

# Results from CS1 Pulsar Observation

LOFAR Status Meeting

23 April 2008

# Outline

- Observation details
- Data Reduction
- Results

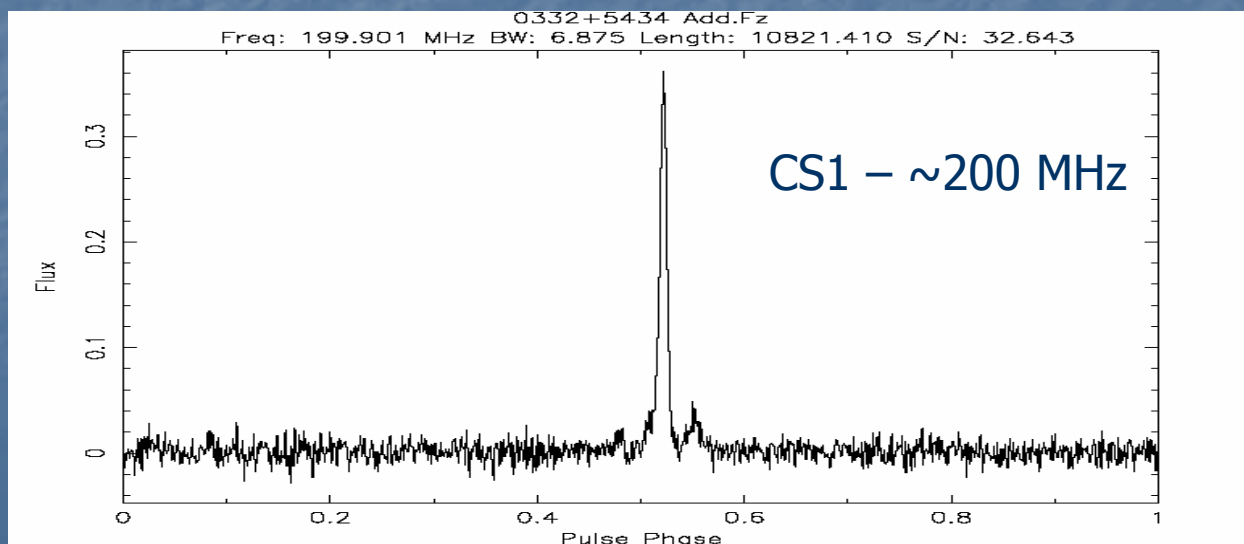
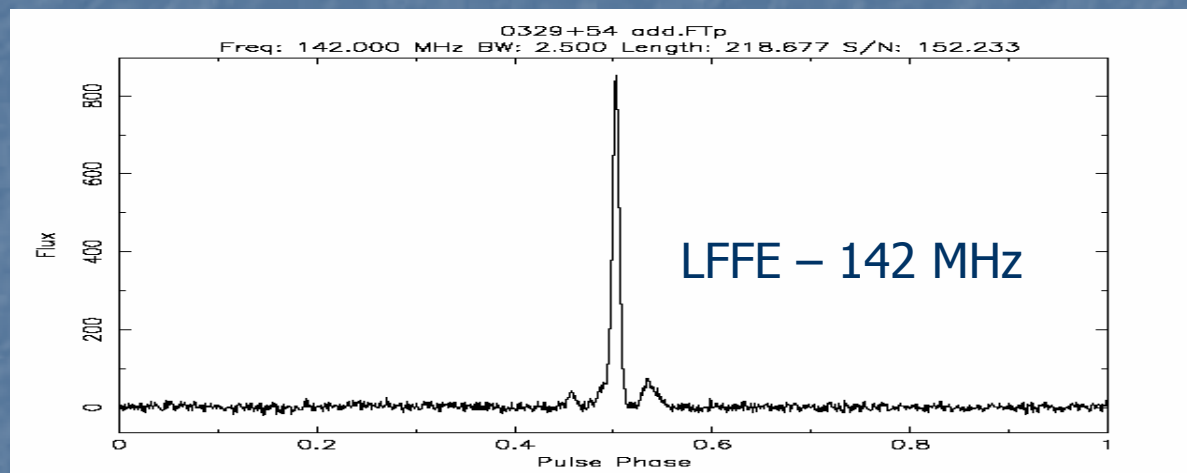
# Observations

