



Status of Data Analysis

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Status of Analysis

- WYSIWYG
 - » UL Reports
 - » Review process



Plans for S2

- Expect a “post S2” telecon
 - » Assess data quality
 - » Lay out plans for future
 - » Need a better mechanism to identify common bottle-necks (Calibration last time. What will it be next time.)



Plans for the future

- UL proposals (sunset clause that ended with E7)
- Is this the best way to organize our data analysis efforts?
- Currently we have a dynamic – proposal driven -- process
 - » Haven't had a new proposal in 3 years
- Regime change in the LSC



LIGO and LSC Computing

Albert Lazzarini



LSC Computing

- LSC Computing Committee organized a collaboration response to NSF's Information Technology Research (ITR) Program for 2003 -- ITR2003
 - » Proposal for 4 key tasks needed in order to complete deployment of Tier 2 Centers
 - Provide authenticated and secure access to LIGO data by collaboration members by developing a Tcl API to the Globus Package for use with existing infrastructure
 - Efficient and secure mirroring of critical datasets across the LIGO Data Grid
 - Computing job load management on clusters (different types of computation)
 - Port DMT software to a grid-based computing model
 - » Proposal requests 8 FTEs (2ea for Tier 2 , Tier 1 centers)
 - » 4 year proposal request for \$5M



Computing & Data Analysis Software

- S2 official release is 0.6.0
 - » 0.6.20 today
 - » Migration to more stable GCC compiler (though still buggy)
 - » Resolved some issues with mpiAPI found in 0.6.0
 - » *Does not fix frameCPP bugs that cause frameAPI to core dump*
 - 0.6.25 at MIT does seem to have fixed bulk of frameAPI
- Targeting a 0.7.0 release roughly one month after end of S2
 - » Continued improvement of mpiAPI and frameAPI performance
 - concurrent lambert for search users
 - end to core dumps in frameAP
 - » Completion of frameCPP spec. compliance (coupled to resolutions with VIRGO)
 - » Better performance and improved memory management where possible
 - faster interaction with SAM/QFS tape archive
 - » Multiple IFO support for creation of RDS
 - » Migration to TCL 8.4.x version and newest SWIG
 - » Possible migration to 64 codes on Solaris platform



Computing, Data Analysis, and Simulation

Computing & Archiving

- Tier 1 Archive at Caltech
 - » LIGO has committed to use SAM-QFS for frame archive starting with E9.
 - » Administrative simplicity, and technical benefits will allow SAM-QFS to be installed at the Observatories
 - Local 1+ year look back of full frames.
 - » Currently the central archive contents:
 - **HPSS: 1.7M files / 58TB (S1 and before)**
 - **SAM-QFS: 0.5M files / 34TB (S1, E9, S2)**
- Compute clusters for LIGO lab sites
 - » Gigabit Ethernet will be used for the final build-out of large Beowulf clusters.
 - » Upgrade enterprise-class (Sun) servers to be installed after S2 to support SAM-QFS and the larger Beowulf clusters.
 - » Central (federated) LDAS database is planned to aggregate all of the database tables from the various LDAS systems.