

# Deep observations with CS1 for a survey of SNRs

N. MOHAN & M. PANDEY

CSI meeting

ASTRON, Dwingeloo, 25th July 2007

## CSI- LBA Current status

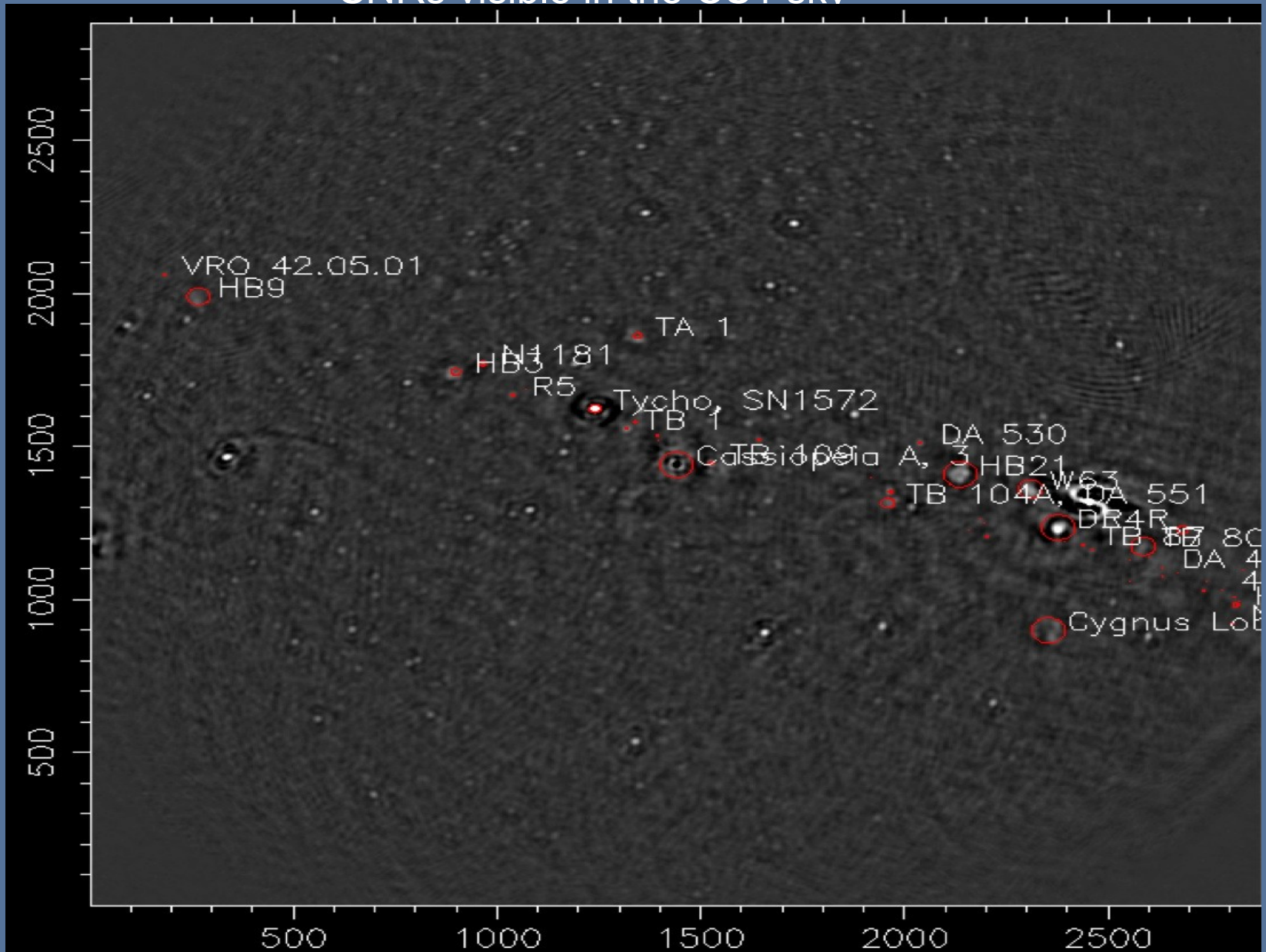
Frequency (MHz)	30	55 - 60	80
Synthesised Beam (arc min)	(~20)	half power (~10)	(~8)
Largest Detected source (degrees)	-	~4	-
Best rms sensitivities achieved (Jy)	-	2 - 3	-

CSI data could be used to study the spectral behavior of bright sources in the Northern Galactic plane.

