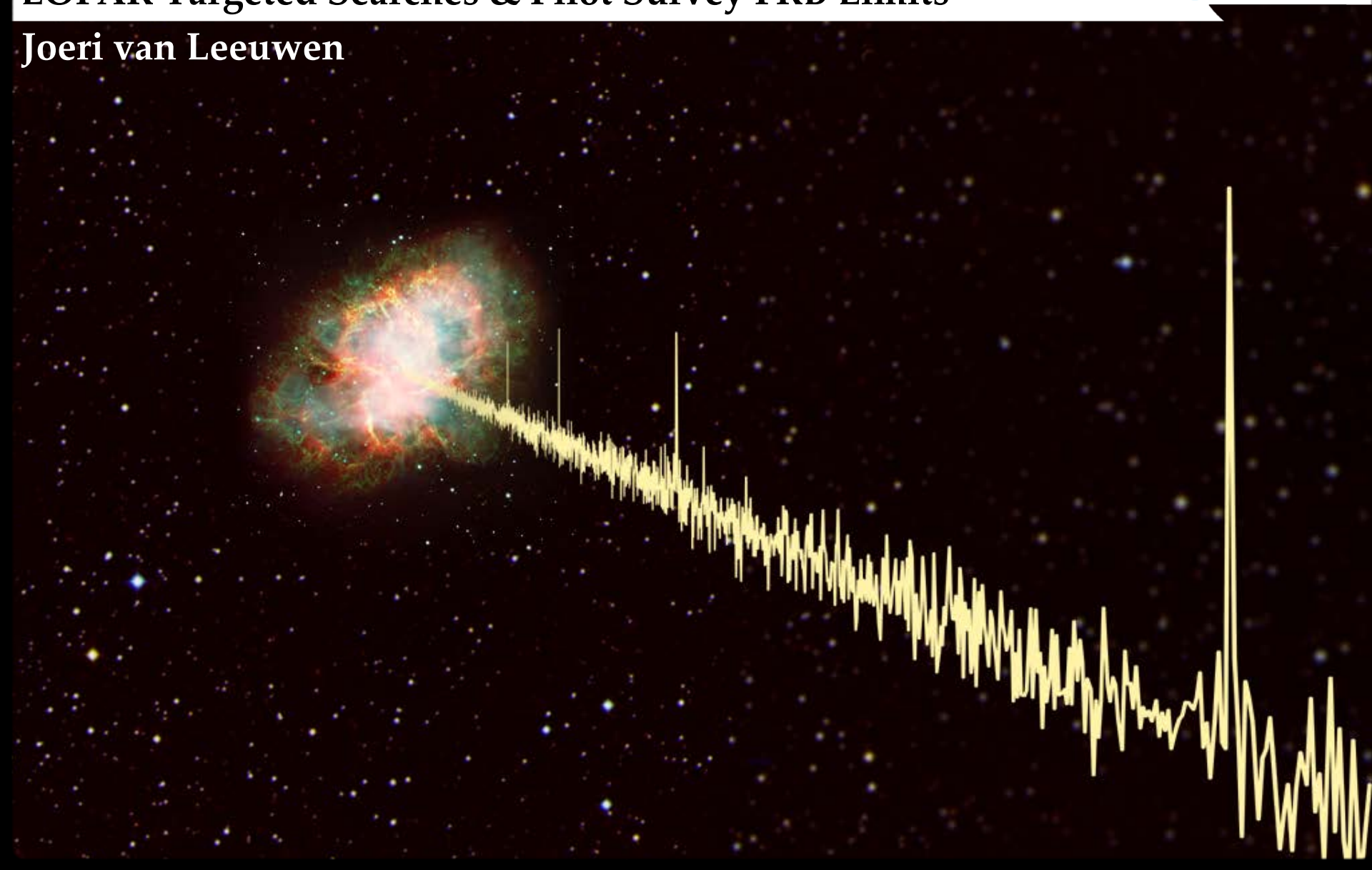
