

Recent Beam-Formed Observations and Tests of “bf2h5” Data Writer

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on behalf of

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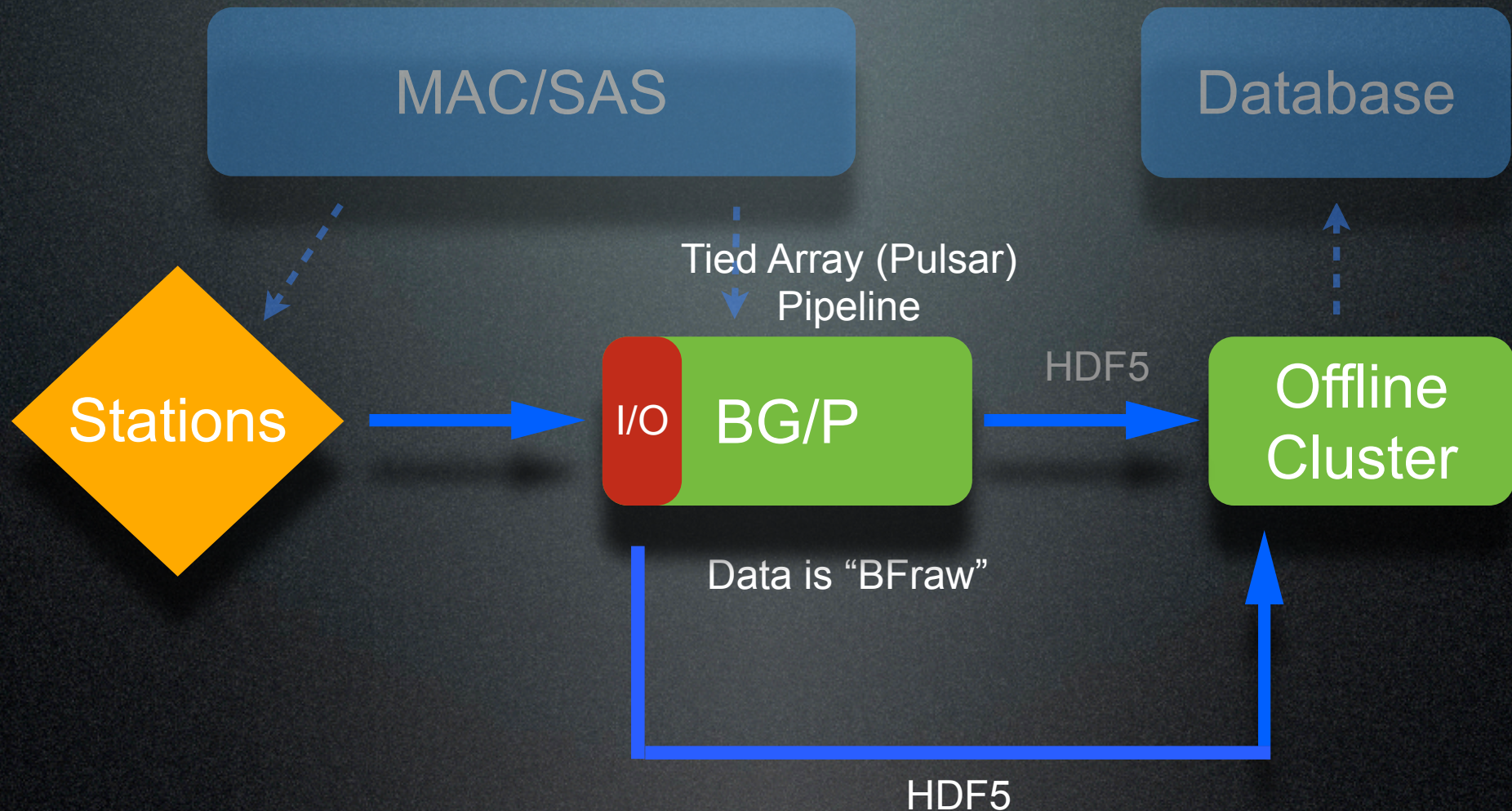
LOFAR Status Meeting
August 5th, 2009



