

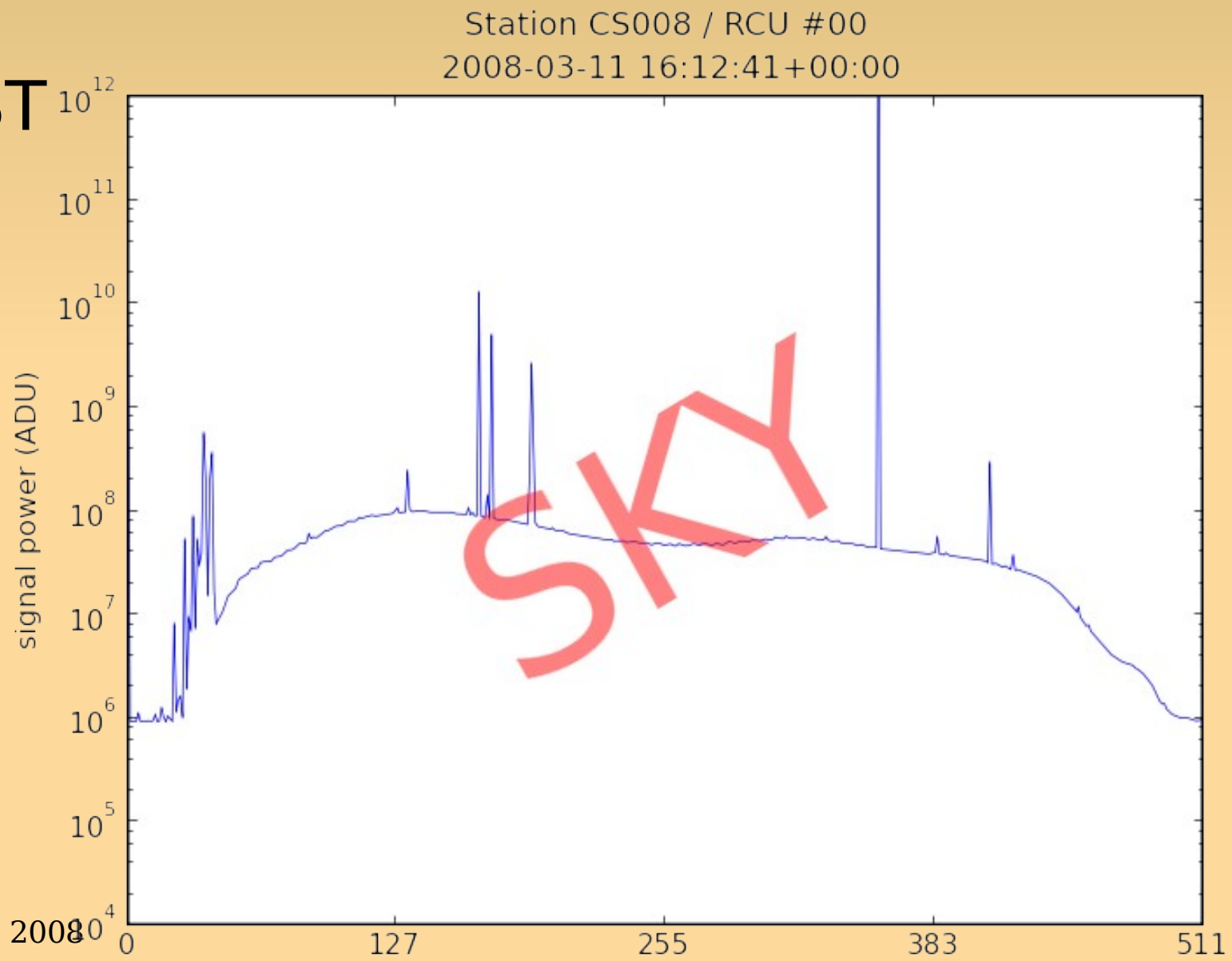
- SHM host software
  - data-fetch (MIS protocol) daemons
    - basic diagnosis
  - database
  - scheduler
  - web server

LOFAR System Health Management Status

- Data taking more-or-less nonstop
  - independent of CEP
  - cs001, cs008, cs010, cs016
  - subband statistics ('SST')
  - cross-correlation statistics ('XST')
  - rsp status ('RSP')