SNRs are good candidates for this study

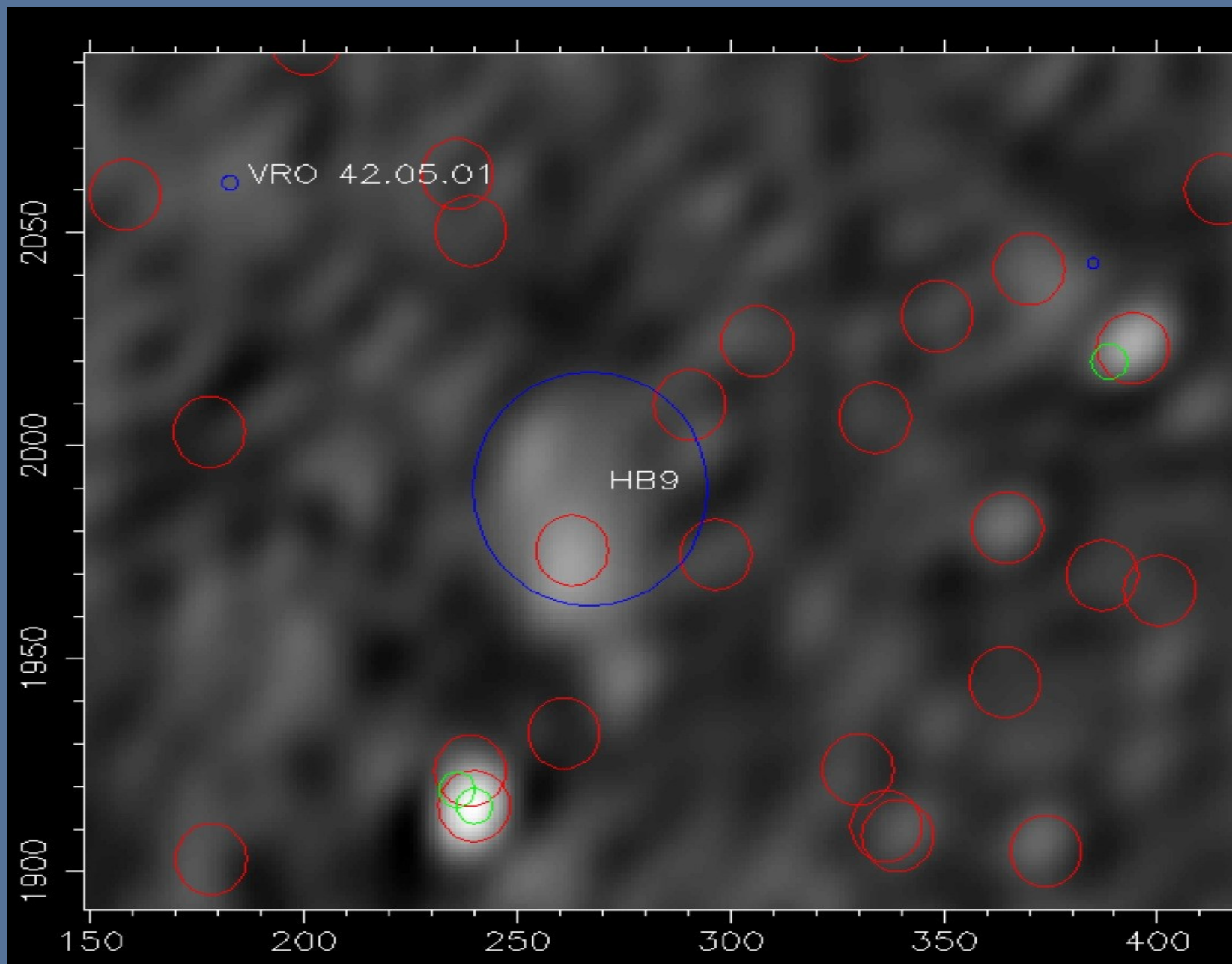
- Niruj has plotted Dave Greens SNR catalogue on 102339 image of Sarod (CS1 data at 60 MHz).
- Resolved shell structure of half a dozen SNRs are seen in the CSI image.
- It will be useful to carry out 30-80 MHz observations on these sources
- Niruj's 'Noise' package + manual is available to carry out image analysis, associating source lists and analyzing source lists against external catalogues.
- A python version of BDSM is available now.

