



LBA Update

Cormac Reynolds
9 November 2022

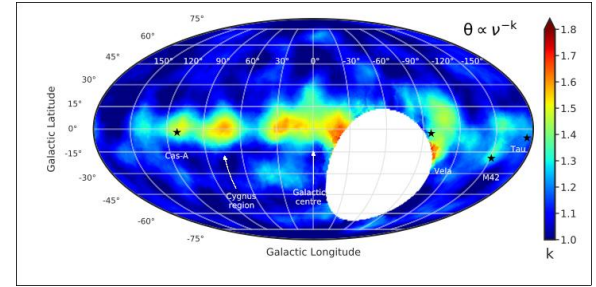
Australia's National Science Agency



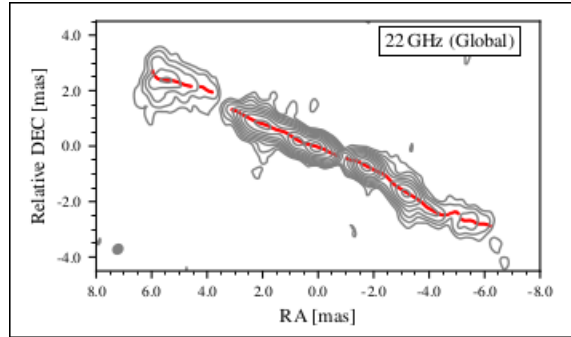
Vanessa Kelly, VLBI, 2019

LBA Highlights (since November 2021)

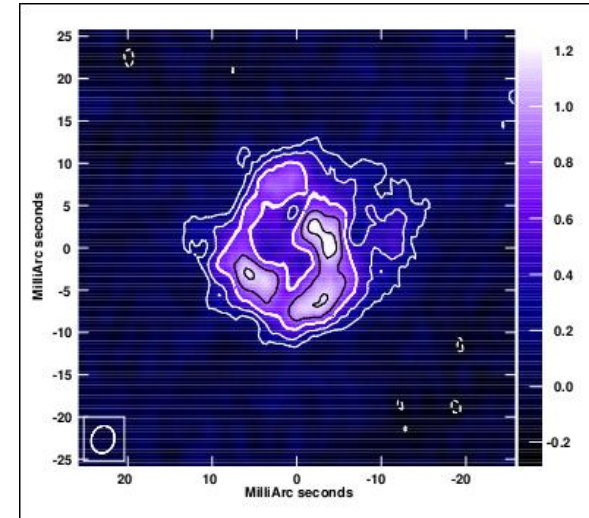
- 6 LBA sessions
- 504 hrs observing
 - 32 User experiments
- 7 published papers
 - RadioAstron obs of SGR A* & NGC 1052
 - All sky scattering
 - SNR 1996cr



Koryukova et al.



Baczko et al.

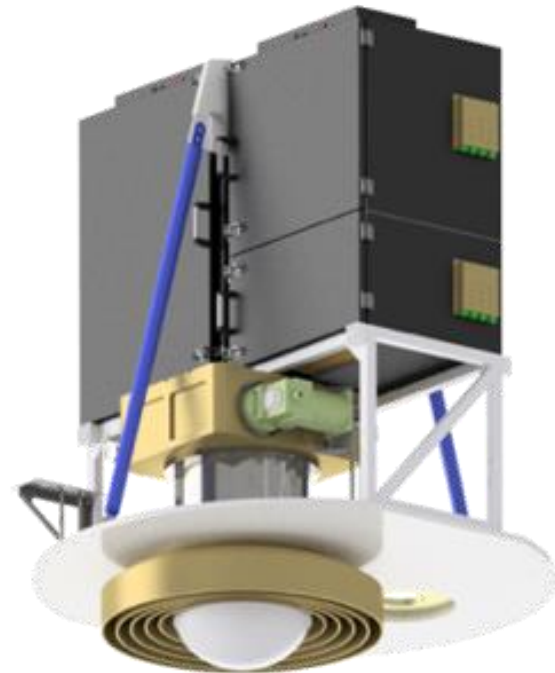


Bietenholz et al.



