



AURA Networking Update

R. Chris Smith & Ron Lambert
AURA Observatory in Chile
CTIO/Gemini/SOAR/LSST



Photons & Petabytes 2012

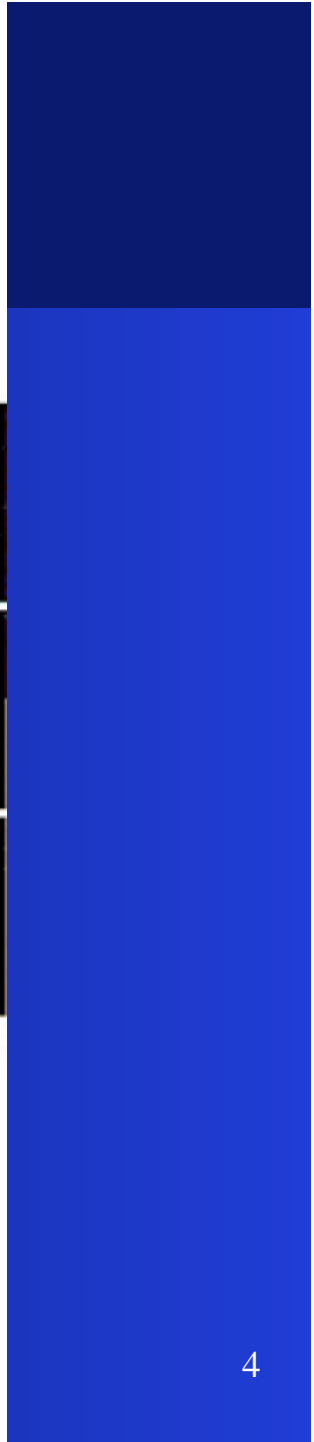
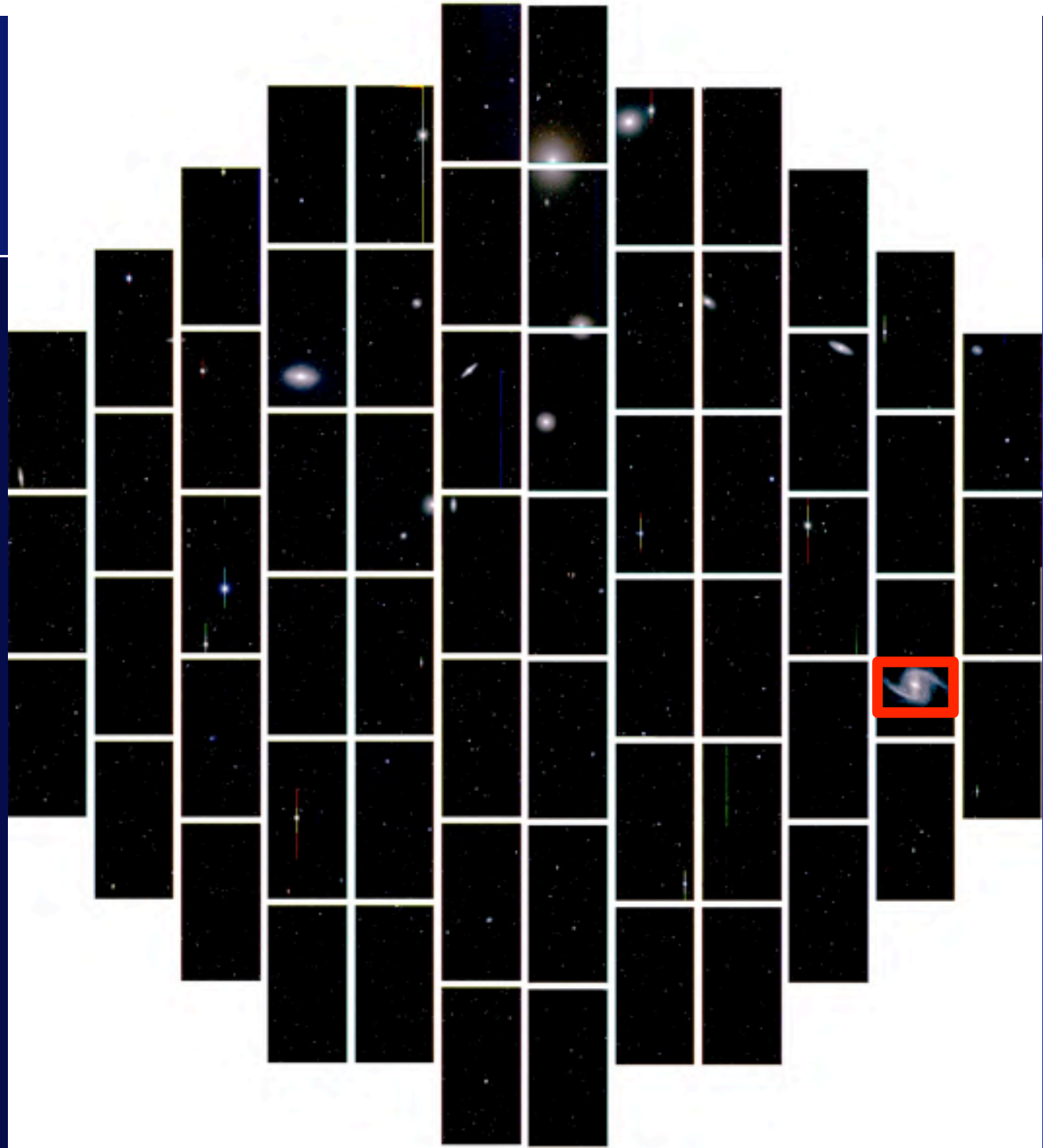


AURA Baseline

- Shared 1Gbps link
 - REUNA providing LS-Stgo
 - LAUREN+AmLight providing Stgo-Miami
- For Tololo+Pachon users, had rate limitation in La Serena firewall of 100Mbps
 - Hardware upgrade done (last weekend)

CTIO & DECam

- Dark Energy Camera commissioned
 - First light 12 September 2012
 - Science since November 2012
- DECam
 - 570 megapixel (largest in S. Hemisphere)
 - 1 GB images uncompressed,
 - usually ~300-500 GB/night





DECam Data Transport

- Automated transport (camera->destination)
 - “Data Transport System”, DTS
 - multiple destinations automatically handled
- Statistics
 - more than 50,000 x 1GB images transferred
 - compression helps, but >30TB transferred
 - most images show up in AZ or IL in <2min
 - high mark last week >700 exposures in 1 night

DECam at CMM

- Chilean science project with fast-reduction requirements (shock breakout supernovae)
- Chilean-led data management
 - Transport via REUNA
 - Pipeline being installed on NLHPC systems
 - Planned reduction in near-real time

Other AURA Telescopes

- LSST (already covered)
- Gemini: new instruments
 - more remote support, remote use planned
- SOAR: new instruments
 - more Brazilian remote use
- SMARTS: new instruments, remote support
- Las Campanas: increased data transfer
- New telescopes...

“Telescope Networks”

- **NEW TREND:** worldwide networks of telescopes acting together
- **LCOGTN:** Las Campanas Observatory Global Telescope Network
- **KMTnet:** Korean Microlensing Telescope network
- **SKYNET/PROMPT:** Transient network
 - <http://skynet.unc.edu/live/>