# SNRs visible in the CS1 sky

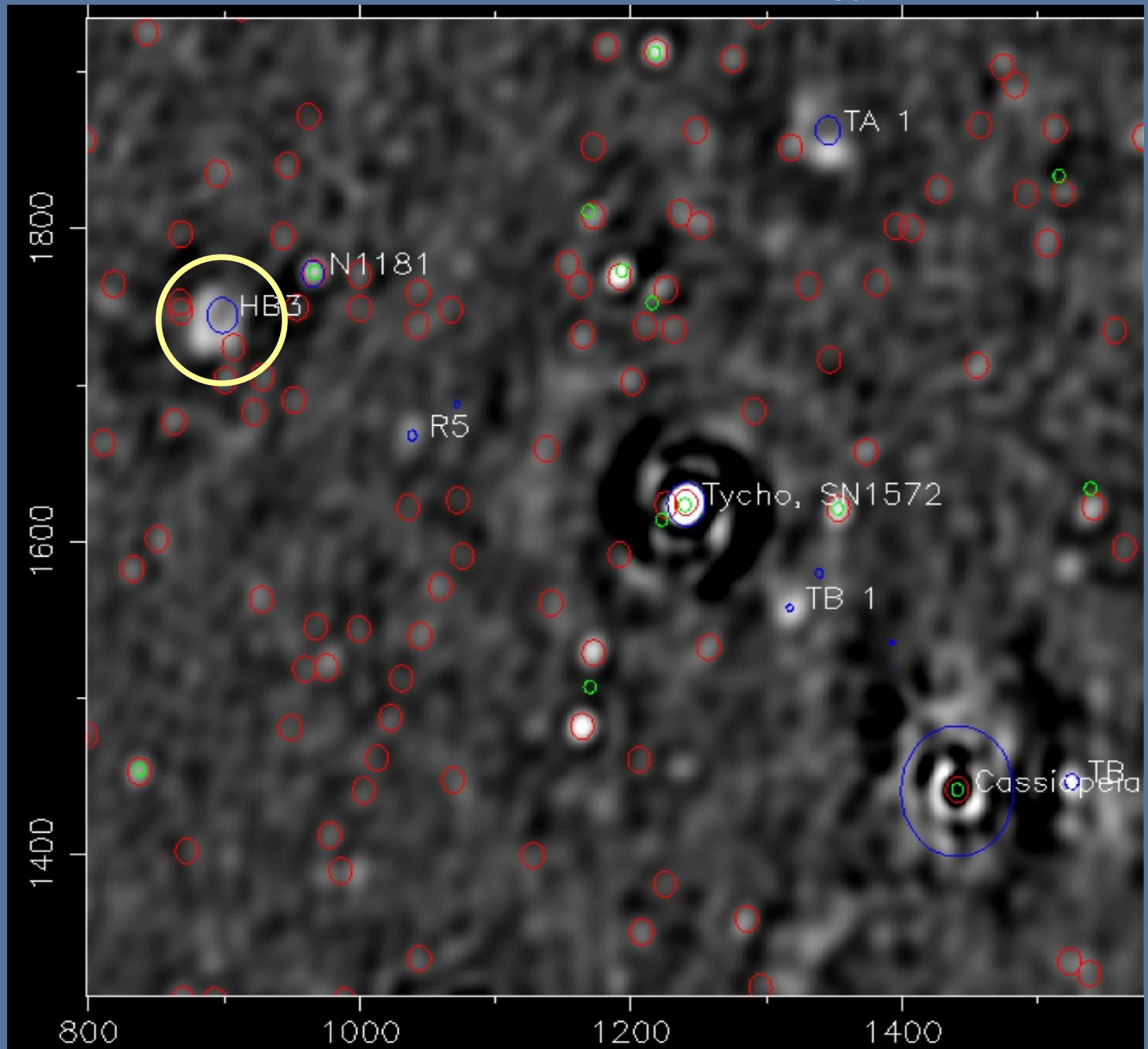


Red circles represent SNRs (size of the circle represents the size of the source) from Dave Green's catalog