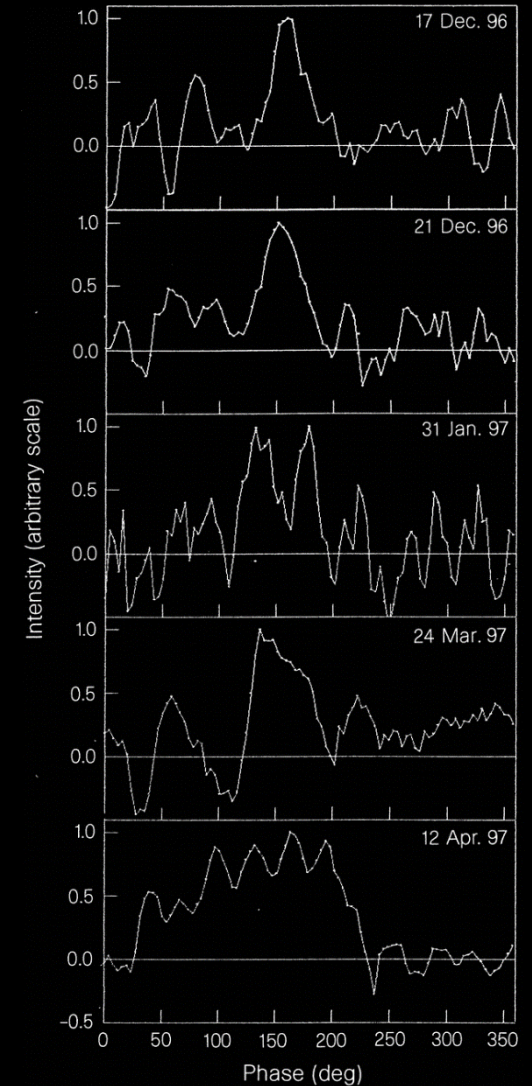


