



# 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

BOULARDY STATION

GERALDTON

PERTH

WESTERN AUSTRALIA

Australia Telescope Compact Array



6 x 22m dia

NARRABRI

NEW SOUTH WALES

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:

