



GWIC Network Analysis Working Group Meeting

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*Virgo Site, Cascina, Italy
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LIGO-G010380-00-E

GWIC Meeting 2001.09.29-18

LIGO Laboratory at Caltech

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Status of Activities within LIGO

- June 2001 target date met for setting up a simple ftp-based data exchange server at Caltech to provide reduced frame data
- WWW sites mirrored at LIGO, Virgo:
 - » <http://wwwcascina.virgo.infn.it/otherDetectors/NdasStatus.html>
 - » <http://www.ligo.caltech.edu/~ndas/index>
- >10 GB of merged data available to date
 - » Seismometer channels
 - » Magnetometer channels
 - » Power line monitor channels
 - » Nominal h_{GW} channel



NDAS -- Network Data Analysis Server

Available Data at this NDAS server

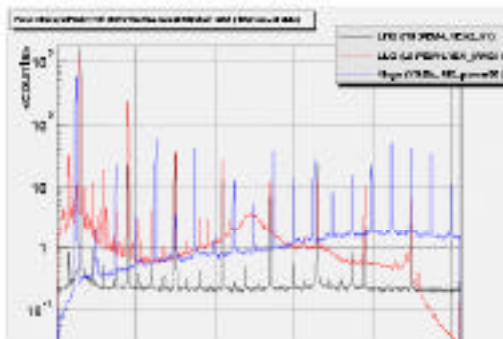
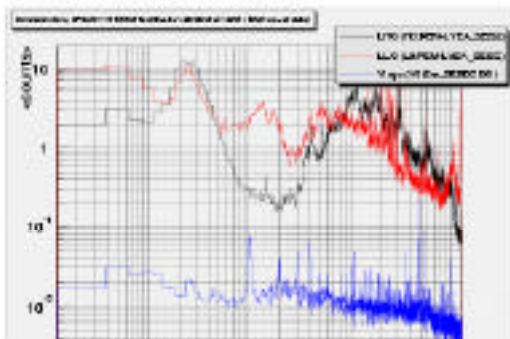
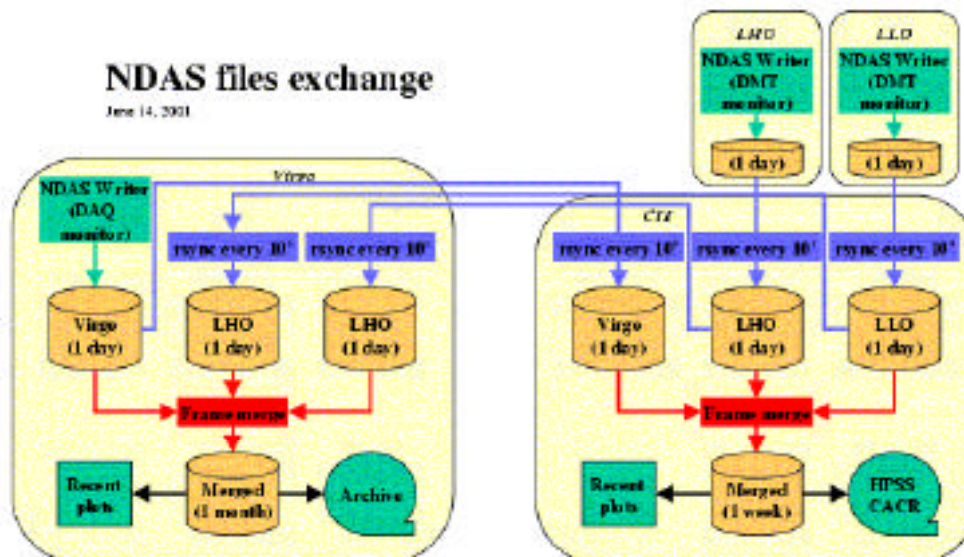
- [LHO](#) (951MBytes)
- [LLO](#) (1351 MBytes)
- [Virgo](#) (657 MBytes)
- [Merged](#) (9547MBytes)

(38 % of the disk is used)

[HPSS archive at Caltech](#)

Data diagnostics for the last merged file

- [File Dump](#)
- [Dump of the first frame in file](#)
- Plot for the [seismometer](#), [power line](#) or [magnetometer](#) data (click on the text to get the postscript file or on the plot to enlarge it)





Status of Activities within LIGO

- LIGO has joined other HEP, Astronomy Collaborations in U.S. to develop a grid computing/database environment for the future
 - » GriPhyN: Grid Physics Network (CMS/ATLAS/LIGO/SDSS)
 - » LIGO, LIGO Scientific Collaboration working on developing APIs, interfaces to LDAS and other resources to permit data mirroring for critical LIGO data subsets
 - » Staging of large computationally limited analyses onto the grid
- The GWIC data exchange/network analysis goals fit naturally into this forum
- Second U.S. effort: international Virtual Data Grid Laboratory (iVDGL)
 - » Collaboration with UK, EUGrid efforts

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Status of Activities within LIGO

- *During the next 6 - 8 months:*
- **GOAL:** study the correlated environments
 - » Quantify effects
 - » Characterize environments
 - » Establish familiarity with data exchange mechanisms
 - » Develop performance metrics, establish future requirements for increased scale
- **MEANS:** implement grid tools to provide robustness, security, experience
- *Ensure that all projects participate who have joint MOUs to share data*



Status of Activities within LIGO

- Proposal: Establish a single working group to undertake characterization of the correlated environment
 - » Dedicated individuals from each project take on responsibility to push effort forward:
 - *quantification of effects, publication of results*
 - » LIGO/LSC Team Members:
 - Erik Katsavounidis (MIT/LIGO)
 - Szabi Marka (Caltech/LIGO)
 - Peter Shawhan (Caltech/LIGO)
 - Peter Saulson (Syracuse/LSC)
 - Roy Williams (Caltech/CACR)
 - *Balance of interferometer, LDAS, and Grid knowledge*