LOFAR Targeted Searches & Pilot Survey FRB Limits

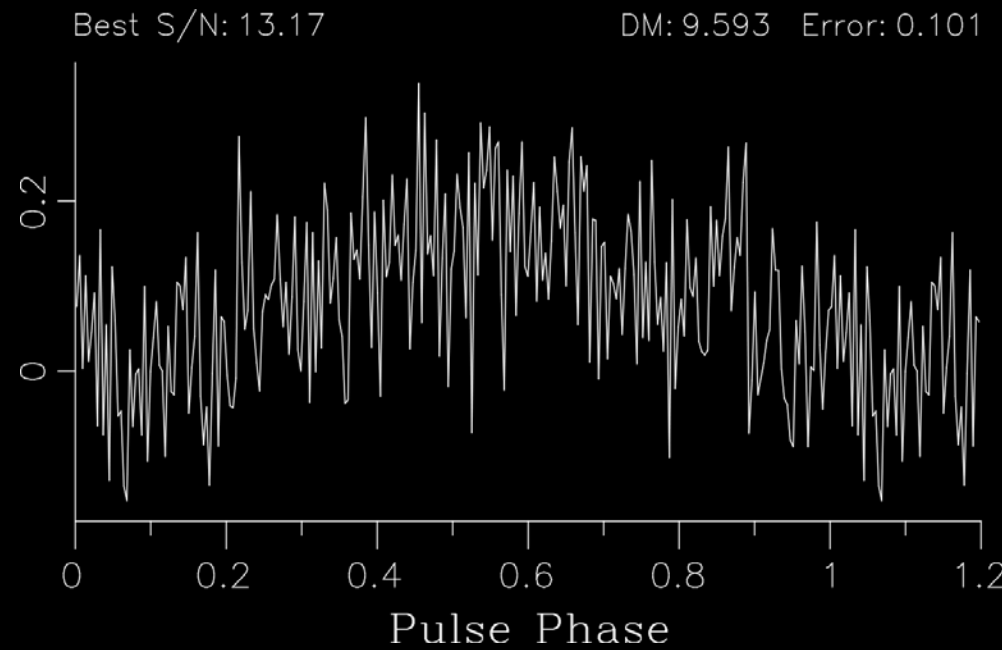
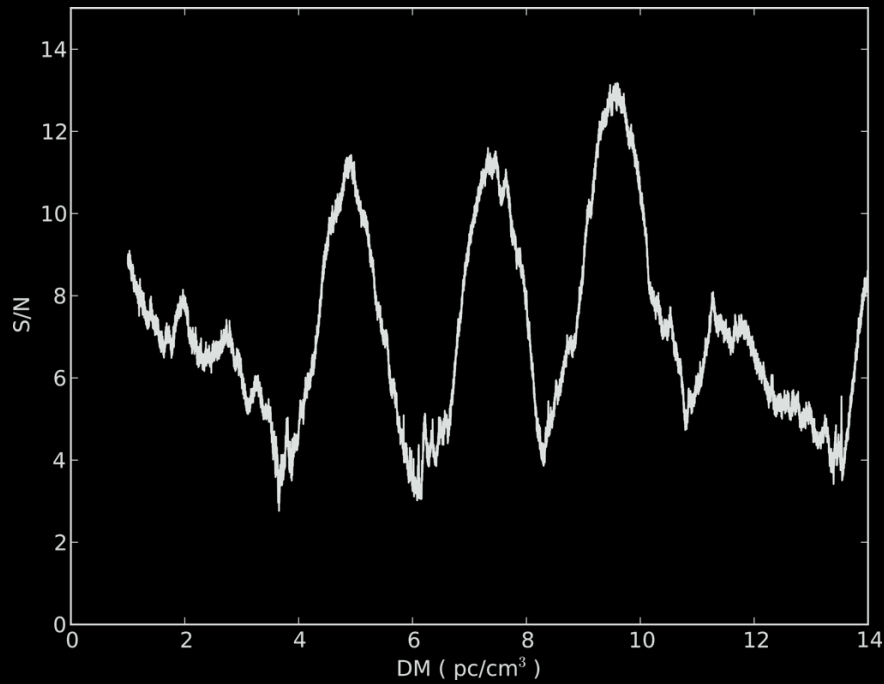
Joeri van Leeuwen