- Aim: beam shape of the 6-tile telescope
- CS1 as transit telescope
- CS1 – 6 HBA Tiles, 96 dipoles
- $A_{\text{eff}} = 25 \text{ m}^2$   
( $G_{\text{dip}} = 1.5$  and  $\lambda = 1.5 \text{ m}$ )
- Tiles pointed to zenith
- 170-230 MHz, 48 subbands, 160 MHz sampling
- ~650 GB data for 3-hour observation

# Data Reduction

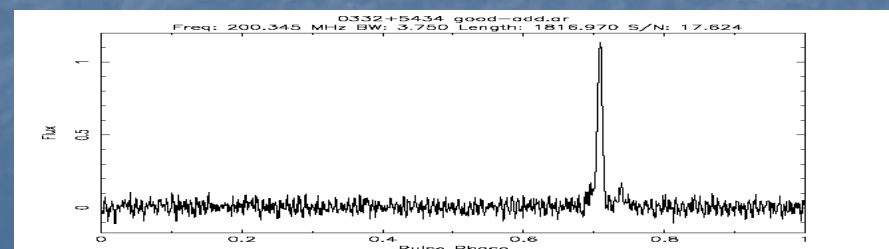
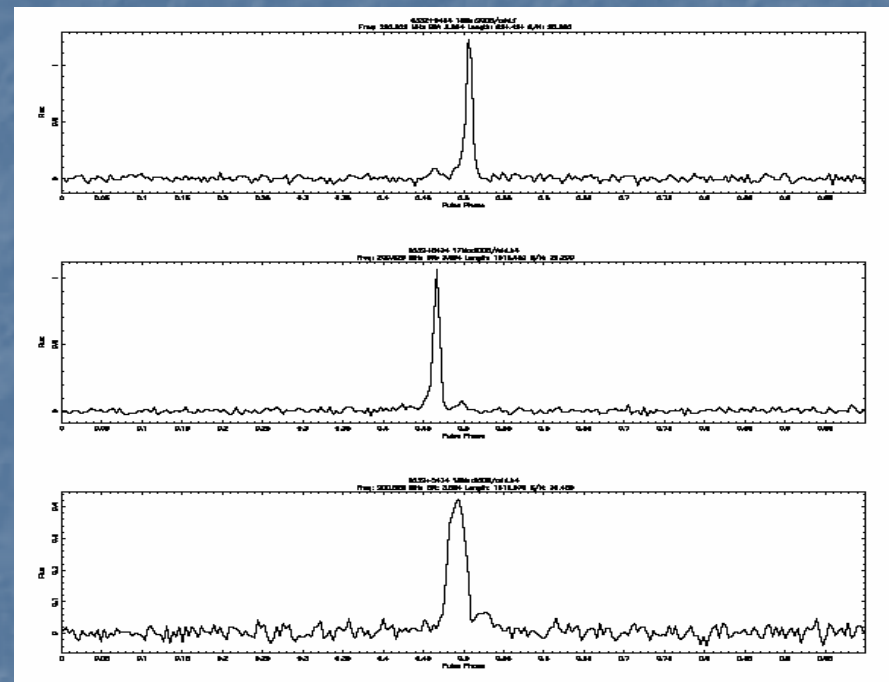
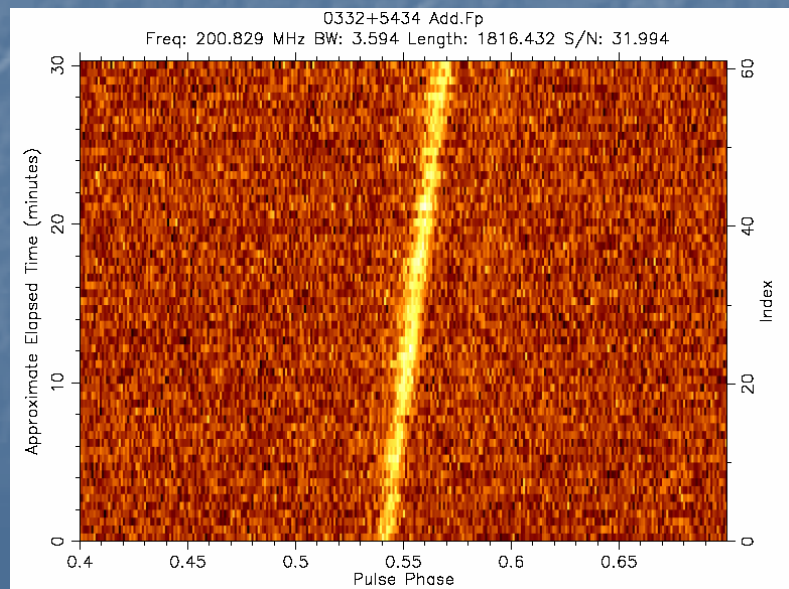
- Convert to 8-bit format
- Reduce data: Dump single pulses
- Form 30-sec sub-integration
- Combine groups of subbands