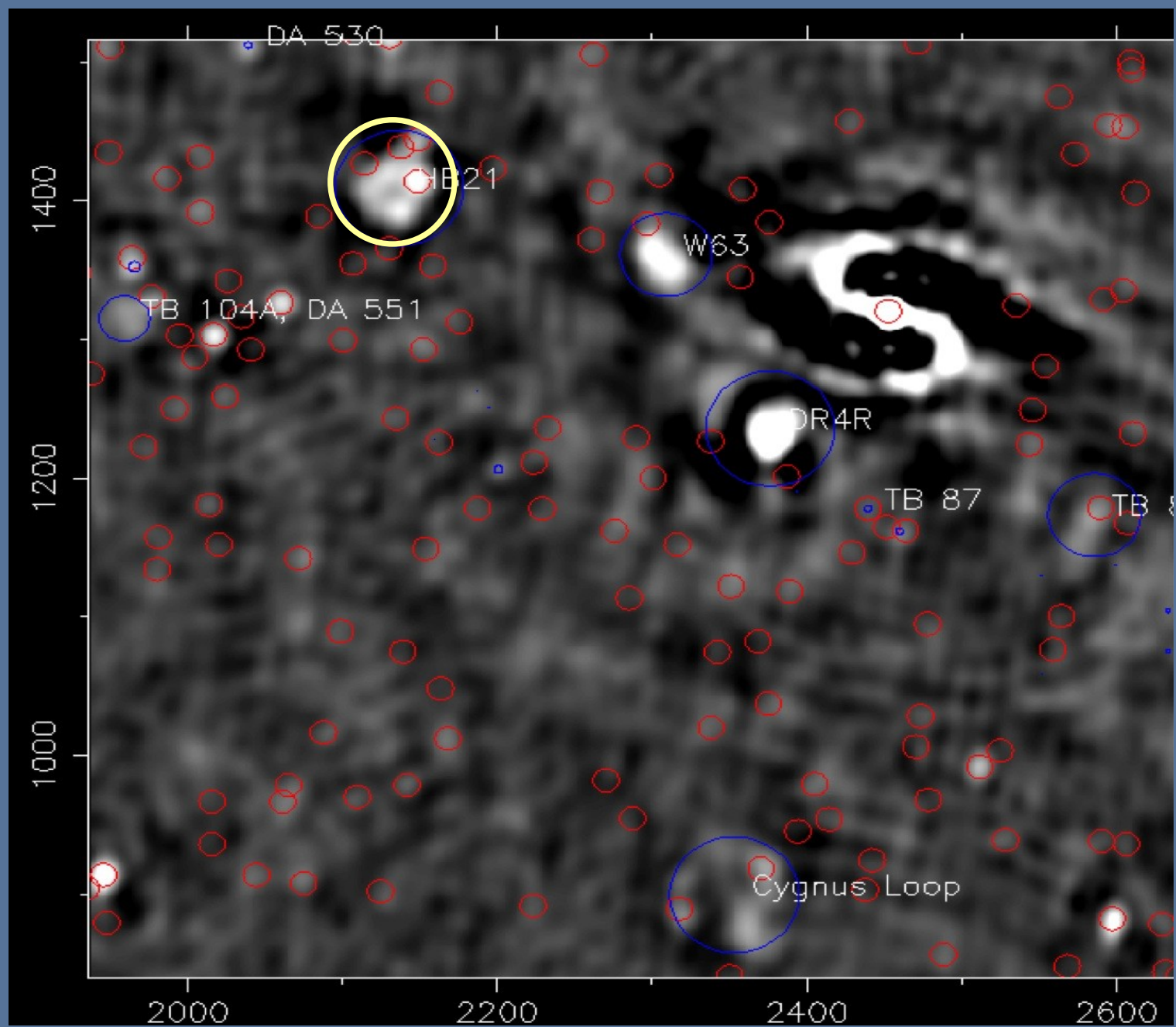
Red circles- 4C catalog, Green circles- 3C catalog, Blue circles- DG SNRs