Radio-quiet neutron stars
Geminga



Radio-quiet neutron stars
Geminga (Coenen et al. 2014)



Radio-quiet neutron stars

Name	P (sec)
1E 0630+178 (Geminga)	0.237
AXP 1E 2259+586	6.98
AXP 4U 0142+61	8.6
RX J1308.6+2127	10.32
RX J2143.0+0654	9.44
SGR 1900+14	5.17
1RXS J141256.0+792204	0.059
RXJ1605.3+3249	6.9 (?)

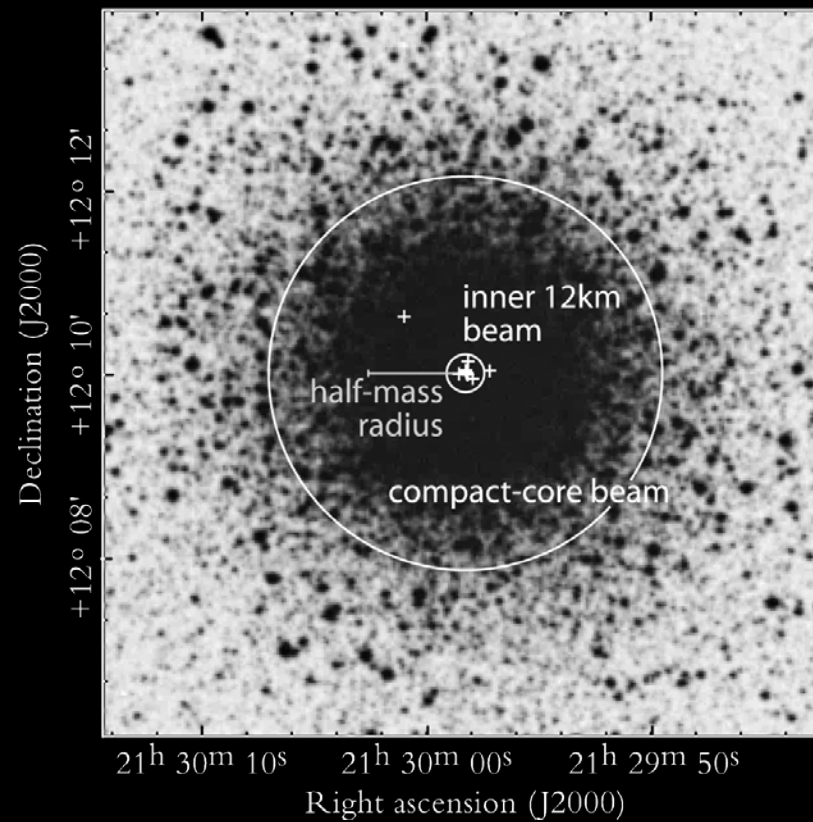
High-energy sources
Pulsar wind nebulae



High-energy sources
Supernova remnants



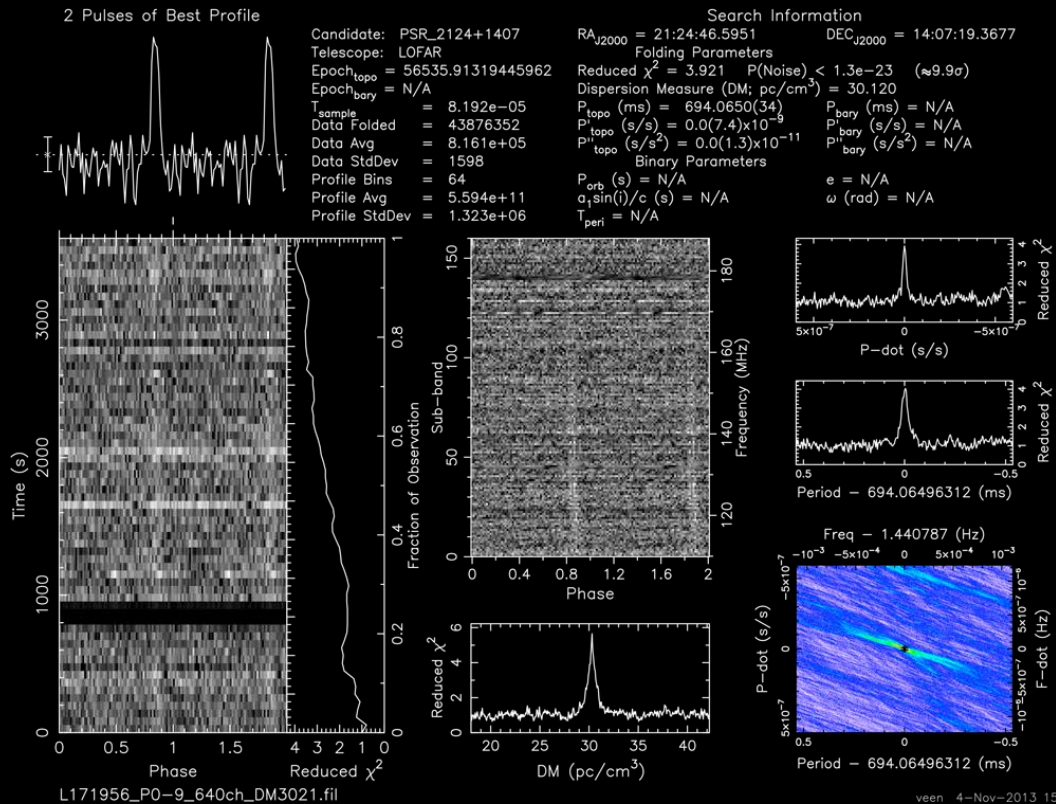
Nearby galaxies and globular clusters
GC M15 (ter Veen et al. 2014)