# First look....



# Profile changes?

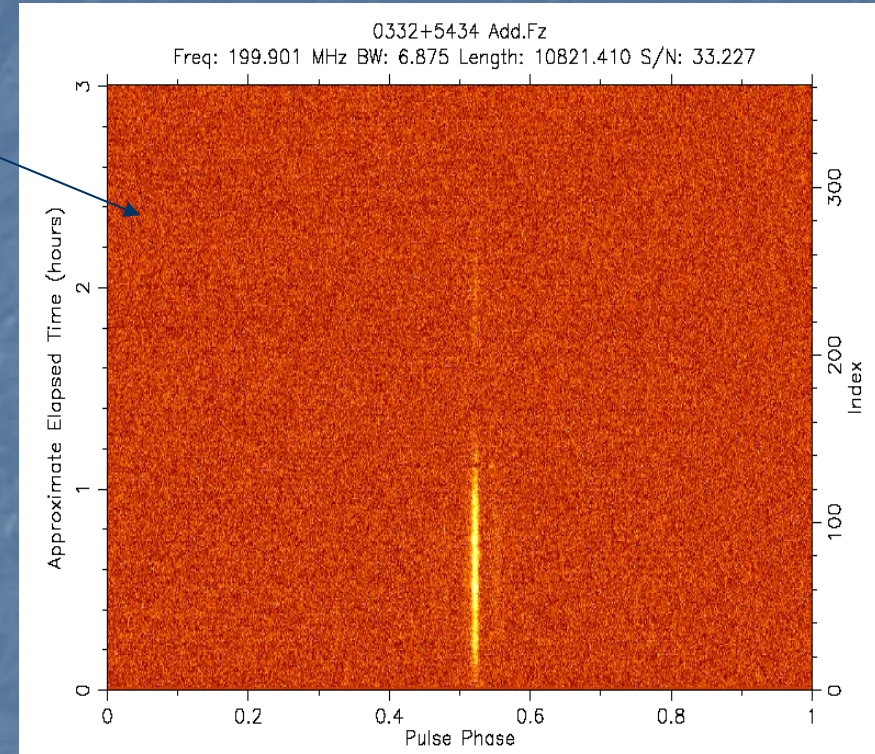
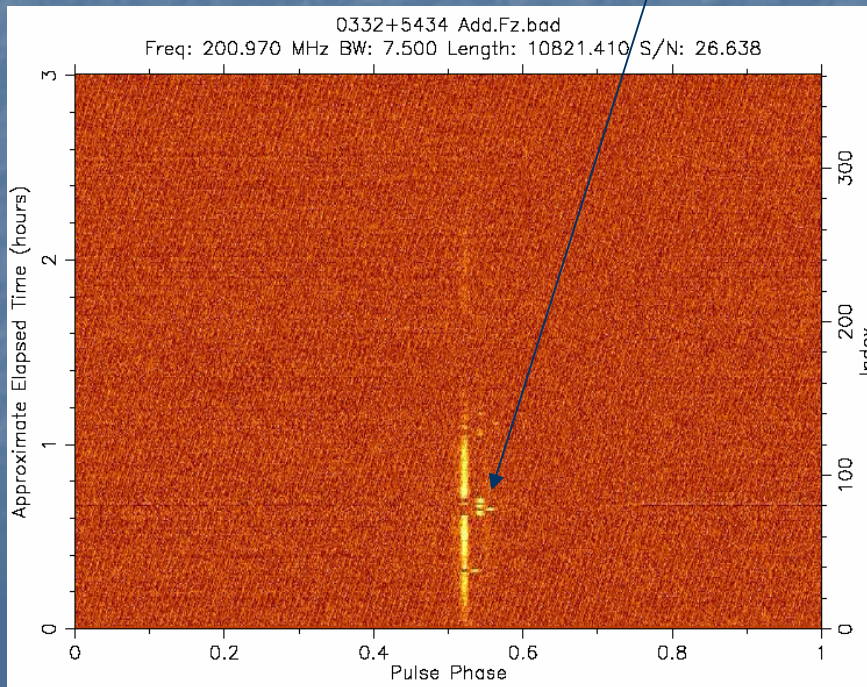
- profile broadening
- sync errors?

