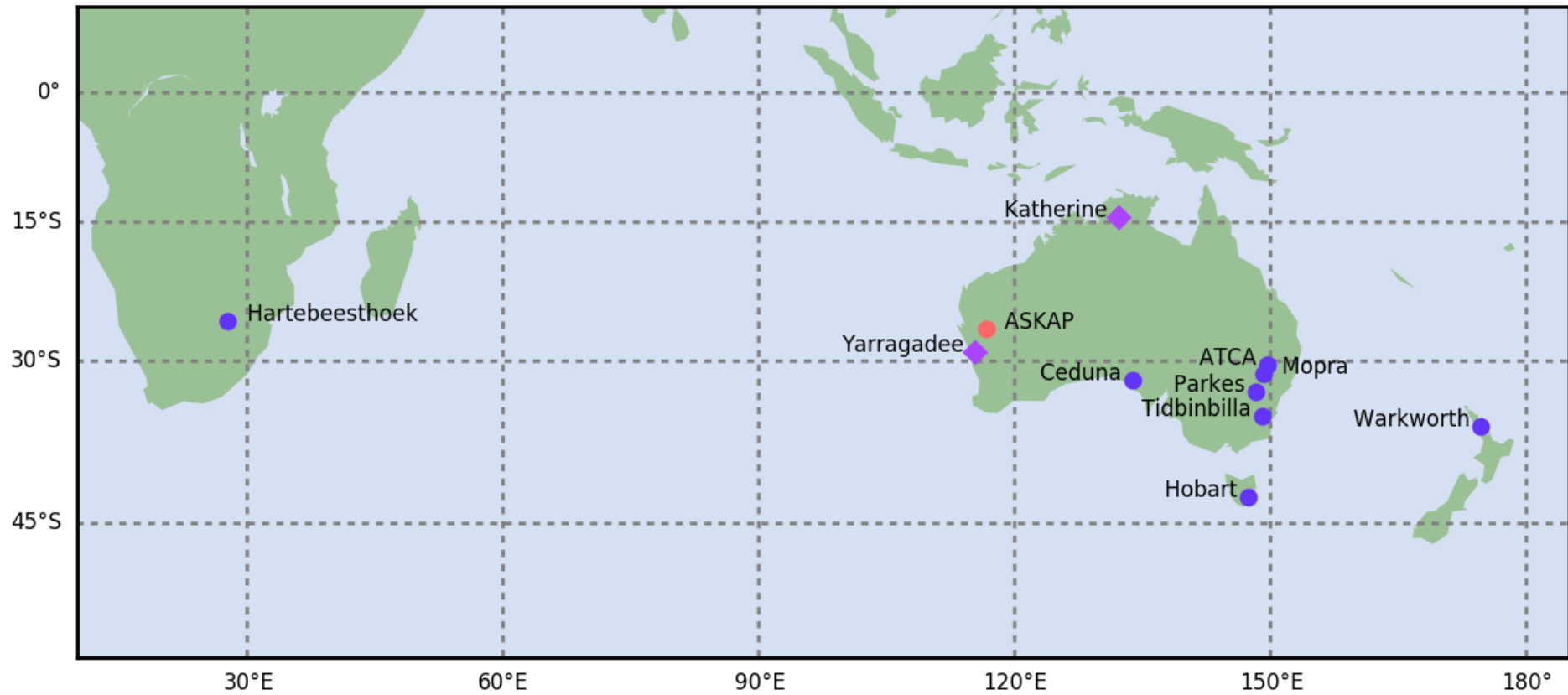


Long Baseline Array



The LBA – Past 12 Months

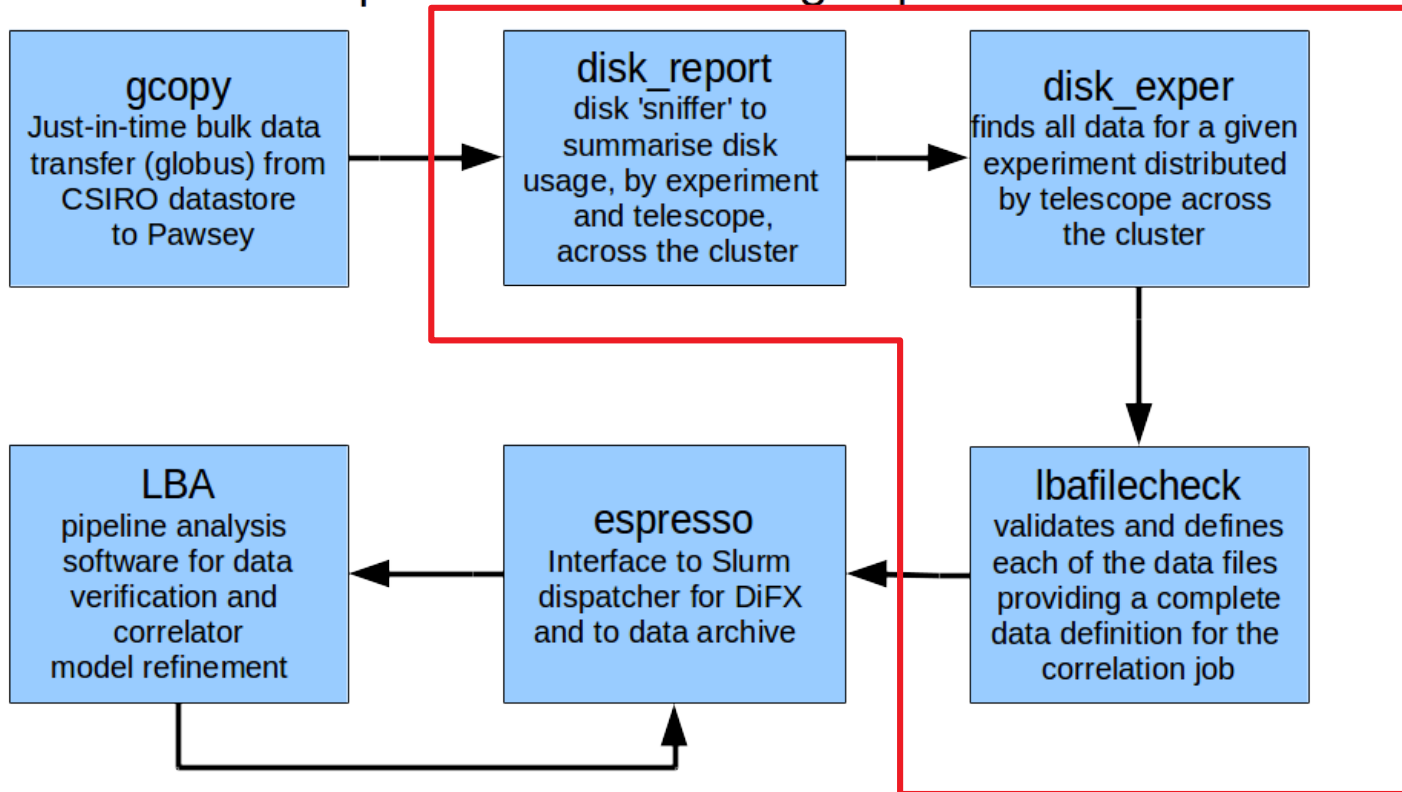
- 30 Days observing
 - 4 ATNF Antennas (Parkes, ATCA, Mopra, ASKAP)
 - 4 UTAS antennas (Hobart , Ceduna, Yarragadee, Katherine)
 - Warkworth x2 antennas (AUT, NZ)
 - Tidbinbilla, Hartebeesthoek
 - Kunming, Tianma65,
 - Hitachi, Yamaguchi, Kashima
- Upgraded to DiFX-2.6.1
 - CALC11 by default
 - Ongoing astrometric series revert to CALC9
 - Analysing need for this
 - Multiple datastreams to support DBBC3 (AuScope)
- Espresso updates
 - Data handling for multiple datastreams