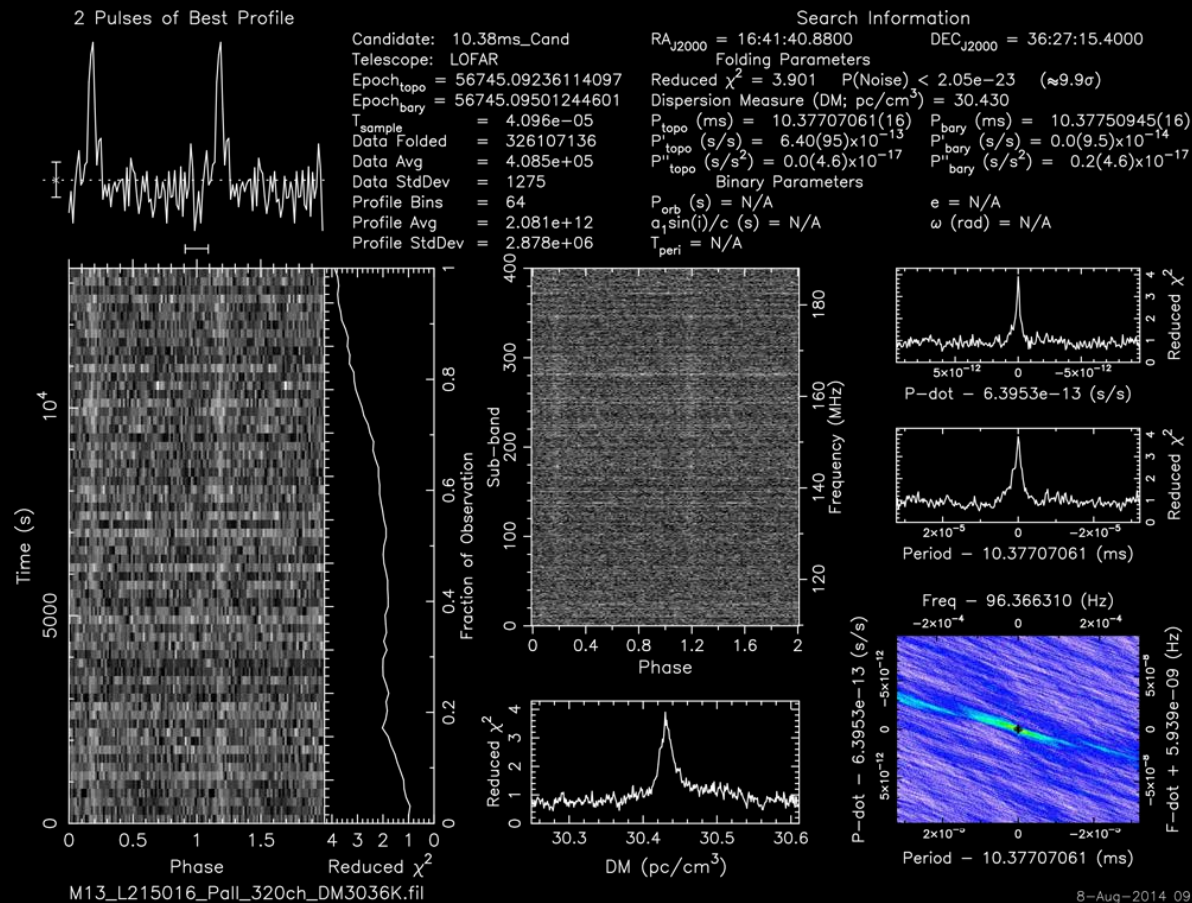
Nearby galaxies and globular clusters

GC M15 (ter Veen et al. 2014)

