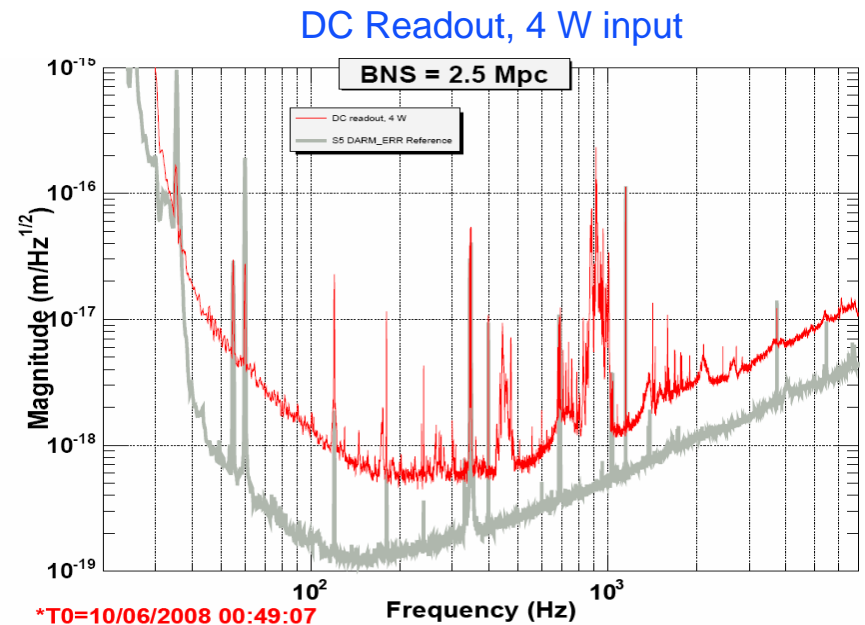


Status of the LSC

David Reitze
University of Florida

General News

- You've heard exciting progress on E-LIGO, AdvLIGO, Astrowatch, S5 analyses
- LSC is still growing
 - » 634 members at last count
- Important strategic business at this meeting:
 - » a discussion about plans/process for developing external collaborations
 - » Search groups plans for S6/VSR2
 - » DAC meeting: "What science do we want to get out of S5 data and how does it map into our plans for papers ?"



Update on LSC Observational Papers

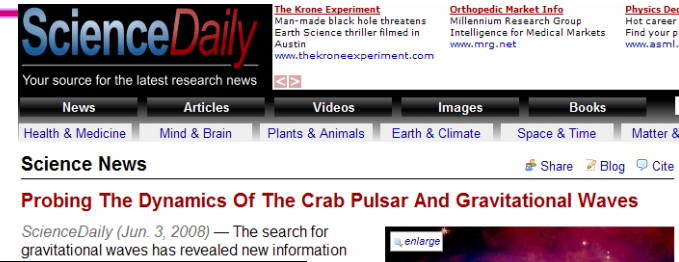
- **Published**
 - » "Search for gravitational waves associated with 39 gamma-ray bursts using data from the second, third, and fourth LIGO runs," Phys. Rev. D 77 (2008) 062004.
 - » "A joint search for gravitational wave bursts with AURIGA and LIGO," Class. Quantum Grav. 25 (2008) 095004.

- **Submitted**
 - "The Einstein@Home search for periodic gravitational waves in LIGO S4 data", submitted to Phys. Rev. D. ([arXiv:0804.1747](https://arxiv.org/abs/0804.1747))
 - "Beating the spin-down limit on gravitational wave emission from the Crab pulsar", was submitted to the ArXiv on May 29 (arxiv.org/abs/0805.4758).
 - 'highlight' result for the LSC!

