Software Coordinator Report

Alan Wiseman

LIGO-G020357-00-Z

Status of ASIS

- ## Most of the original activities absorbed into UL Work
  - » Should it exist at all?
  - » If so, what issues should this committee address

- ## Better/More interaction with the source modeling research community
  - » Source working group data analysis facilitators reports:
    - – 11:30 Tuesay
      - • Inspiral of Compararable Mass Binaries (BH/BH,BH/NS,NS/NS)
      - • Binary Blackhole Merger
      - • NS/NS (plunge, merger, tidal disruption)

LSC Committee on Computing Facilities

- ## LSC iVDGL Facilities (Tier II Centers)
- ## GW data problem is well-suited for distributed [grid] computing – So the LSC should (and has) embraced various GRID initiatives
  - » GriPhyN [Gri(d) Phy(sics) N(etwork)]
    - – Developed useful software tools [e.g. security, data replication]
  - » iVDGL [international Virtual Data Grid Laboratory]
    - – Hardware for the centers
    - – UWM, PSU [MIT,UTB]
  - » ?????
    - – Operations budget:
    - – System administration support

Upper Limits Investigations

Closing out the E7 Analysis

- Sequence of telecons for groups to present results to the entire collaboration
  - » Burst group 21June, 3pm EDT
  - » Inspiral 28 June, 3pm EDT
  - » Stochastic Background 5 July 3pm EDT
  - » Continuous Waves (TBD)
- Write-up distributed before August LSC Meeting
- Presentations of results at August LSC Meetings
- Revisions
- …. On to S1 data

Upper Limit Investigations

- **Status: Series of 4 talks Tuesday afternoon**

- **Recent Past:**
  - » Telecons:
    - – Peter Saulson (Burst) set a high standard on the first one
    - – Patrick Brady (Inspiral), Joe Romano(Stoch Back) rose to the occasion
    - – On going telecons
      - • Mario Diaz [UTB] has agreed to organize future telecons
      - • Scheduling
        - » Problematic at best! How to include GEO

Origins and Goals

- Origins …
  - » White Paper lays out a mechanism to establish research groups
  - » Proposal Driven
    - – Each group has a proposal on file
  - » Sociological aspects
    - – Open, advertised process
    - – Turn over
  - » Rai's reason: Mix Experimentalists and Theorists.
  - » … It may be the case that for years we will be setting upper limits.

- Goals
  - » Use engineering data, demonstrate that we can do science (from end to end) in the manner we will science with science-run data.
  - » (Co-opted) Sequence of mock data challenges to test the analysis pipeline.
  - » Software development
  - » Integrate detector characterization into the analysis stream.
  - » Intellectual exercise of finding methods of determining upper limits

Upper Limits Investigations

… We now have some track record …

- What about the future …
  - » UL groups originated as internal "proposals"
    - – Should we continue to organize our research this way?
    - – Proposals had termination dates.

Moving on to S1

- ## Proposals for the UL groups addressed E7 only
  - » (Correctly) chosen to ignore this and keep going for now.

- ## Vigorous effort to run on line is under way
  - » Burst and inspiral searches will run in real time
  - » LSUG [LSC Software Users Group, Patrick Brady chair]
  - » Resource allocation
    - – Plans originates with the users
    - – Discussed in the UL chairs group
    - – Discussed in the LSC Computing Committee
    - – Not hardware limited in the search code running on the cluster
    - – All searches (and generation or reduced data sets) tax LDAS front-end