Test pulsar detected .. By GC pulsars surprisingly absent



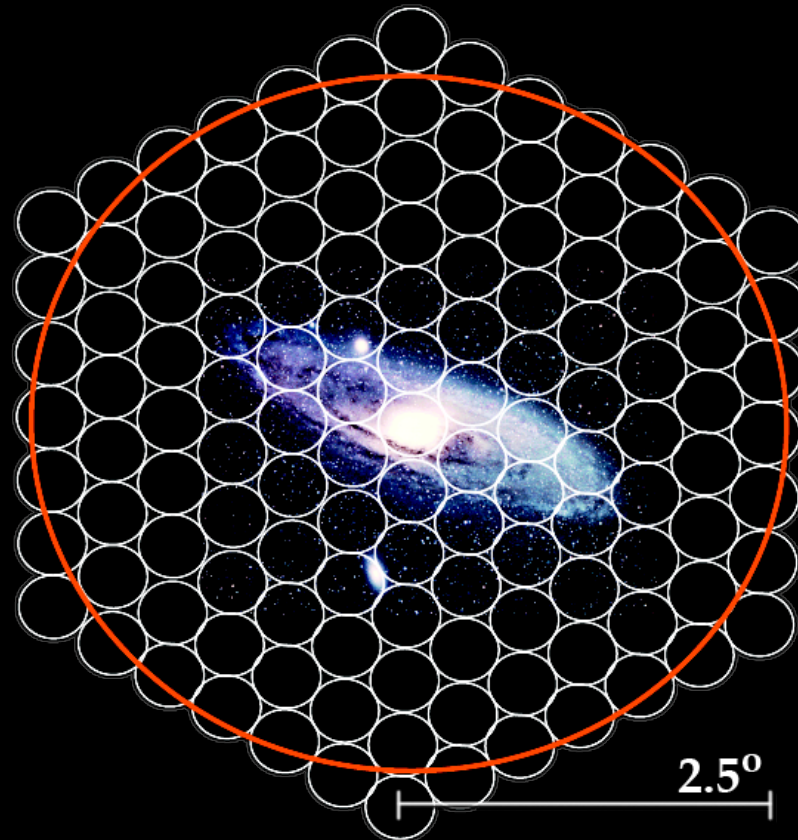
Nearby galaxies and globular clusters
GC M13 (ter Veen et al. 2014)



Science – TS 3

Nearby galaxies and globular clusters

127 beams on M31



Science – TS 3

Nearby galaxies and globular clusters

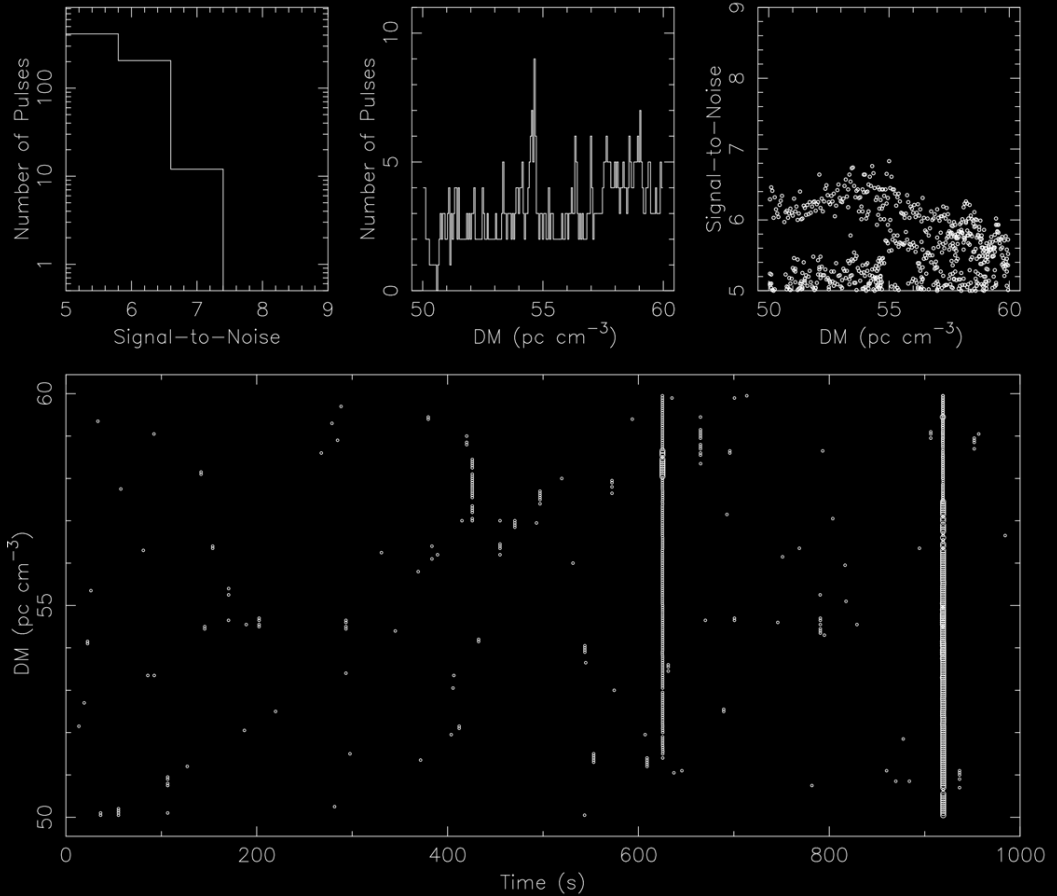
127 beams on M31

Single pulse results for 'NONE_L30906_RSP2'

Source: M31
Telescope: LOFAR
Instrument: HBA_110_190

RA (J2000): 00:42:44.0000
DEC (J2000): 41:16:08.0000
MJD_{topo}: 55822.003472222248

N samples: 1376256
Sampling time: 2621.44 μ s
Freq_{ctr}: 153.6 MHz



evan 11-Jun-2013 11:56

LPPS FRB Limits



Cornell University
Library

arXiv.org > astro-ph > arXiv:1408.0411

Astrophysics > Solar and Stellar Astrophysics

The LOFAR Pilot Surveys for Pulsars and Fast Radio Transients

Thijs Coenen (1,2), Joeri van Leeuwen (2,1), Jason W. T. Hessels (2,1), Ben W. Stappers (3), Vladislav I. Kondratiev (2), A. Alexov, R. P. Breton, A. Bilous, S. Cooper, H. Falcke, R. A. Fallows, V. Gajjar, J.-M. Grießmeier, T. E. Hassall, A. Karastergiou, E. F. Keane, M. Kramer, M. Kuniyoshi, A. Noutsos, S. Osłowski, M. Pilia, M. Serylak, C. Schrijvers, C. Sobey, S. ter Veen, J. Verbiest, P. Weltevrede, S. Wijnholds, K. Zagkouris, A.S. van Amesfoort, J. Anderson, A. Asgekar, I. M. Avruch, M. E. Bell, M. J. Bentum, G. Bernardi, P. Best, A. Bonafede, F. Breitling, J. Broderick, M. Brügger, H. R. Butcher, B. Ciardi, A. Corstanje, A. Deller, S. Duscha, J. Eislöffel, R. Fender, C. Ferrari, W. Frieswijk, M. A. Garrett, F. de Gasperin, E. de Geus, A. W. Gunst, J. P. Hamaker, et al. (35 additional authors not shown)

(Submitted on 2 Aug 2014)

We have conducted two pilot surveys for radio pulsars and fast transients with the LOFAR (LOFAR) around 140 MHz and here report on the first low-frequency survey. This new pulsars. The first survey, the LOFAR Pilot Survey, covered an area of 1.4×10^4 sq. deg. with

We gratefully acknowledge support from the Simons Foundation and member institutions

Search or Article-id

(Help | Advanced search)

All papers

Download:

- PDF
- Other formats

Current browse context:

astro-ph.SR

< prev | next >

new | recent | 1408

Change to browse by:

astro-ph

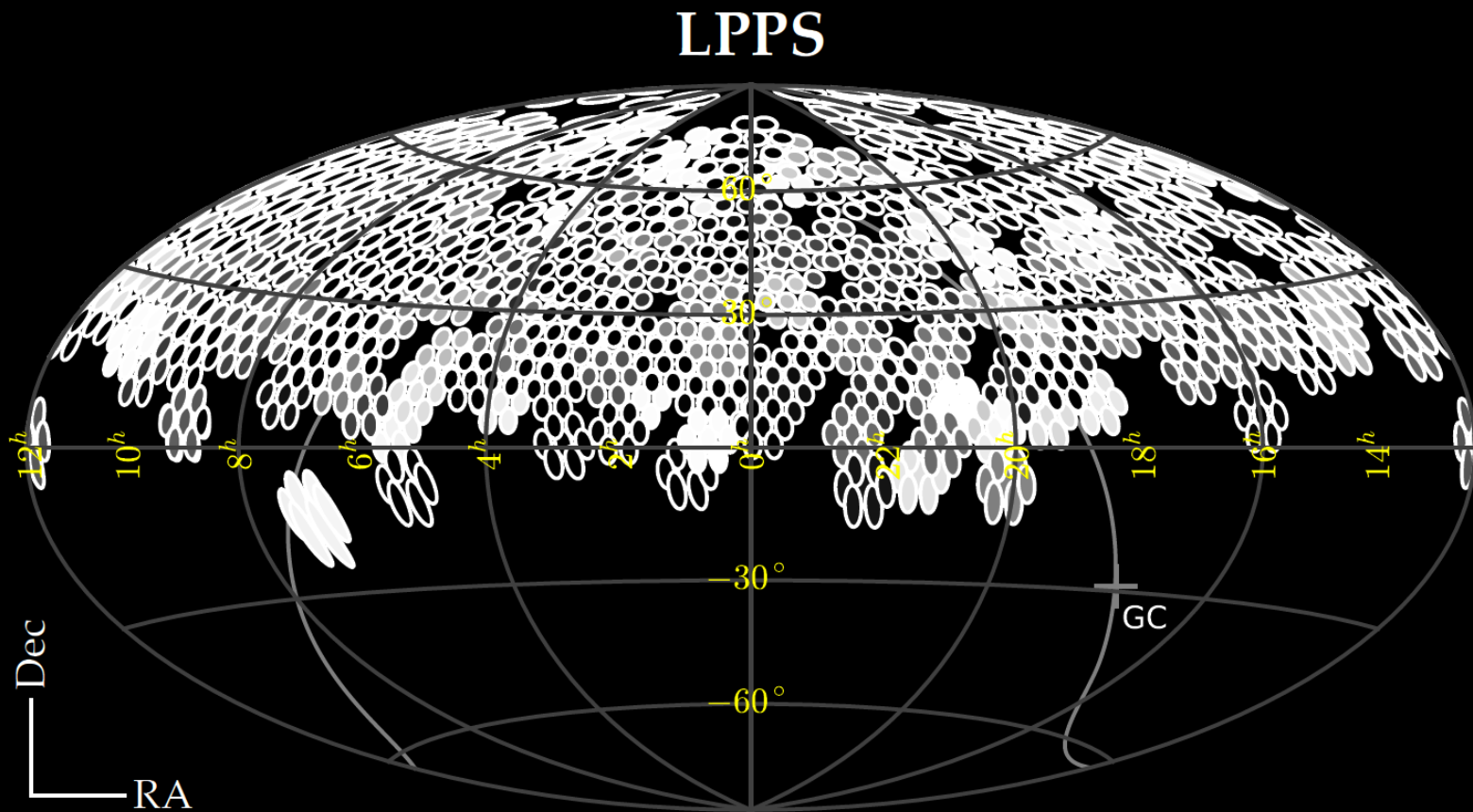
astro-ph.HE

References & Citations

- NASA ADS

Bookmark (what is this?)

LPPS FRB Limits



LPPS FRB Limits

$$R_{\text{FRB}}(S > 107 \sqrt{\frac{w}{0.66 \text{ ms}}} \text{ Jy}) < 1.5 \times 10^2 \text{ sky}^{-1} \text{ day}^{-1}$$

*Most stringent low-frequency
limit published so-far.*

$$\Phi_{\text{FRB}} < 2.5 \times 10^5 \left(\frac{142}{1300} \right)^{-1.3(\alpha+2)} \text{ Gpc}^{-3} \text{ yr}^{-1}$$