- **Coming up for consideration at the June Executive Committee Meeting**
 - » The LIGO-GEO S4 paper: <http://www.ligo.caltech.edu/docs/ScienceDocs/P/P080008-01.pdf> (the final S4 paper!)
 - » The S5 SGR paper: <http://www.ligo.caltech.edu/docs/ScienceDocs/P/P070105-01.pdf> (the third S5 paper)

The Crab Pulsar Result

- Coordinated press release on the date of arXiv posting by several LSC institutions
- Picked up by press, science web sites...
- ... and bloggers!



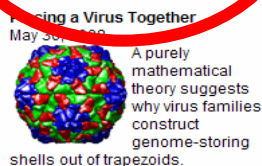
Posted by thales 06/02/08 20:45

Flag

Rank: 3/5 after 2 votes

This just in: crosses confirmed to keep vampires at bay! I know because I wore one yesterday and nothing happened.

as cause of slowing down of Crab Pulsar's spinning neutron star.
 ▶ Article: [Cosmos](#)



APS membership to physicists living in developing countries.

Through the Matching Members Program, individuals residing in eligible countries—especially those who are members of their national physical societies—may apply for a reduced-cost membership in APS.

▶ [Matching Members Program](#)



Julia M. Phillips, Sandia National Laboratories

▶ [More Information about Prizes & Awards.](#)

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encouraging minority students to study physics. The brochure is filled with profiles of minority physicists. It is an information physics care [Understand](#)



unlike.

"We can now say definitively that gravitational waves play only a minor role at best in this phenomenon," said David Reitze, a physicist at the University of Florida in Gainesville, USA. "Our measurements tell us that no more than four per cent of the energy loss of the pulsar is caused by the emission of gravitational waves."

Supernova brighter than the Moon

Reitze heads up an international team of researchers collaborating on the Laser Interferometer Gravitational Wave Observatory (LIGO) network who detail the evidence refuting gravitational waves in an upcoming *Astrophysical Journal Letters*.

The Crab Nebula, located 6,500 light years away in



Speedy, yet slower: The Crab Pulsar, a city-sized, magnetised neutron star spinning 30 times a second, lies at the center of this composite image

- Developing strong footprint in outreach activities
 - » Presentation at AAS meeting in St Louis last month



LSC EPO Gravitational Wave Astronomy
Opening a New Window on the Universe for Students, Educators and the Public

Celebrate IYA2009 with Gravitational Wave Astronomy
The nascent field of gravitational wave astronomy offers many opportunities for effective and inspirational astronomy outreach. Gravitational waves, the 'ripples in spacetime' predicted by Einstein's general theory of relativity, are produced by some of the most energetic and dramatic phenomena in the cosmos, including...

LIGO Observatories
Visit a Gravitational Wave Observatory Near You
The LIGO Observatories in Hanford, Washington, and Livingston, Louisiana use the excitement of the search for gravitational waves as a platform for increasing...

Classroom Activities
Model Michelson Interferometer Students use a simulated interferometer to investigate the behavior of interference patterns. The simulator models the interference pattern that arises from the mixture of the two light paths in the interferometer. Developed by LIGO Hanford Observatory.

- » Plans for large scale exhibit at the 2009 World Science Festival
 - Seeking NSF funding



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

Education and Public Outreach Group
LIGO Scientific Collaboration

June 10, 2008

Transition to new L-V search group structure

- From the LIGO-Virgo MOU:

During a transition period the LSC and Virgo Collaborations can maintain two Chairs each, rather than a Chair and a deputy-Chair. One of the Chairs will be designated as the main liaison to the other project. The transition period is meant to allow a smooth transition between the existing structures and the new joint structures, while at the same time not affecting the scientific productivity of the groups. Such period will begin after the MOU is signed and will end at a time deemed appropriate by each analysis group but not exceeding 1.5 years. A natural time for this transition period to end is the exhaustion of the LSC-only and Virgo-only publications back-log.

- Also from the L-V MOU:

A Deputy Chair may also be appointed from each Collaboration, with responsibilities specific to that Collaboration (data quality, pipelines, backlog of papers ...), with responsibilities specified when they are appointed.

