

# EXPreS Specifications\\

## Connectivity\\

The 3 ATNF telescopes are connected to Sydney via 1 Gbps “lightpaths”. This is shared with production traffic to the observatories.

- Initial testing will be via standard AARNET route to Europe. This is via Singapore and uses 4×155 Mbps connections
- Routing will then be changed to use the SX Transport 10 Gbps line via the USA. Given the increased RTT this may not give better TCP throughput

## Protocols\\

What protocol needs to be used for the transfers? TCP, UDP, VSI-e, something else? If anything other than TCP (or a similar reliable stream interface) is used then is a packet header format needed (so lost packets don't screw up the data stream).

## Data Format\\

The Mark5B “file” format will be used. This consists of the raw baseband data with regular time headers and header CRC.

- Will Mark5A+ or Mark5B playback be used for these tests. Mark5B playback does not use the CRC in the header so this makes the implementation a little easier.
- Need to specify and agree on the “track assignment” and bit encoding used.

## Control\\

A thin Mark5(B?) client will be written which emulates a real Mark5 and directly controls the LBADR recorder.

- Minimal Mark5 command set needs to be specified in sufficient detail for implementation.

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