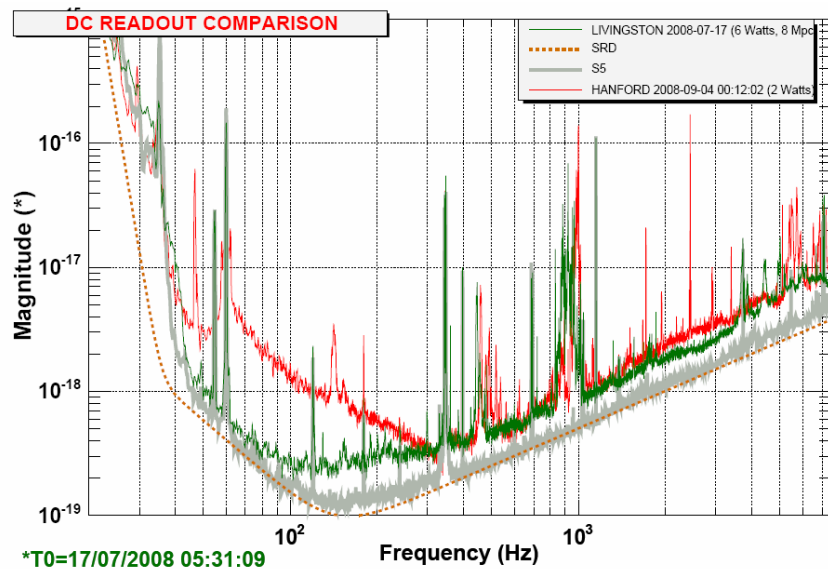


Status of the LSC

Dave Reitze
University of Florida

News

- Many exciting things happening on lots of fronts
 - » AdvLIGO, GEO, Virgo+, Astrowatch, E-LIGO, S5 analysis results, S6 plans
- Important strategic business at this meeting:
 - » LIGO open data policy
 - » a discussion about plans/process for developing external collaborations
 - » Data analysis summit
- Also:
 - » New authentication methods for the LSC
 - » Open Science Grid and the LSC



- **LSC observational papers in print since June**
 - » “*Implications for the Origin of GRB 070201 from LIGO Observations*”, in Ap. J.
 - First S5 paper in print
 - » “*Beating the spin-down limit on gravitational wave emission from the Crab pulsar*,” in Ap. J. Lett.
 - » *Astrophysically triggered searches for gravitational waves: status and prospects*, in CQG
 - **LIGO-Virgo paper!**
- **LSC observational papers accepted since June**
 - » “*Search of S3 LIGO data for gravitational wave signals from spinning black hole and neutron star binary inspirals*”, accepted in Phys. Rev D
 - » *The Einstein@home search for periodic gravitational waves in LIGO S4 data*”, accepted in Phys. Rev D
- **LSC observational papers on ArXiv since June**
 - » “*Search for Gravitational Wave Bursts from Soft Gamma Repeaters*”, submitted to Phys. Rev. Lett.
- **Mature drafts**
 - » “*All-sky LIGO search for periodic gravitational waves in the early S5 data*” – CW group paper
 - » “*Search for Gravitational Waves from Low Mass Binary Coalescences in the First Calendar Year of S5 LIGO data* – CBC group

Status of the LSC

- **LSC memberships**
 - » Rochester Institute of Technology has re-joined the LSC (John Whelan will be the PI of the RIT group)
- **LSC Working Groups**
 - » Vuk Mandic has been re-elected as one of the co-chairs of the Stochastic search group.
- **LSC Working Group – Education and Public Outreach**
 - » Major focus is now on development of outreach exhibit for the 2009 World Science Festival
 - \$700K proposal submitted to NSF

Catching a New Wave:
Gravitational Wave Astronomy as a Probe of the Universe

Education and Public Outreach Group
LIGO Scientific Collaboration



NY08

World
Science
Festival

Astrowatch A5

- **By all measures, a success!**
 - » 102 GRBs to date during A5

**List of GRBs Detected by Satellite Experiments
During LIGO's A5 Run
(Astrowatch)**

External Triggers Group

GCN number	GRB Date	redshift	UT time	GPS seconds	RA (deg)	Dec (deg)	GRB duration (sec)	GRB fluence (E-7 ergs/cm ²)	Fave LHO
08270	080919	--	00:05:13	905817927.000	265.289	-42.396	--	--	0.288
08245	080916C	--	00:12:45	905559179.000	121.800	-61.300	--	--	0.571

GRB List: http://www.uoregon.edu/~ileonor/ligo/a5/grb/online/A5grbs_list.html

- **But we need more volunteers!!**
 - » Current well staffed through end of 2008, but critical need in first months of 2009
 - » LIGO Program Advisory Committee: "The PAC was surprised to hear that not enough students are available within the LSC to fully staff the Astrowatch program. ... the PAC feels that spending some amount of time at one of the observatories, providing some form of service, *should be a requirement* for all students and postdocs in the collaboration."