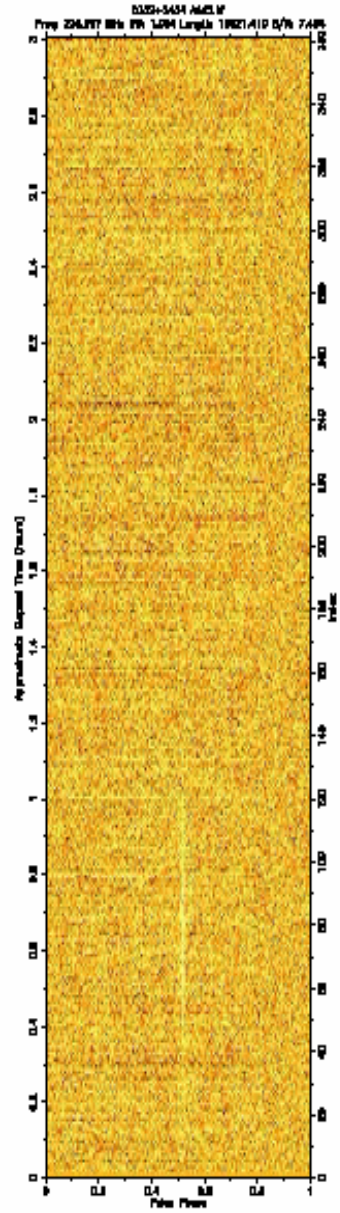
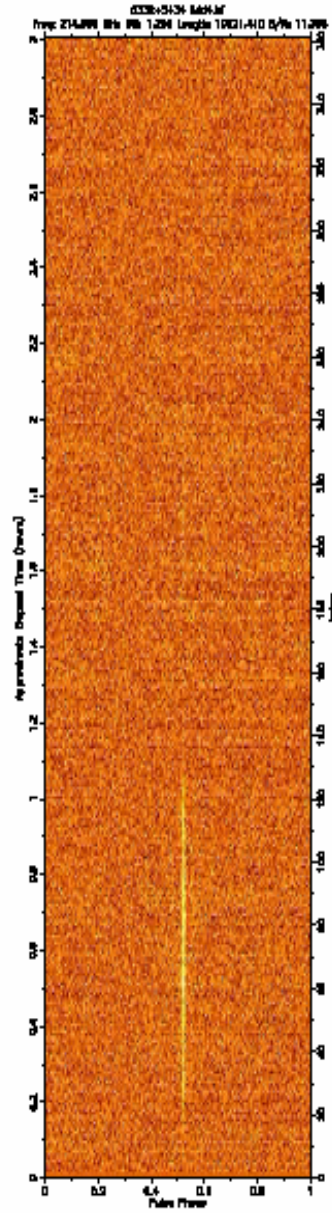
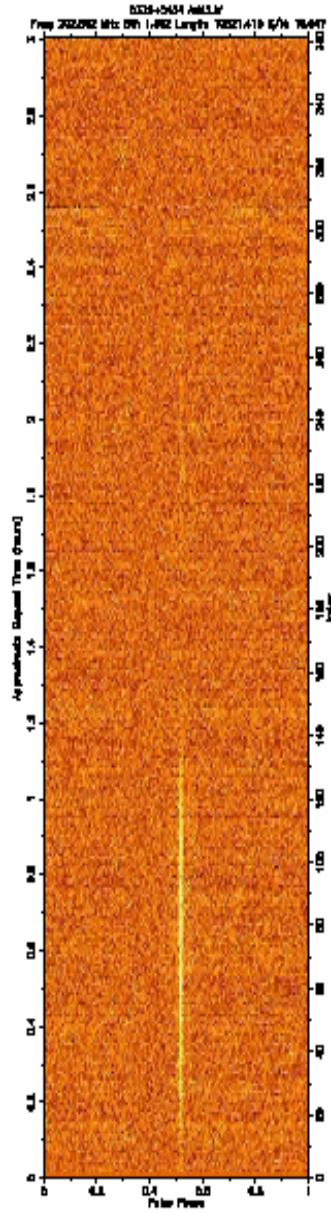
