

PARKES

OVERVIEW

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CRYO PAF

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PULSE@PARKES DEVELOPMENTS

BREAKTHROUGH LISTEN

- Installed preliminary single beam system in September
 - (full single beam mid-December, multibeam February 2017)
- Started time allocation on 4th October, officially 'kicked off' 8th November with Proxima B observation & press release
- ~4-5 hr observing blocks per day, varying in time (LST)
- Smaller total allocation this semester due to installation and multibeam timescales, larger allocation next semester to equate
- Data storage under discussion, Pawsey application made, all data public
- Intention is combination of pointed observations and Galactic plane survey (step and stare, ~15mins)



MAINTENANCE HAPPENINGS

- Master Equatorial (failing to lock, issues with motion, slow v fast speeds)
- Translator (y-axis issues, receiver changes $<2^{\circ}$ from zenith)
- Power Switchboard Upgrade (imminent 2 week shutdown)
- Tower environment (ACM in ground floor, decontaminated)
- Maser Failure (Power supply failure, Vremya replacement from Narrabri)
- Leap second (implementation for January 1st)
- Maintenance handovers ('shared risk' 30mins)



BACKEND MOVEMENTS

- Since last ATUC:
 - DFB 3 removed from racks
 - DFB 4 moved to where DFB 3 used to be
 - CASPSR moved
- Imminent
 - BPSR/HIPSR movement to another rack
 - BPSR/HIPSR capability movement to new GPUs
- Next Year
 - New 4 channel digitiser/sampler for existing backends ~ March
 - Working towards 'all-in-one' GPU backend



FRONTEND MOVEMENTS

- Since last ATUC:
 - MPI PAF removed, details on science later from Aaron
 - Multibeam refurbishment almost complete, to be reinstalled next week for mid-December observing
 - All feed horn vacuum windows have been replaced, unstable amplifier 12B has been replaced, cryodynes serviced, repairs to 70K radiation shield and all vacuum o-rings replaced.
 - Ultra-WideBand receiver (UWB)
 - George Hobbs Project Scientist
 - Intention to roll out new control software (ToS)
 - Work to continue on completion of FAST multibeam (see Tasso talk)
 - Targeting second half of 2017 for installation and commissioning



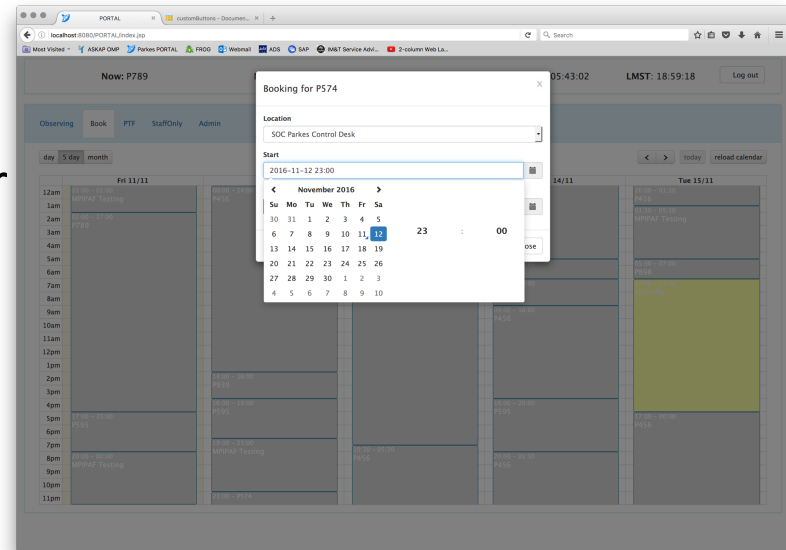
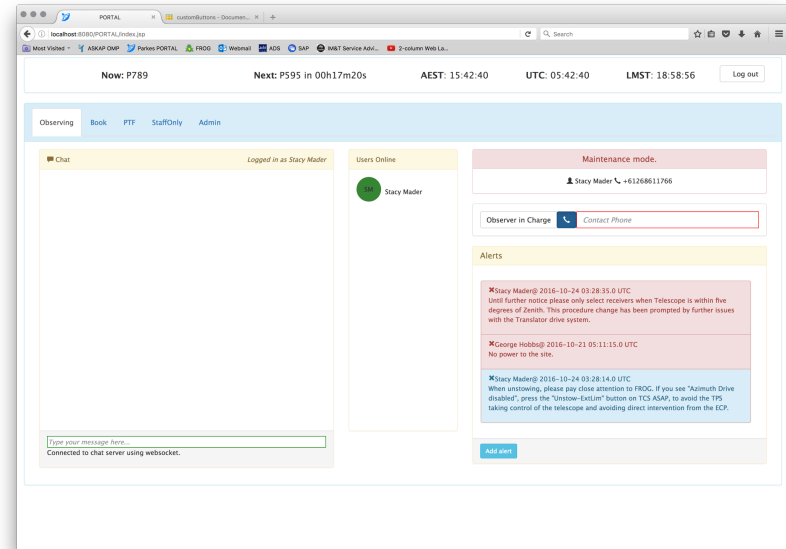
CRYO PAF

- After ultra-wideband (low) receiver, intention is for multibeam replacement, cryogenically cooled Phased Array Feed (AKA 3rd generation PAF, AKA Rocket (boosted) PAF)
- Intention to support via LIEF proposal for 2018 funding commencement
 - LIEF proposal to be led by Lister Stavelly-Smith
 - currently coordinating discussion/science objectives
 - Parkes Forum tomorrow to discuss
 - University internal deadlines for Expressions of Interest January 2017
 - LIEF proposal deadline February 2017 (decision November 2017)



USER SUPPORT UPDATES

- Since last ATUC:
 - users guide updates in progress
 - updated portal in line with ASKAP portal
 - new version ‘live’ by end of November
 - able to book part sessions
 - real-time updates (alerts, bookings etc)
 - simpler interface
 - will be training tool (video/document) for new system
- On horizon
 - Incorporate FROG into Portal



PULSE@PARKES DEVELOPMENTS

- Working on developing 'PULSE@PARKES' as an educational package for Universities, both nationally and internationally (Shi Dai, George Hobbs & Rob Hollow currently in China)
 - Providing access to practical radio astronomy, learning for new radio astronomy communities
- Exploring options for online learning modules, remote training
- Trial session with students from MacQuarie Uni last week successful
- George Hobbs and Rob Hollow working with students to develop material (vacation student project)
- Expansion to broaden science scope, e.g. include spectral line (MASE@PARKES?)
- Possible CSIRO 'Lean Launch Pad', purchasable learning modules



THANK YOU

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