Recent Beam-Formed Obs

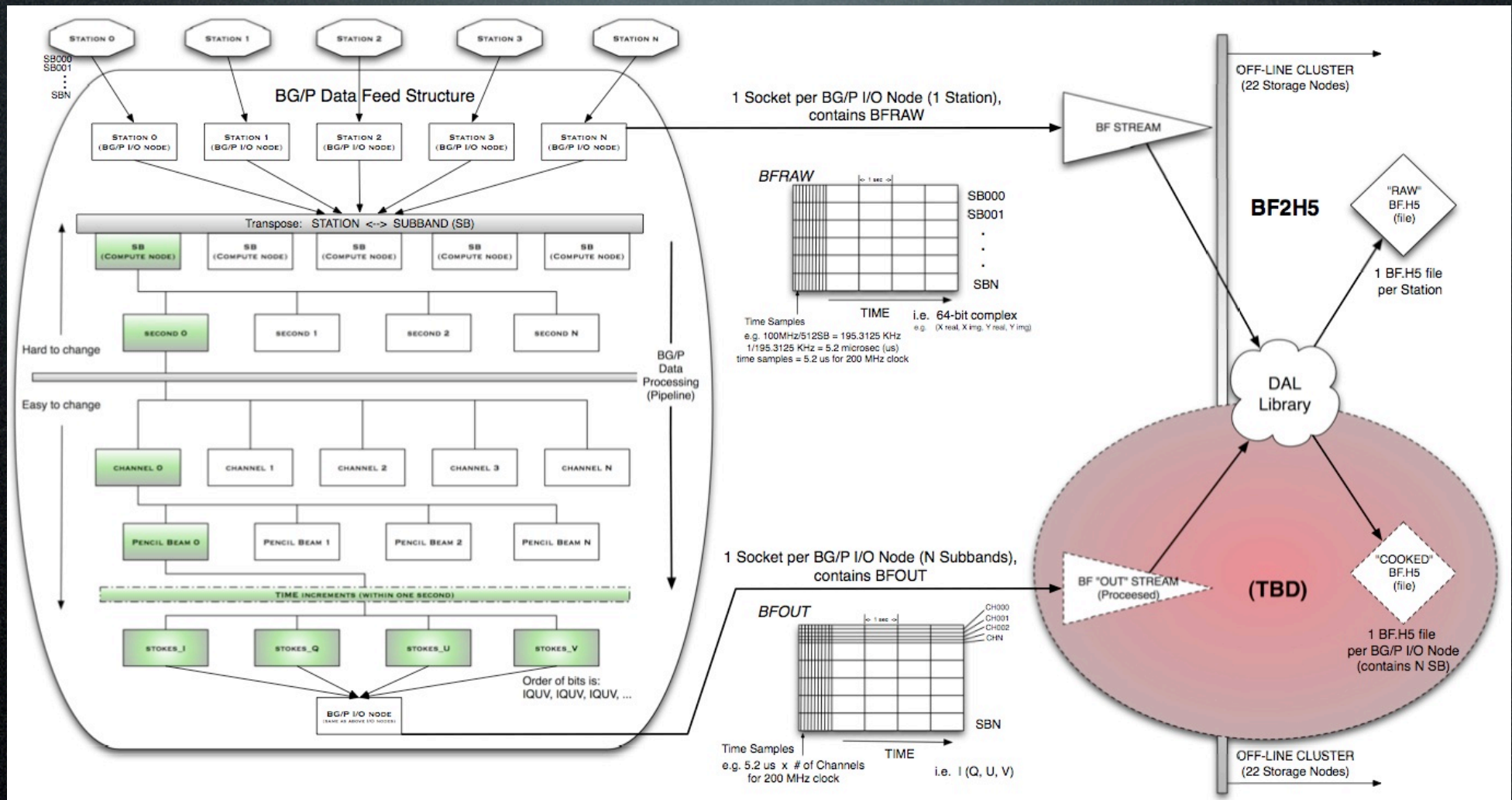
- Obs108 & 109: simultaneous LBA and HBA dynamic spectra of the Sun.
- Obs113: first LBA pulsar observations and tests of “bf2h5” HDF5 file writer.