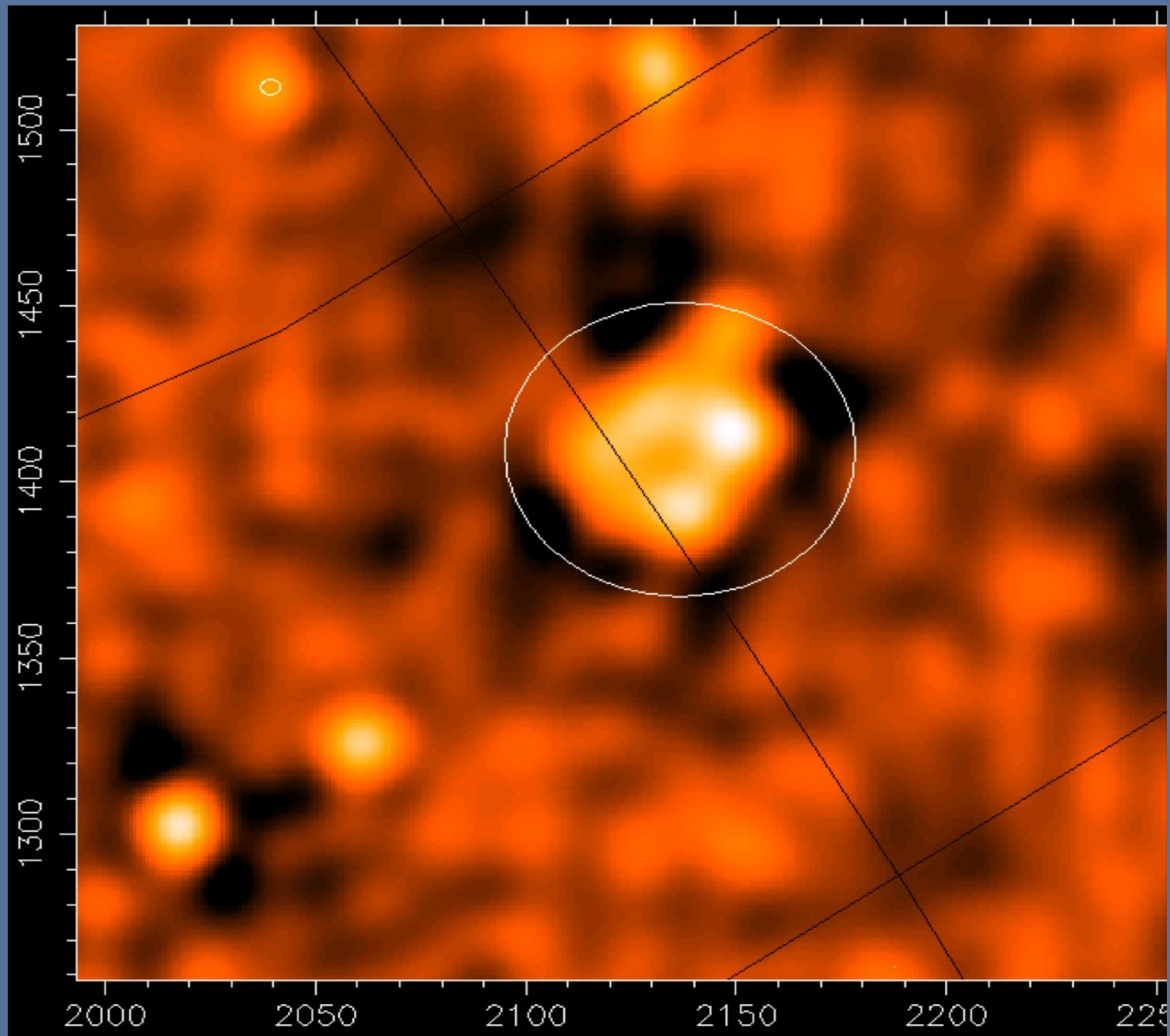
Note HB3 has a resolved shell morphology



Note HB21 shows a well resolved shell morphology with multiple components



- Blown up image of HB 21 showing multiple components





- Multiple components of HB 21 are consistent with this image at 232 MHz with the WSRT (Zhang et al. 2001 ChJAA, 1, 443)