APS News, Aug/Sept 2008



Photo by Evan Goetz

Left to right: Matthew West, Evan Goetz, Philip Roberts and Pinkesh Patel

www.ligo.org

- A new ligo.org web site went live last week
 - » Design by Veronica Kondrashov, with content from DHR and the LSC EPO group



» <http://www.ligo.org/>

Opening our data to the broader research community?

- Request from the National Science Board at the March 2008 meeting
 - » “NSF management shall report back to the National Science Board within 12 months of this award what efforts have been undertaken and what provisions have been implemented to make the data obtained under this award available and useable to the broader research community.”
- LIGO is proactively addressing this: a position paper has been developed by current and former LIGO Lab Directors, Deputy Directors, and LSC Spokespersons
 - » Available at <http://www.ligo.caltech.edu/docs/ScienceDocs/M/M080072-05/M080072-05.pdf>
 - » Paper describes an open data model for LIGO
 - responds to the NSB’s request
 - preserves our ability to do science in the short term as well as enhances it in the long term.
 - » general approach is sufficiently well-reasoned to serve as the framework for the final version which is delivered to NSF
- Details in Albert Lazzarini’s presentation later this morning

- LSC/Virgo data is becoming astrophysically interesting → *motivates the need to establish more interactions with other communities*
- The Data Analysis Council has developed a policy statement
 - » Available at <http://www.lsc-group.phys.uwm.edu/ligovirgo/dac/policy/externalCollabsBasics.txt>
- Presents principles in which establishing external collaborations should be based
 - » Collaboration-wide, intrinsic scientific merit, MOU, non-exclusivity
- Discusses modes of establishing collaborations

Data Analysis Summit

- Search groups are currently juggling a number of issues, including S5/VSR1 analyses and papers, preparations for S6 and VSR2, LIGO-Virgo integration, collaborations with members of the external research community.
 - » evident that stresses exist within each group in trying to carry out this broad set of activities
- To address these issues, a data analysis summit meeting will take place after the L-V meeting
 - » Attendees: LSC, Virgo search group, detector characterization, calibration, DASWG and CompComm chairs, DAC chairs, LIGO and Virgo Directorate
- Goals
 - » Identify strengths and weaknesses, identify bottlenecks in generating observational results and develop methods to overcome them, improving group functionality
 - examine detailed plans and timelines for completing S5/VSR1 analyses
 - examine detailed plans and timelines for preparing for S6

LSC Council Meeting Agenda

- Consideration of new members applying for membership to the LSC
 - » Hans-Peter Bischof, Josh Faber, and Yosef Zlochower, Rochester Institute of Technology
 - John Whelan (new RIT PI) will make the presentation
- Discussion of LIGO open data policy position paper
- Consideration and vote on a policy by the Data Analysis Council for developing external collaborations between the LSC/Virgo and other collaborations
- Consideration and vote of proposals for external collaborations by the Burst group

LSC Executive Committee Meeting Agenda

- First, a a joint session with the Virgo Steering Committee, with two agenda items:
 - » LIGO open data policy and its implications for Virgo and GEO
 - » external collaborations document; view from Virgo
- Second, LSC ExComm meeting:
 - » consideration of the CW group S5 PowerFlux search
 - » if time, a brief update on LSC Education and Public Outreach activities
- Tonight at 1930 here

Some final reminders

- Please upload your talks ahead of time
 - » <http://www.lsc-group.phys.uwm.edu/ligovirgo/meetings/LSCVirgo0809>
 - » Requires the usual LSC user/password
- Join the APS Topical Group on Gravitation
 - » The APS Gravitation Topical Group is the primary professional organization for the GW community
 - » GG now has over 1000 members
 - If we grow to 1400 members, we become a Division of the APS with more clout!
 - » If you are not already a member, please join!
- Semi-annual generation of the LSC author list will begin in October
 - » Now done online through Directory Services: <http://roster.ligo.org/>
 - » Group leaders, please get your lists updated by October 1
- Upcoming L-V meetings
 - » December meeting
 - Data analysis focus, no Council meeting
 - Will take place in College Park, MD at the Univ. of Maryland
 - Dates are Dec 15-18, 2008 (f2f and main meeting)
 - » March meeting
 - Will take place in Pasadena, CA
 - Full meeting: instrument science, data analysis, detector characterization, Council
 - Dates are March 16-19, 2009

Enjoy the meeting!