Transition to new L-V search group structure

- **How will this be implemented?**
 - » Elections (appointments) will take place for LSC deputy chairs according to the E&M calendar
 - » Deputy chairs become chairs when new election takes place
- **So what does this mean in practice and what will be different from the way we are functioning now?**
 - » Constraints to be considered
 - Still lots of work to do on S5 analyses, both LSC-only and joint L-V analyses
 - Efforts needed ASAP to get ready for S6
 - » Some discussions with DAC, Virgo to understand impact
- **Bottom line: Search groups will continue to function as they are now**
 - » “The sentiment of many leaders is that the differentiation in function/title between the formerly co-chairs shall not change the way the groups operate. In principle it can be taken as simply a change in the names of the positions... In theory some distinction between the future role shall exist, leaders expect that this opportunity shall be rarely used and that all decisions shall be taken in agreement by all three (deputy-)co-chairs.”
 - Szabi Marka

Changes in LSC Working Group Chairs

- LSC Working Groups

- » Detector Characterization – Keith Riles has stepped down as the chair of the LSC DetChar group after 10 years leading the group
 - *We all owe Keith a great debt of gratitude for his outstanding leadership!*
 - Gaby Gonzalez will take over the DetChar chair during this month
 - She has told me that she won't repeat Keith's 10 year record
- » Calibration Committee
 - Brian O'Reilly stepping down as the chair of the LSC Calibration Committee; Mike Landry also stepping down
 - New organizational structure (will require a ByLaws update)
 - Two co-chairs – one instrumental/h(f) co-chair and one code/h(t) co-chair
 - » Instrumental co-chair: Keita Kawabe
 - » Code/h(t) co-chair: Xavi Siemens

Changes at the top

- LSC Search Groups
 - » CW group
 - Mike Landry stepping down as co-chair of the CW group
 - Group opted for appointed by the Spokesperson with a strong recommendation for Mike's replacement
 - Keith Riles will take over as the deputy chair of the CW group in late June.
 - » Burst Group
 - Call for nominations underway for deputy chair

GWIC Roadmap



GWIC

Gravitational Wave International Committee

- **Initiated by GWIC in 2007**
 - » Roadmap committee chaired by Jay Marx; members from all major GW program
 - » See presentation by Jay Marx for details: [GWIC Roadmap](#)
- **Goals**
 - » Develop a strategic plan for the field of gravitational wave science
 - Advocate for the GW community
 - Supported and influenced by the GW community
 - » Inform and excite scientists from other fields about GW science
 - » Demonstrate to funding agents a rationale, realistic and coherent plan for the field over the next 30 years
- ***Your opinion is very important!!***
 - » *How the roadmap evolves will depend on you*
 - » *Communicate with the Roadmap Committee*
 - ***gwicpoll@ligo.caltech.edu***

Annual MOU period

- Annual MOU Reporting begins soon
 - » secure web-based interface: <https://mou.ligo.caltech.edu>
 - Revised based on suggestions from last year
 - Accepts TeX, html input or pdf file uploading
 - » MOU review to be held July 24,25 at MIT
 - Committee: Stefan Ballmer, Peter Fritschel, Gregg Harry, Eric Gustafson, Mike Landry, Albert Lazzarini, Szabi Marka, Nergis Mavalvala, Maria Alessandra Papa, Fred Raab, David Reitze, Keith Riles, Norna Robertson, Peter Saulson, Peter Shawhan, Alan Weinstein
 - » Instructions will be sent to PIs in the next few weeks
 - » Please submit them in a timely manner

Some reminders and news

- **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 you are not already a member, please join!

- **Upcoming L-V meetings**
 - » September meeting
 - Will take place in Amsterdam
 - Full meeting
 - Council meeting
 - dates are September 22 – 26
 - Web site and housing details forthcoming
 - » December meeting – after investigating possibilities, best option is Univ. of Maryland
 - Washington DC is a hub city
 - Reasonable registration fee and hotel fees

Enjoy the rest of the
meeting!