The Emerging Infrastructure of Autonomous Astronomy

Monday 16 October, 7:30 pm – *Murphey*

Organized by: R. Seaman, *NOAO*
T. Axelrod, *LSST*
A. Allan, *University of Exeter*
R. White, *LANL*
R. Williams, *Caltech*

Meeting the challenges of time domain and transient astronomy demands a new logistical framework for carrying out the practice of astronomy. Manual observing techniques not only will fail to serve, but do not even begin to address the complete problem of defining a new autonomous infrastructure that closes the loop from proposing new research – through experimental design – to the scheduling of survey telescope operations – to the data archiving and pipeline processing that result in the discovery of new transients – to the publishing of these events – through automated follow-up via robotic assets – and finally to the collection, display and interpretation of all related observations, resulting in adjustments to the original research directions.

Agenda

What the heck is "Autonomous Astronomy"? – Rob Seaman
Science drivers for transient astronomy: LSST – Tim Axelrod

Group discussion: *Why study transients and the time domain?*

Closing the loop: VOEventNet – Roy Williams
Tying into existing systems: Gemini ToO – Kim Gillies
Uniting heterogeneous observing assets: HTN – Alasdair Allan

Group discussion: *What infrastructure and standards do we need?*

What to do about moving objects: Pan-STARRS – Francesco Pierfederici
Scheduling for multiple cadences: LSST – Kem Cook

Open-ended discussion: *Hotwiring Astronomy for fun and profit!*

Representatives of other projects exploring autonomous techniques are encouraged to contribute presentations to the BoF and their expertise to the varied working groups.

Links

- Large Synoptic Survey Telescope *http://www.lsst.org*
- Heterogeneous Telescope Networks *http://www.telescope-networks.org*
- eSTAR *http://www.estar.org.uk*
- Thinking Telescopes Project *http://www.thinkingtelescopes.lanl.gov*
- IVOA VOEvent working group *http://voevent.org*
- VOEventNet consortium *http://voeventnet.org*