LIGO

LSC Software and Other Things

Alan Wiseman
University of Wisconsin -- Milwaukee

LIGO-G020074-00-Z

LIGO Astrophysical Searches During E7

- Full search pipeline is operational
  - **Inspiral searches: FCT and Template**
  - **Burst (unmodelled) searches: Power Statistic, TimeFreq Cluster, Slope**
  - **Continuous Waves**
  - **Stochastic Background**

Did any of the searches use LDAS during E7?

All of them!

LIGO Software Users Group: Patrick Brady, Stuart Anderson, Linqing Wen, Julien Sylvester, Ed Daw, Duncan Brown, Greg Mendell, Kent Blackburn

LIGO

- Mechanism fo
  - » Internal LSC p
  - » Good set of ini
    - – Resource de
  - » Expanded to in

Good initial conditions, …

ut short on follow up … Need a way to close the loop

hus the All LSC telecon last month

here will be more of them

eadline news 10minute presentation format will likely change

eedback to the Lab

iscussion of results

LIGO

- Long term sol
  - » Generated wit
  - » Eliminate chan

[redacted]

here do we put E7 Data this spring?

imited disk space at the sites (during the hardware upgrade)

imited disk space at MIT (where burst group is planning analysis)

educe the data (no decimation)
MT availability

it on the remaining disks at the sites

ules and philosophy about software quality Control (MDC)

pprox 2TBytes at LHO, 1TByte at LLO

asy access to DMT at the sites

ASIS

- **Astrophysical Source Identification and Signature**
  - » **Subcommitee originally developing astrophysical search code**
  - » **Now …**
    - – **Many of the astrophysical question now fall under the purview of the UL groups**
    - – **Many of the software development details handled in the working groups**
  - » **What's next? LSC executive committee**
    - – **Discussion in the ASIS/Source-workshop session on Friday**

LIGO Changes to FRAME Specification

- FRAME: Universal (International) Currency for Gravitational-Wave Data
  - » Specification has been reasonably stable …
  - » However some changes needed to be made…
    - – Working group (including VIRGO representation) made some recommendations
      - e.g. Remove the ``local time'' from the frame
        carry some multidetector information
        carry a specific FFT data structure
    - – Software Change Control Board met (Jolien Creighton, John Zweizig, Stuart Anderson) [Ratified, Remanded, Rejected]

    www.lsc-group.phys.uwm.edu/~agw/SCCB/ProposedFormat_T970130-13.pdf
  - » **Goal: Implement (and test) the changes before E7**

Distributed Computing

- Issues: Defining Tier II Centers, Managing the distributed resources, Allocating the computing resources, FTE's to implement solutions
  - » Under review by LSC Computing Resources Committee
    - – Albert Lazzarini, Warren Anderson, Kent Blackburn, Patrick Brady, Sam Finn, Tom Nash, Eric Katsavounidis, Alan Wiseman
  - » We started our planning and coding before ``Grid Computing'' was a household word … How do we embrace this now?
  - » How much redesign can we afford with S1 in a few months?
  - » How much hardware and software conformity can we (should we) try to exert on the LSC institutions?
  - » The GW data analysis problem is very well suited to distributed computing, therefore we should be bold in using the grid tools.
  - » Should not settle adding a layer of wrapping over what we have.

White Paper Status Report …

- Or obituary
- Rai has stated it is complete … until next time

- My suggestion: A focused rewrite of three areas that are under very active discussion

(1) Mechanism or some requirements that the analysis groups close the loop with the collaboration and the lab.

(2) ASIS restructuring.

(3) Clearer Definition of Tier II center responsibilities

LDAS Camp II

- Location: UWM
- Tentative (vague) dates: Mid May
- Subject Matter: LDAS Pipeline Searches, LAL, LALWrapper …

- If you are interested, speak to me.