Pulsar/Beam-formed Pipeline

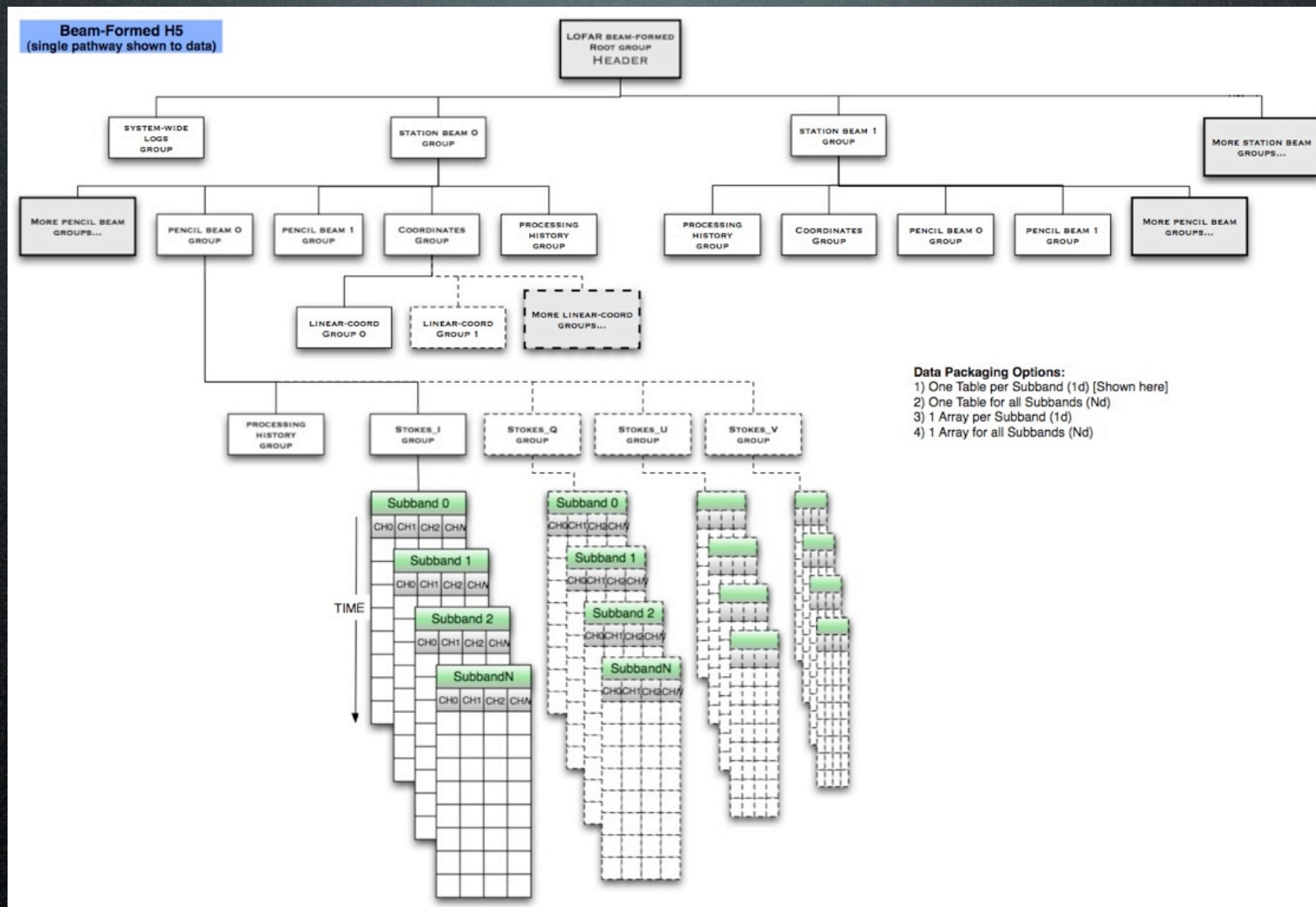


What were previously called .cor files (corrected for packet loss etc.) can now be written directly to HDF5 on the storage nodes. Next step: implement this *after* the Pulsar Pipeline.