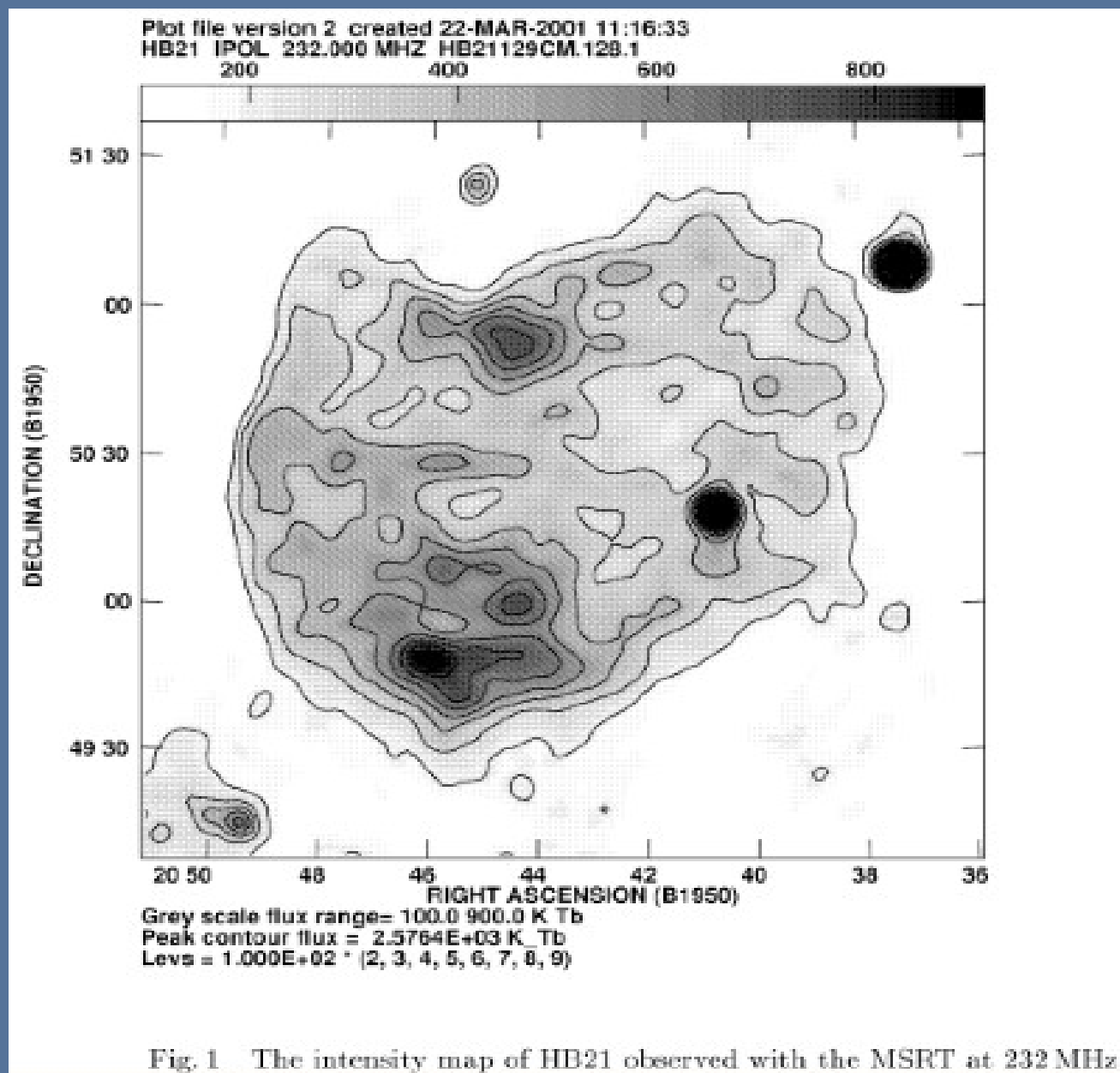


Fig. 1 The intensity map of HB21 observed with the MSRT at 232 MHz.

We would like to carry out a similar study for the following bright spiral galaxies and halos:

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Source	Flux density (57.5 MHz) (Jy)
1- NGC 253	$48 \pm 9$
2- NGC 1068 (M77)	$39 \pm 8$
3- NGC 3034 (M82)	$29 \pm 6$
4- NGC 5236 (M83)	$29 \pm 5$
5- Abell 2256	25

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