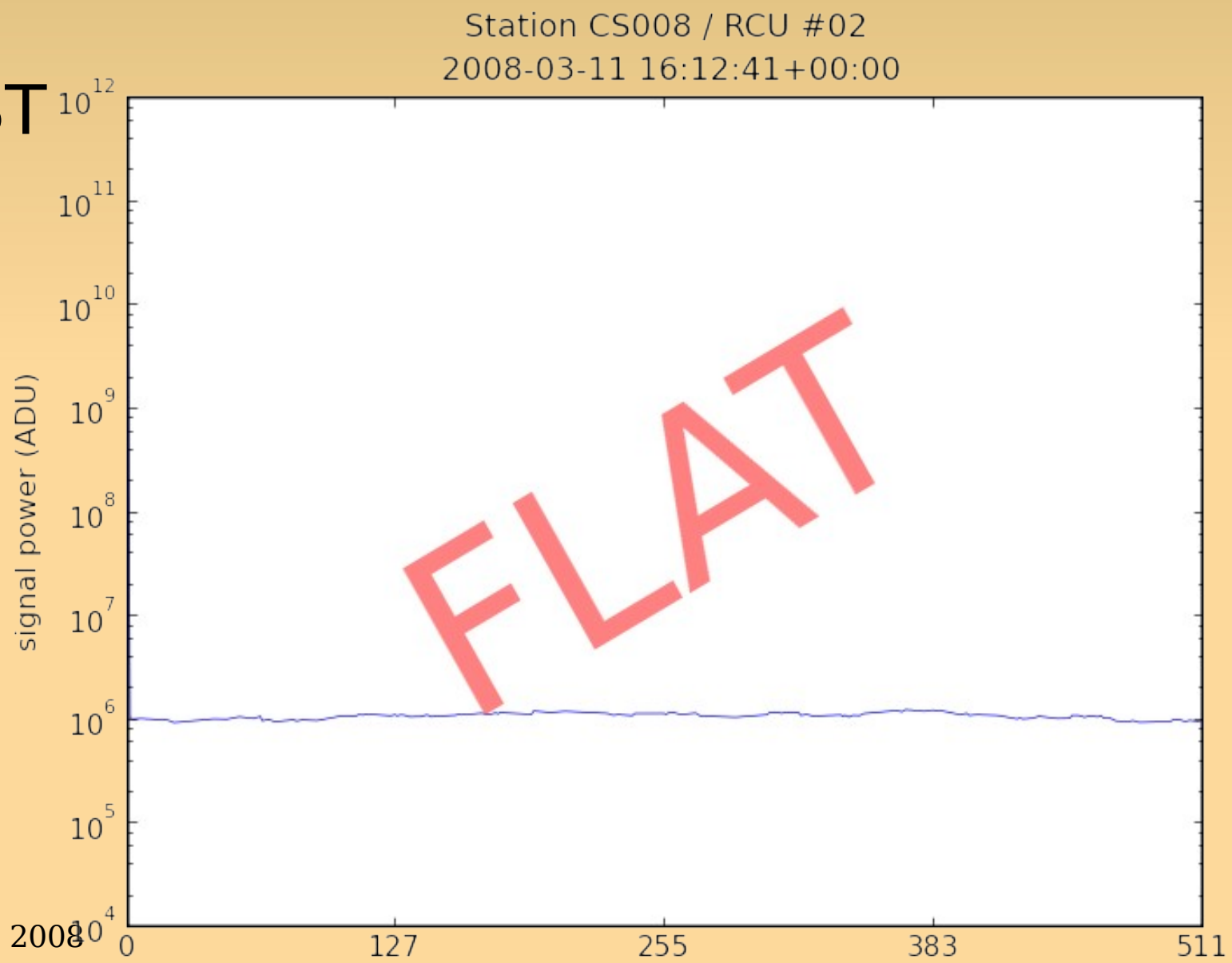
LOFAR System Health Management Status

- SST



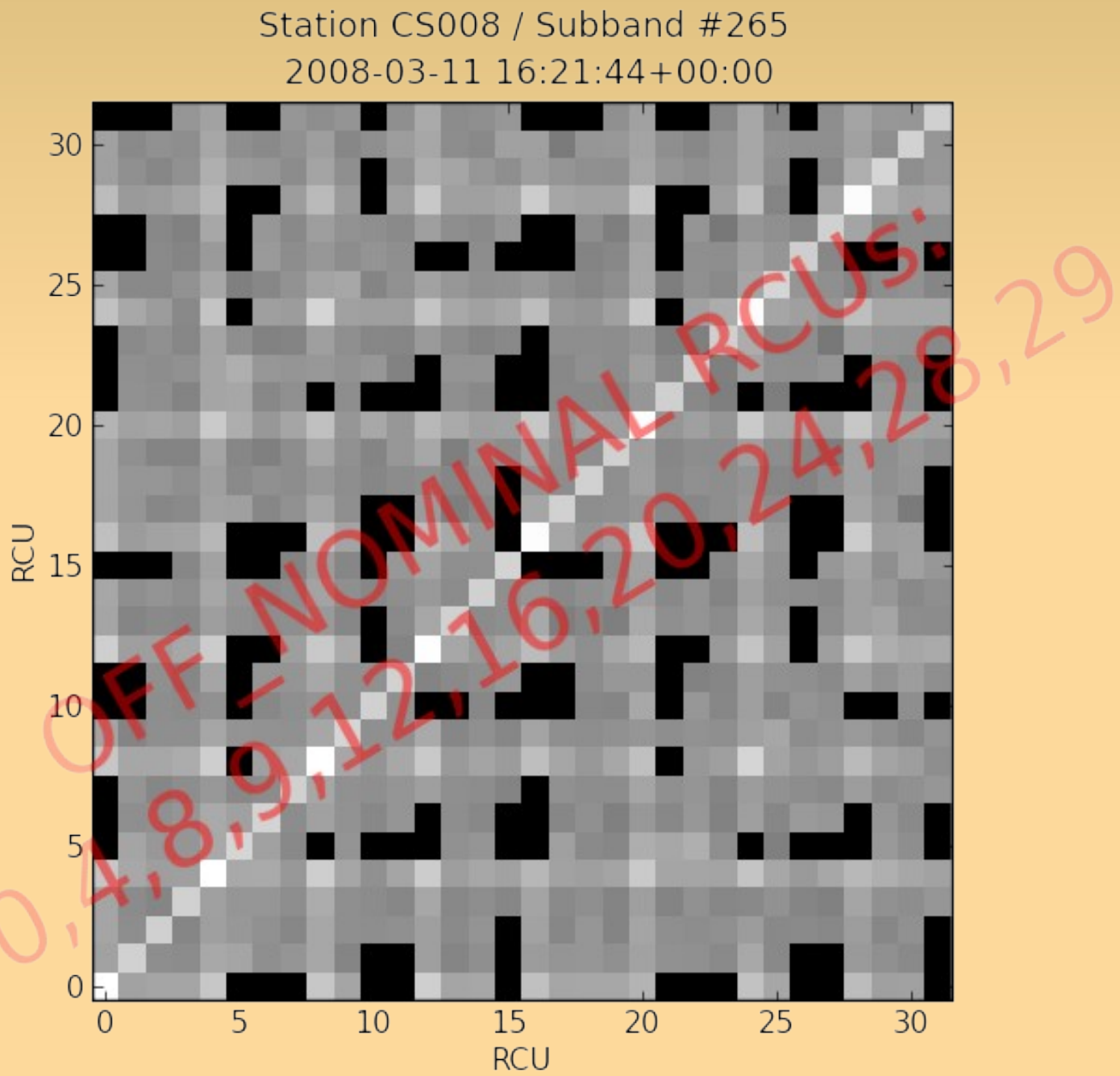
LOFAR System Health Management Status

- SST



LOFAR System Health Management Status

- XST



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LOFAR System Health Management Status

- RSP
  - same information as 'rspctl –status'
    - rsp-board temperature sensors, voltages, etc.

LOFAR System Health Management Status

- SHM console
  - webpage for latest database additions
    - shm001.lofar.nl/shm/data

LOFAR System Health Management Status

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LOFAR System Health Management Plans

- Model-based diagnosis
  - lydia language model
    - still toy models
  - probabilistic diagnosis testing
  - communication to MAC
  - widen data trawl
    - network components via snmp
    - CEP diagnostics

LOFAR System Health Management Plans

- SHM console (web pages)
  - diagnosis
  - daemon scheduler
  - data browser
  - comments or suggestions:
    - avruch@lofar.nl