Parkes

- UWL 1-4 GHz now routine
 - Transitioning from LBA DAS to Medusa
 - Will allow recording up to 8 Gbps in near future
 - Higher possible
 - Post-correlation pol conversion
- Higher frequency receivers remain on rotation (according to demand)
- CryoPAF installation may interfere with VLBI sessions



ATCA

- BIGCAT will see significant sensitivity increase
 - Current 1 Gbps -> 8 Gbps (more possible)
- BIGCAT deployment may reduce available observing days
 - Limited interest in LBA without ATCA



Mopra

- Operating under contract with KASI
 - Have installed Octave and Mark6 (20+ GHz only)
 - Observing few days per month (increasing) for KVN and GMVA
 - Continued participation in LBA



University of Tasmania

- Routine use of Ceduna, Katherine, Yarragadee
- Hobart 26m returning to service after bearing replacement



Ceduna 30m	1-25 GHz
Hobart 26m	1-25 GHz
Katherine 12m	2-14 GHz
Yarragadee 12m	2-14 GHz



courtesy Brett Reid

Auckland University of Technology

- AUT likely to divest at end March 2023
- A consortium led by NZ MBIE planning to take over
- Both 12-m and 30-m likely to be retained
- Continued participation in LBA expected



Warkworth 30m	4.8,6.7, 8 GHz
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Warkworth 12m	2, 8 GHz
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LBA - Correlator

- Located at Pawsey centre
- Transitioning from Magnus to Setonix
 - Minor impact on processing this year
- Facilitated by switch to container installation (Singularity)
- Setonix available soon...





Thank you

Space and Astronomy

Cormac Reynolds

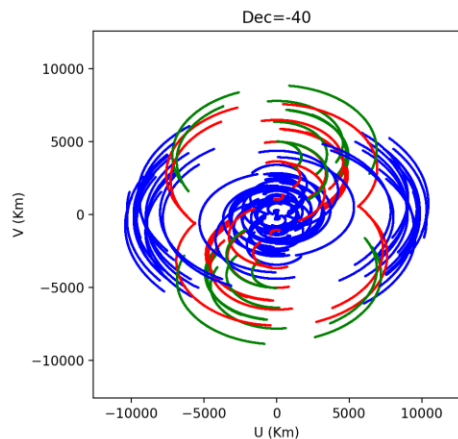
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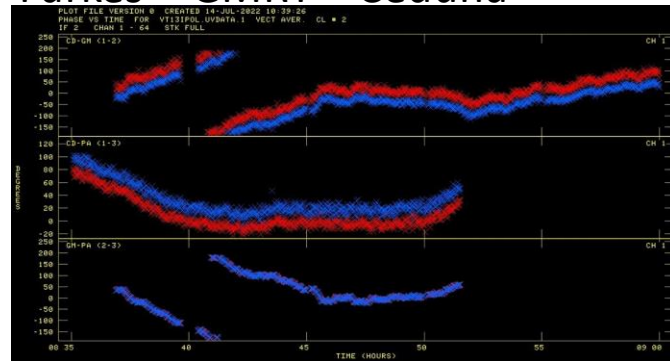
East Asian VLBI Network

- Ongoing collaboration
 - Observations with FAST
- uGMRT fringes with LBA
- Thai 40m and Malaysian 12m next year



- Thailand
- Malaysia
- LBA + SKA-Mid

Parkes – GMRT – Ceduna





SKA-VLBI Science Workshop

VLBI in the SKA Era
14-18 February 2022



#SKAVLBI2022



- More than 400 participants from ~40 countries
- **Summary paper in preparation:** SKA-VLBI science and requirements, data chain and products, SRC role for VLBI, software developments and data reduction packages
- **Coordination between SKA and VLBI arrays to be facilitated by GVA**