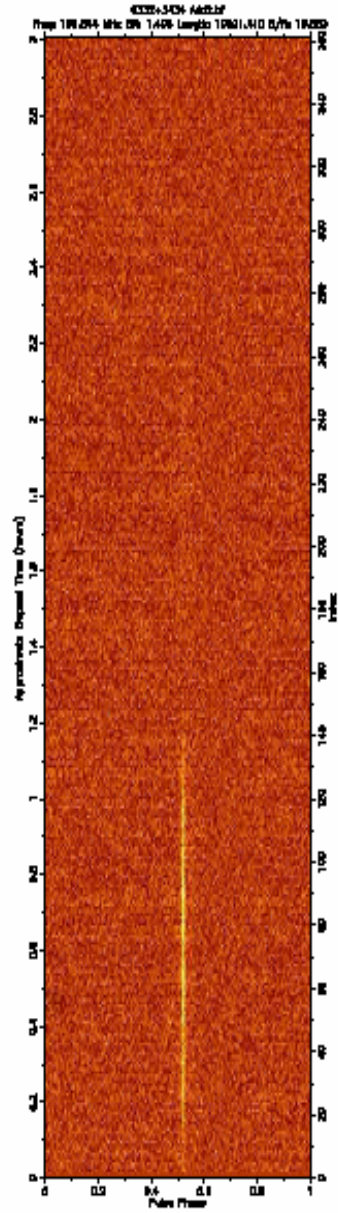
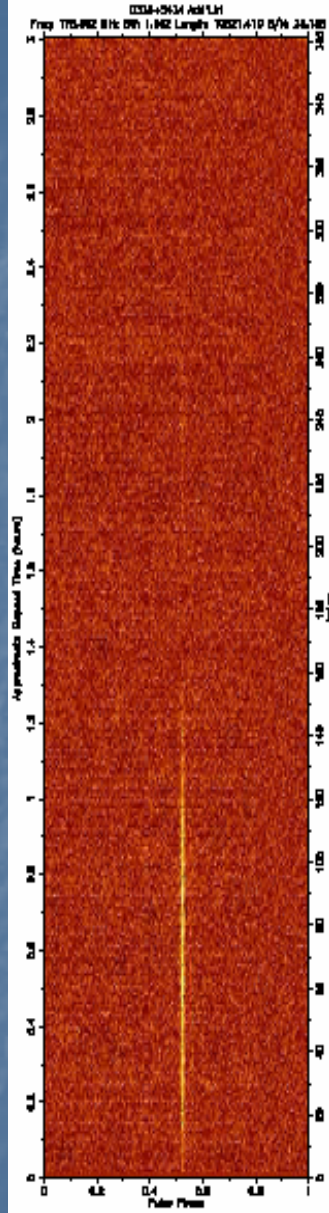


