Discussion: To Where From Here?
DC2 Closeout Meeting
2 June, 2006

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Outline

• Data challenge progression – original ideas
• Work to be done
• How best to do it
• Discussion
Original Data Challenge Planning Approach

• Walk before running: design a progression of studies.
  – DC2. More ambitious science goals. Encourage further development, based on lessons from DC1.
  – DC3. Support for flight science production.
“DC3”-related Work to be Done

Systematic & Sensitivity Studies
- pt sources, extended sources, transients; upper limits
- diffuse analyses
- variability (incl. pulsars)
- neighboring sources
- flaring & diffuse effects
- focus on 1st papers analyses

Other Studies
- PSR (“handoff review”) performance
- analysis tuning (signal/bkgd, quality knobs by topic)
- update simulation (s/c model, tune from beam test and IA data...)
- first light observations (simulate point, then scan); early ops analyses
- effects of burst repoints
- sky survey strategy checks
- background fluxes evaluation early ops

Readiness
- digital data problems
- instrument problems (bad channels, wrong rates, recognizing a few wrong constants, ...)
- ASP (aka quicklook running and burst handling)
- receiving data dumps, running the pipeline, benchmarking resources and times, reliability
- idiosyncrasies vs. problems
- day(s) in the life
- performance monitoring
- documentation
How to Organize?

- Standard notion of a data challenge doesn’t match our needs
  - systematic studies are in some sense the opposite of a data challenge (study effects with many, known versions of “truth” instead of one, unknown “truth”)
  - we don’t need an artificial deadline. We have the best deadline there is: LAUNCH!
  - work is ongoing, not focused in a limited few-month period

- Therefore, propose something different for “DC3”
  - no DC3, in the sense of DC1, DC2
  - better supports the original and emerging (based on DC1, DC2 lessons) goals for DC3
Coordination, Schedule

• Coordinate simulation studies
  – will likely need a common set of simulations plus a near-constant stream of simulations to support special studies. Develop capabilities outside SLAC as needed using collaboration resources.

• Readiness work coordinated with the six mission-level end-to-end tests.
  – leverage off these internal to LAT
  – a sequence of “service challenges” for readiness testing serves these needs better than what is needed for systematic studies by science topic.

• Organize by area
  – Science groups, led by Analysis Coordinator
  – ISOC, led by ISOC managers
  – Areas of overlap done jointly (as we will need for flight!)
### Work to be Done: Responsibilities

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Collaboration participation needed for each of these!
ETE Tests

- **ETE1**: LAT commanding; SSR playbacks; L0 data processing; LAT diag data
- **ETE2**: delivery of LAT RT HK to ISOC; LAT FSW file management (load, dump, list)
- **ETE3**: ATS switchover; ToO; ARR; Burst alert processing in BAP; SSR playbacks; LAT calibration; LRS diag PROC; TCS control; LAT reconfig
- **ETE4**: GLAST safemode & recovery; LAT reboot
- **ETE5**: LAT T&C DB update; PROC updates
- **ETE6**: Launch site data path checks; regression testing

“Day in the Life”

- **DitL1** (7 days): sky survey nominal mission planning; ARR; RT PROC execution
- **DitL2** (10 days): pointed observation miss. plan.; ToO; PROC execution

*look for opportunities, e.g., here for “service challenges”*
Plus other major ongoing efforts!

- **Beam test**
  - now is a great time to jump from DC2 work to beam test studies
  - biweekly meetings

- **Instrument Test Data Analysis (IA)**
  - “first-light” LAT data are already available. More to come now. Get to know your instrument!
  - weekly Friday meetings
Discussion
Finally...

Congratulations, again, to everyone for a very successful DC2!!

and THANKS, Sandy!!!