

First Successful LBA Pulsar Observation

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on behalf of

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LOFAR Status Meeting
August 19th, 2009



Recent LBA Pulsar Obs

From August 4-18th, 2009

Station	Obs ID	Source	Config	Results
RS503	L2009_13446	B0809+74	LBA, 200MHz, sub 153-400, 1 chan, 1.3ms, 1hr	Not seen yet, will try again
RS503	L2009_13449	B1133+16	LBA, 200MHz, sub 153-400, 1 chan, 1.3ms, 2hr	Not seen yet, will try again
CS302	L2009_13516	B0531+21	LBA, 200MHz, sub 153-400, 16 chans, 4.6ms, 2hr	In progress, only giant pulses expected
CS302	L2009_13523	B1919+21	LBA, 200MHz, sub 153-400, 16 chans, 4.6ms, 2hr	Detected!
DE601 (Effelsberg)	L2009_13569	B1919+21	LBA, sub 301-420, 16 chans, 2.3ms, 4hr	Not seen yet, lat./long. of station mixed up!!
DE601 (Effelsberg)	L2009_13631	B0950+08	LBA, sub 301-390, 16 chans, 4.6ms, 2hr	Not seen yet. Need to check station configuration!!

In tracker: 113, 131, 132, 138, and 143

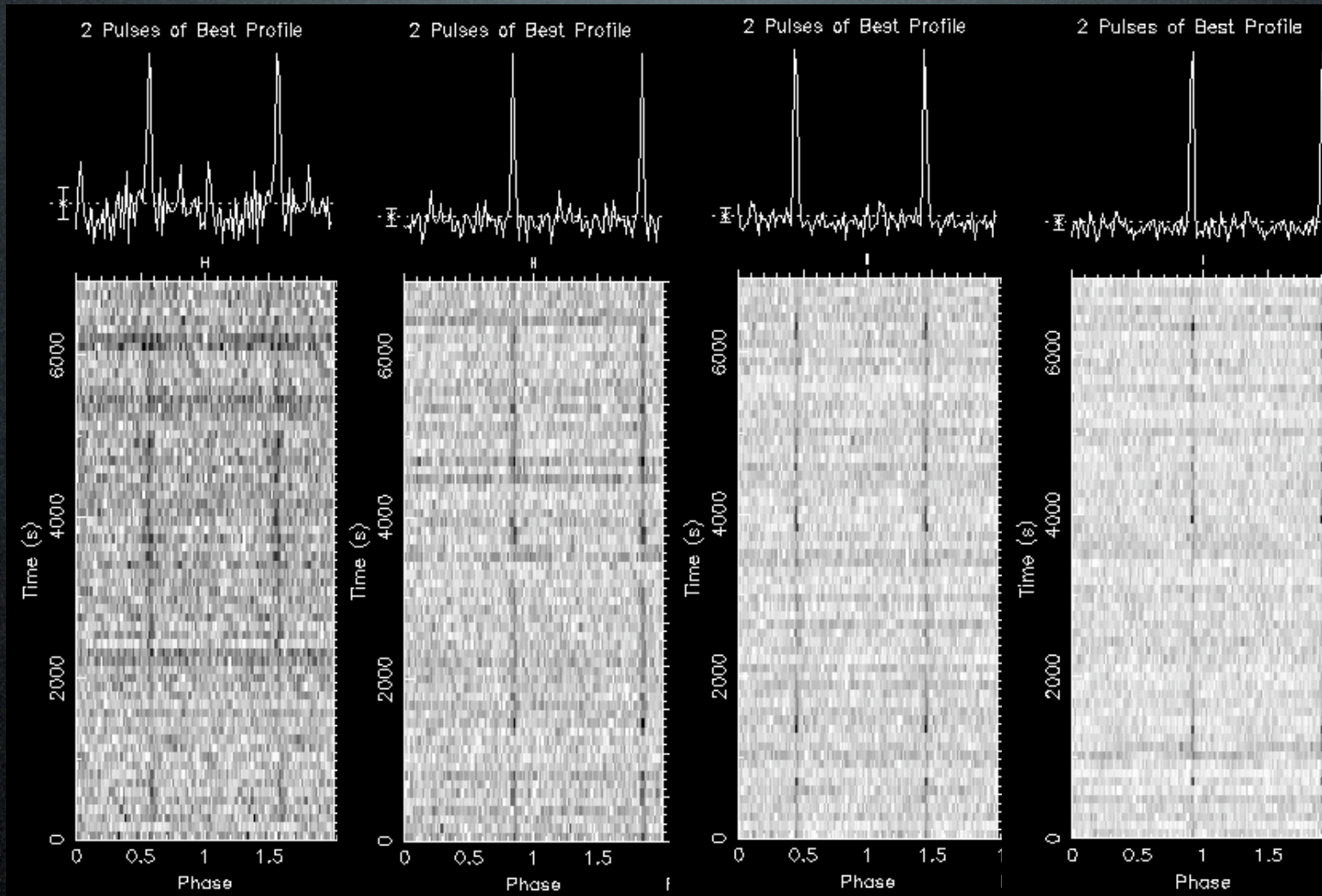


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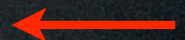
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B1919+21 with LBAs



Bright
Pulses?



30-42 MHz

42-54 MHz

54-66 MHz

66-78 MHz



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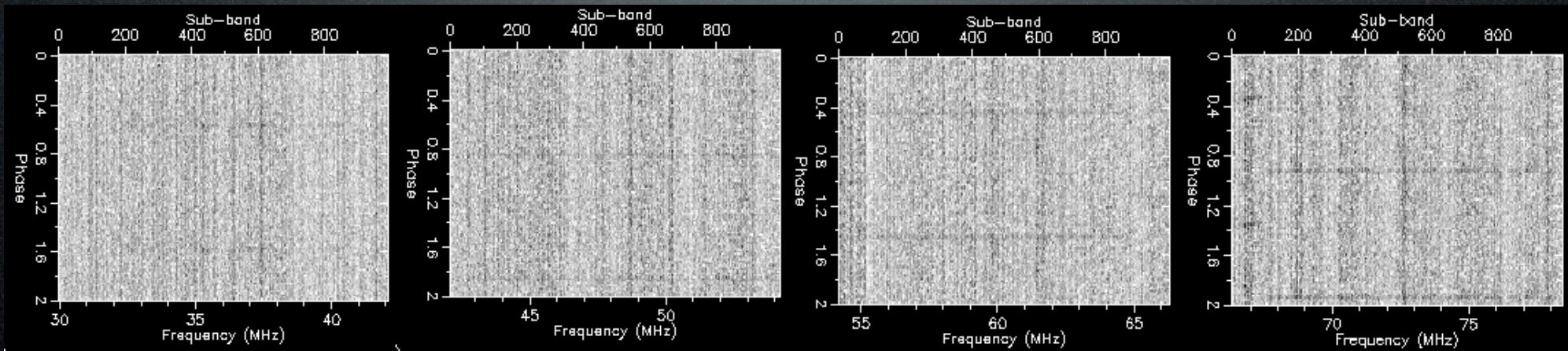
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ASTRON

B1919+21 with LBAs

Likely the widest bandwidth pulsar observation ever made at these frequencies!