# Results .....

RFI removed

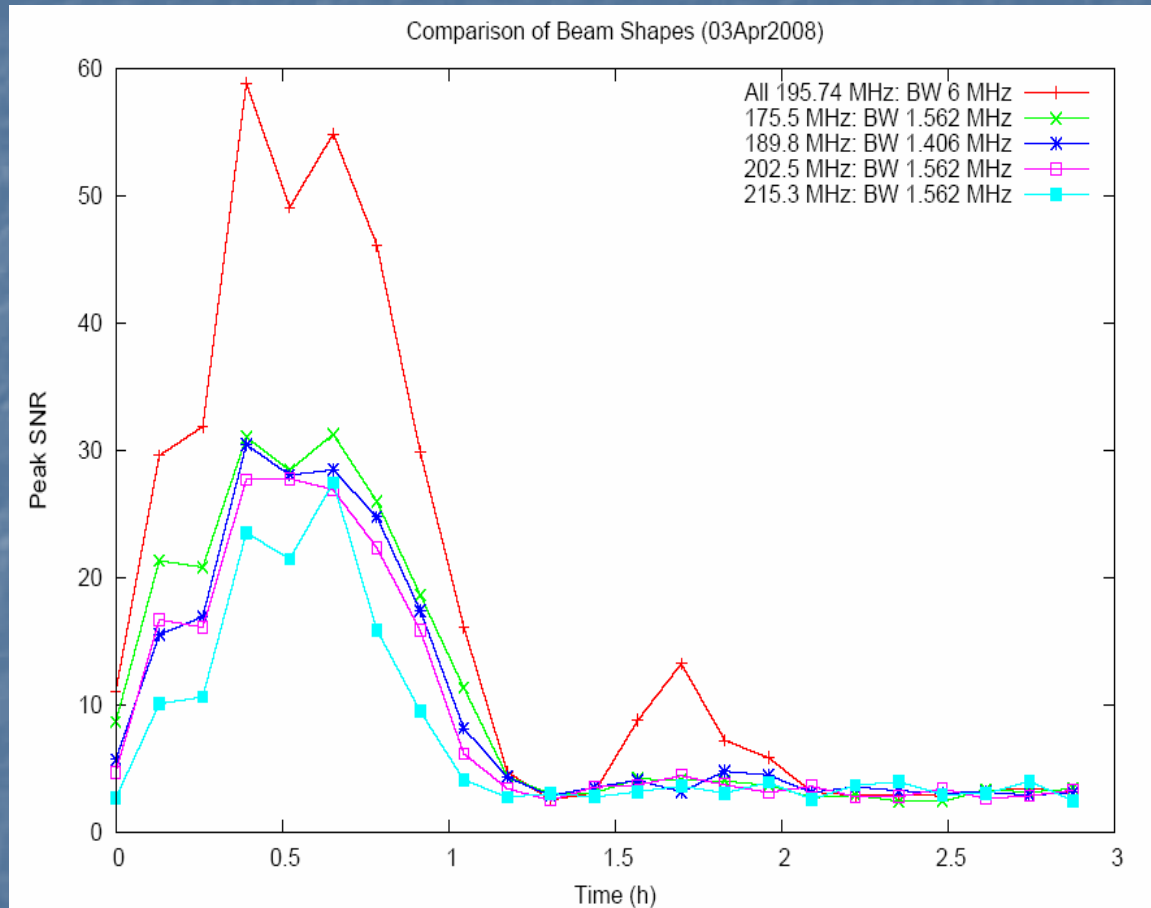
RFI in bands 14/36/37/43







- sidelobe or grating lobe?
- 3db beam =  $6.6^\circ$
- expected:  
 $\lambda = 1.76\text{m to } 1.3\text{m}$   
 $\sim 6.6^\circ \text{ to } 4.9^\circ$   
 with  $d = 15\text{m}$



Plot from Ben Stappers.

# New Observation – 13 Apr

- Test tracking
- Needs to be debugged