Espresso

Now Python3 compatible
fsclock.py for FS clock predictions
Supports multiple datastreams per station

Updated for multiple
datastreams per station

The Espresso Processing Pipeline



LBA Correlator Facility - Pawsey Centre

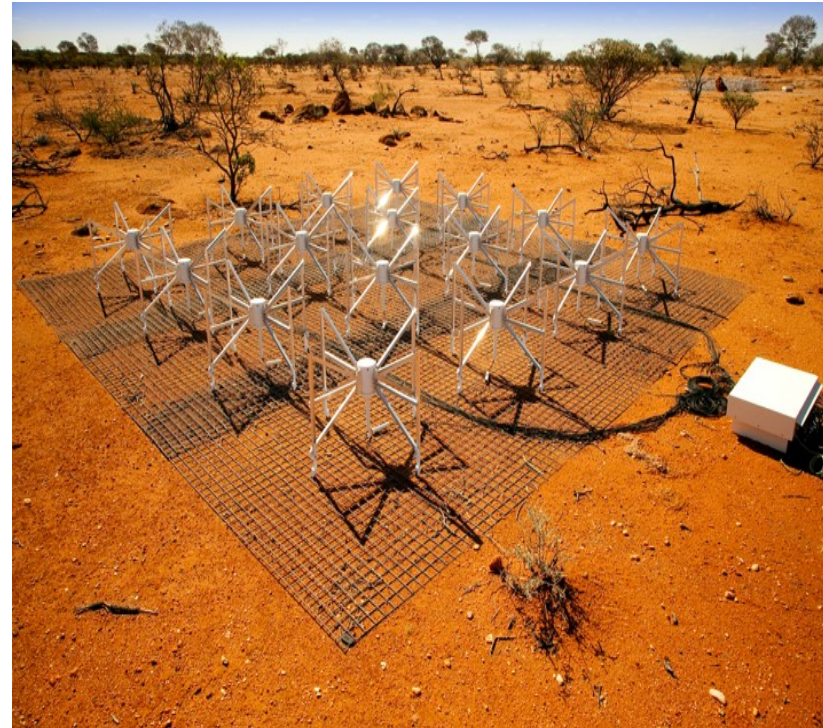
•Magnus Specs

- 1488 x 24 core nodes
 - 1097 Teraflops
- Cray Aries interconnect
 - 72 Gbps per node
- #41 on Global Top500 list of supercomputers (2014/11)
- 225,000 CPU hours secured through merit allocation in 2019
- \$70 million tender by Pawsey for upgrade of full supercomputing suite



LBA-Low

- MWA Style dipole
 - Bluering digital processing
 - RFSoc Sampler/FPGA
 - Channelisation+BeamForming
 - \$US190/K 256 dipoles
- Locate at existing LBA observatories?
 - Saves on site costs (power, network etc)
- Possibly near existing networks
- Unfunded, but may allow ILT science on SKA-LOW (100s of beams?)



Goals for this Meeting

- PolConvert – required for Parkes UWB receiver
 - Learn how to use
 - Document
- Streamline Multiple Datastreams in v2d
 - `datastream_filelist` ?

```
File Edit Tools Syntax Buffers Window
[]
DATASTREAM hi_rcp
{
    filelist = vx028a_hi_rcp.filelist
}
DATASTREAM hi_lcp
{
    filelist = vx028a_hi_lcp.filelist
}
ANTENNA HI
{
    #filelist = vx028a_hi.filelist
    datastreams = hi_rcp
    datastreams = hi_lcp
    zoom = default
    clockOffset = 6.218
    clockRate = 0.000E+00
    clockEpoch = 58619.578
}
165,0-1 46%
```