Data Rights Considerations

Neil Gehrels & David Spergel

SDT # 4
July 29-30, 2014

WFIRST Considerations

- Past standard of 1 year proprietary time for all data is probably no longer acceptable to NASA or the community
- WFIRST-AFTA wide field imager has wide FoV that makes proprietary data difficult.
- Different science areas for WFIRST-AFTA have different data needs, making any proprietary rules complex and likely unworkable.
- An open data policy such as that of LSST and Fermi LAT may be the natural fit for most or all of the WFIRST-AFTA data
- Rapid public access to survey data has been demonstrated to maximize scientific output

WFIRST Considerations cont.

- Large pre-planned surveys using WFIRST's wide-field capabilities, with multiple science goals, will be a large part of the program. Rapid public access to such survey data has been demonstrated to maximize scientific output, and similar HST and Spitzer programs have thus usually been non-proprietary.
- The planned science for these surveys will require that full analysis pipelines be written and tested with "simulated data challenges" well before launch, to make possible science-level feedback for the WFIRST observing. This will also make short or zero proprietary times more appropriate.
- “Processed” data products such as galaxy shape, convergence field, power spectra and cosmological parameters that are potential science team products may require longer processing times and may be made public later.

WFIRST Recommendation

- WFIRST have an open data policy such as that of LSST where data is made public as soon as it is processed
- First year (6 months?) of mission is for check-out and calibration
- Issues to consider:
  - For specific precision cosmology measurements "blind analysis" procedures will likely be necessary. Consider strategies for “freezing” techniques on first year data
  - Long-term nature of dark energy and exoplanet programs.
  - How to protect GO projects? Some will use only part of the field


Wide-Field Infrared Survey Telescope
WFIRST
Dark Energy - Exoplanets - NIR Surveys

Back-up

Background

- Rules for data rights will be determined by NASA HQ prior to science team selections
- SDT has an opportunity to weigh in
- At SDT #3 we discussed policies of Spitzer, HST and Fermi, and considered options for WFIRST
- Here a recommendation is suggested
- Then discussion

HST - review

- Standard proprietary period is 1 year for GO observations
- For large Treasury programs, the default is no proprietary period and PIs usually use this default
- No proprietary period for multi-cycle Treasury programs
- Instrument Development Teams (IDTs)
  - Guaranteed Time Observers (GTOs)
  - received give certain # of orbits
  - to be used over 3 years
  - GO not allowed to propose for their targets
  - 1 year proprietary time after data taken
- TOO requestors can get 1 year time or waive it

Spitzer Prime Mission - review

- Legacy programs (24% of time): zero proprietary time (NOTE: Legacy was an option for most of prime mission)
- First-Look Survey (100 hours at start of mission): zero time
- Half of all Spitzer data acquired in the first year was non-proprietary
- Guaranteed Time and General Observers: 1 year nominal
- Large programs (>500 hr each): most of them waived prop time (the call hinted at that option)
- DDT (5% of observatory time): zero time

Spitzer Warm Mission - review

- Large programs (>500hr each, >75% of observatory time): zero by default, and may request 90days
- Smaller programs: default 1 year, but many request less or waive

(Legacy category was dropped in Warm Mission)

(Empirical finding: time from acquisition to publication of data is 2-3yr regardless of prop period duration)

Fermi - review

- Instrument builders given 1st year of data to commission observatory
- GBM and LAT instruments both have wide fields of view (8 sr, 3 sr).
  - Impractical to give proprietary time on individual sources since full field is needed for analysis
- After first year, all data are public from time they are processed.