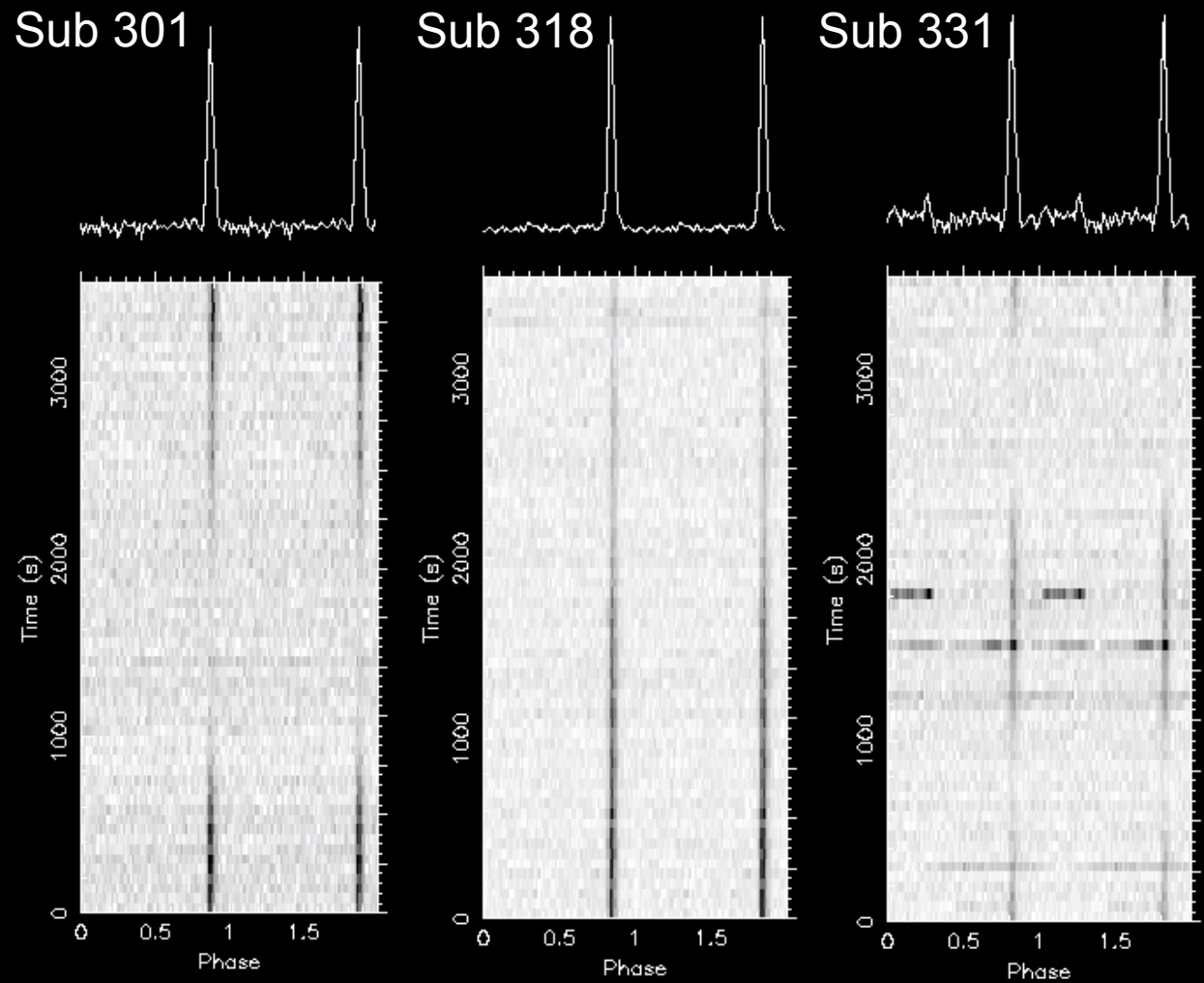
Beam-Formed Data Flow



Beam-Formed HDF5 Files



Successful bf2h5 Obs



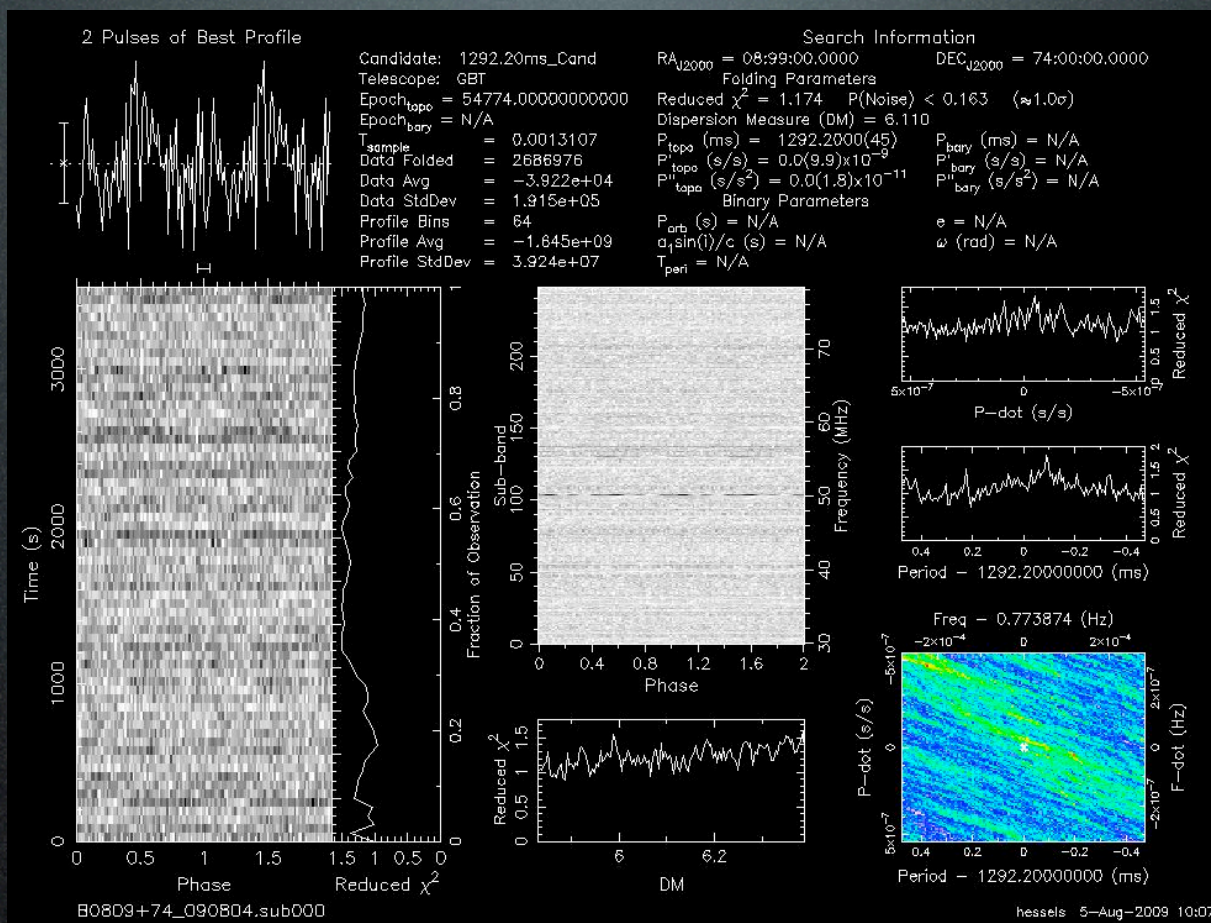
- 090803: Simultaneous CS302 (HBA Sub 300-331 / 160MHz), RS307 (HBA Sub 100-131 / 120MHz), and RS503 (LBA Sub 300-331 / 60MHz).

- Pulsar only detected in HBA (CS302, RS503) observations.

- Bad RFI in RS307 and RS503 data.

LBA Follow-up

Using the full pulsar pipeline (*not* bf2h5) and 48MHz of bandwidth



No single station detection of B0809+74 or B1133+16



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Recent Beam-Formed Obs

- “bf2h5” data writer now works for dumping station data directly to an HDF5 file.
- Can downsample in realtime. Very useful for long observations.
- Parallel version will provide greater bandwidth.
- Stand-alone version for single station use?
- Need a version of this write on the “tail end” of the BG/P pulsar pipeline.
- Still no LBA pulsar detections. Try B1919+21 and investigate potential technical problems.
- Will redo recent Sun observations. May shed light on LBA pulsar non-detections.