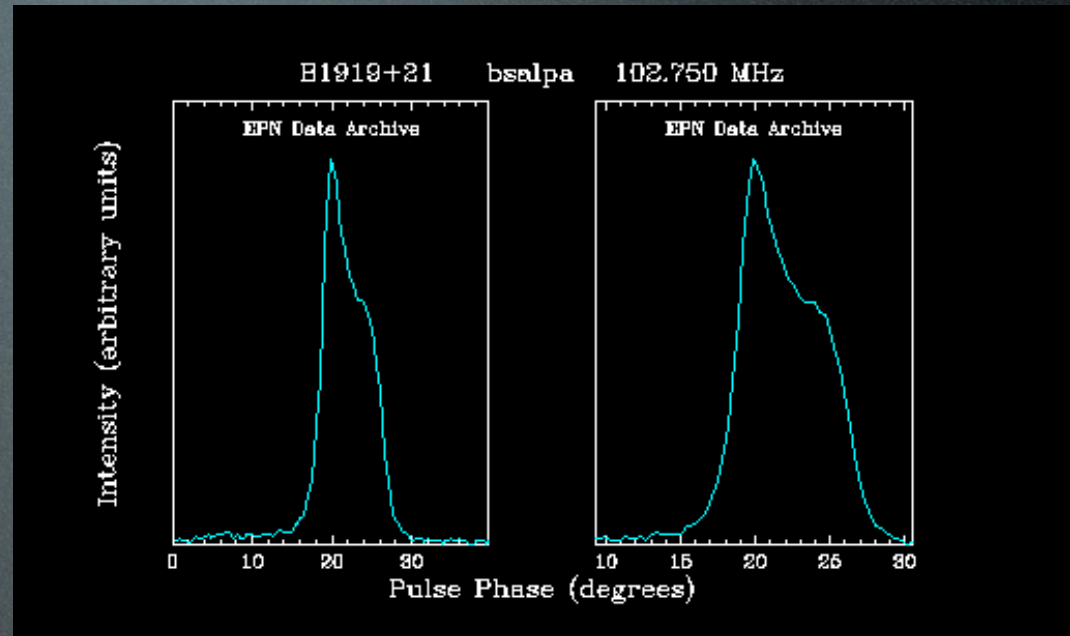
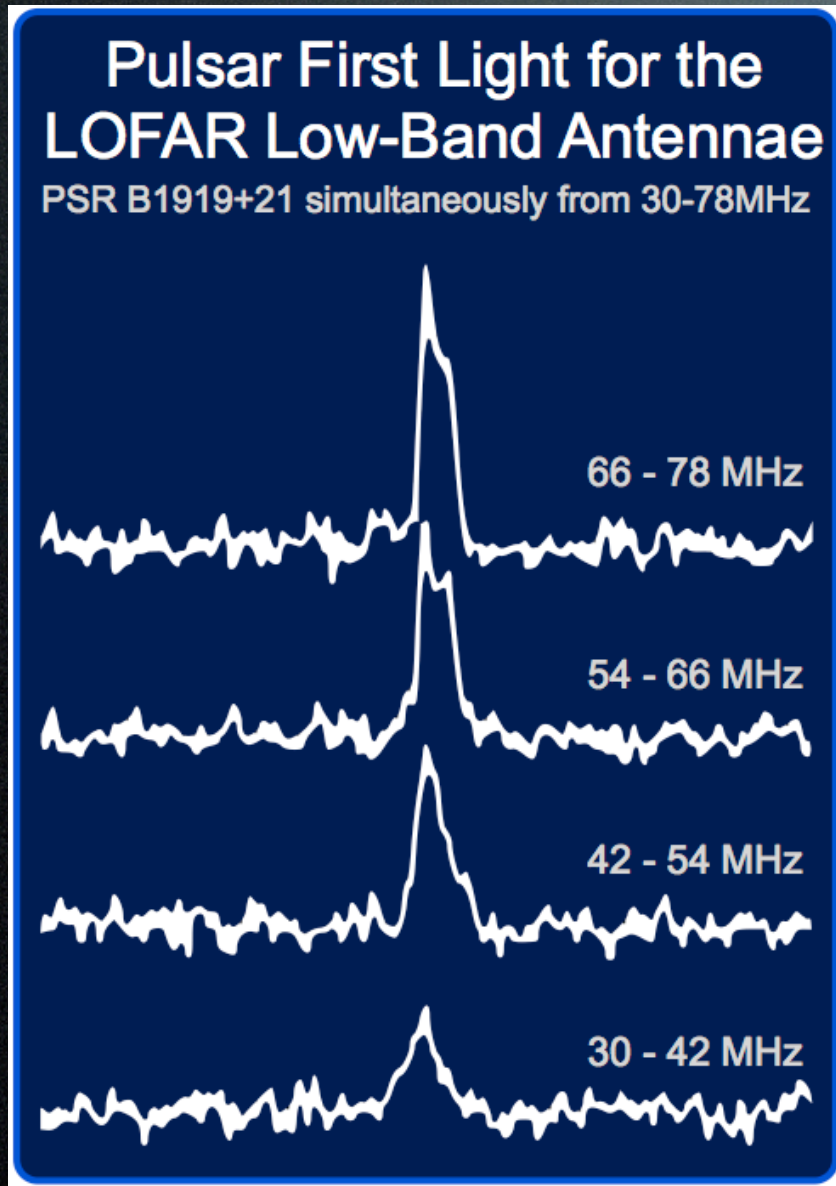
30-42 MHz

42-54 MHz

54-66 MHz

66-78 MHz

B1919+21's Pulse Profile



(EPN catalog, k199)

Shoulder dominates at
low frequency?

Summary

- Achieved pulsar first light with the LBAs.
- Similar observations with Effelsberg have so far been unsuccessful.
- **Possibly still lingering configuration issues at Effelsberg.**
- Planning multi-station wide-band observations (entire LBA and HBA bands).
- Planning multi-station, incoherent addition.
- Planning simultaneous pulsar/imaging obs.
- Pulsar Busy Week 4 from 21-25 september.
- Thanks observers and developers!

