



ICALEPCS 2015

International Conference on Accelerator
& Large Experimental Physics
Control Systems

Timing Systems for ATNF Telescopes

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Australia Telescope National Facility sites:

Australian Square Kilometre Array Pathfinder



36 x 12m dia

Australia Telescope Compact Array



6 x 22m dia

BOULARDY STATION

GERALDTON

PERTH

WESTERN
AUSTRALIA

NEW SOUTH
WALES

NARRABRI

PARKES

SYDNEY

Parkes Observatory



1 x 64m



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Application of timing and synchronisation:

- Timestamp observation data:
 - In digitised streams from each antenna
 - In correlated data written to disk
- Antenna pointing
- Common timing cycles:
 - Integration cycle
 - Calibration cycle
- Lock phase of local oscillators to a common reference



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Basic architecture:

