DECam SV

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Goal of DECam SV

- The goal of SV is to obtain scientifically useful data that both tests and highlights for the community the capabilities of the DECam instrument.

Current Schedule for SV

- Community and DES SV periods are separate

- Plans for community SV are to have 2 one week long periods separated by one weeks.

- Community SV is planned for the end of the 2012A semester (Aug).

- Call for proposals to be done separately from normal proposal cycle.

Selection of SV programs

- The call for SV proposals will be less formal than the regular TAC process
- Current plan is to have proposers submit a few paragraphs describing their scientific program and data requirements
- Panel of commissioning team scientists will determine which proposals will be accepted based on criteria that include use in exercising the instrument and pipeline as well as scientific impact
- Team will then work with accepted proposers to build an observing plan.

SV programs

- SV data is shared risk and may or may not be taken depending on other commissioning pressures
- PIs of accepted programs that do receive data are expected to reduce and analyze data in a timely fashion (details to be determined in call)
- PIs are expected to get analysis into the public domain as quickly as possible (details TBD)
- SV data has no proprietary period

Capabilities to be tested

- A number of data requirements may be less important to the DES team than to general users with very different scientific requirements.

- Below is a partial list of items that are anticipated to be included for testing as part of the community SV.

- Additional input from YOU is requested and welcome!

Capabilities to be tested

- End to end test of quick reduction software
- End to end test of DECam Community Pipeline
- Saturation (bright targets),
- Astrometry,
- Precision photometry, PSF stability
- (bright and faint) Nebulosity (flatfielding),
- Mosaicking of large areas, (background matching)
- Timing resolution (stability on multiple quick succession reads)
- Short time exposures
- Angular resolution for object removal (say background galaxies)
- Non-sidereal tracking
- Image quality (also for DES)

Capabilities to be tested

- May experiment with a couple different ways of taking same data.
- Example:
  - Dome vs twilight vs dark sky flats for large regions of nebulosity
  - stacking of short exposures to produce deep photometric catalogs
  - difference imaging to check for high proper motion objects and solar system sources

Example SV Program

Imagining of star forming regions to test:

- Large scale mosaicking
- Background matching of nebular regions
- Bright star saturation
- Astrometry
- Photometry
- Reduction Pipelines

REU program/NOAO/AURA/NSF

Example SV Program

Measure rotation periods for photometric standards from differential magnitudes in order to yield distance independent GYRO ages to test:

- Precision photometry, e.g.,flux stability in time
- Chip to chip differences in color transformation coefficients and zero points
- Reduction Pipelines