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# Status of the LSC

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# Since we last met...

- It's great to be in Cascina to begin L-V data sharing and the start of the Virgo science run.
  - » *Virgo is off to a great start!*
- Many LSC observational papers posted and submitted to journals
  - » S4 stochastic radiometer paper
  - » S3/S4 known pulsar paper
  - » LIGO-Allegro stochastic search paper
  - » SGR 1806-20 hyperflare triggered burst search
  - » S3/S4 inspiral paper
  - » S4 all-sky burst search paper
- Progress on GRB070201 paper

# LSC Business

- Many meetings of the Data Analysis Committee and Joint Run Planning Committee
  - » Report from DAC: Maria Alessandra Papa, Andrea Vicere
  - » Report from JRPC: Roberto Passaquieti, Fred Raab
- Gregg Harry elected chair of the Optics Working Group
- LSC P&P committee changes
  - » Chair: Laura Cadonati
  - » New member: Valera Frolov
- New LSC meeting committee
  - » Charge:
    - coordinate LSC side of L-V meeting planning
    - examine venues for US meetings
  - » Members: Gabriela Gonzalez, Maria Alessandra Papa, David Shoemaker

# LSC Observational Papers

- <http://www.ligo.mit.edu/~cadonati/PP/Papers.html>



## LSC Publications

[Observational results](#)   [Conference proceedings](#)

Last updated: May 4, 2007

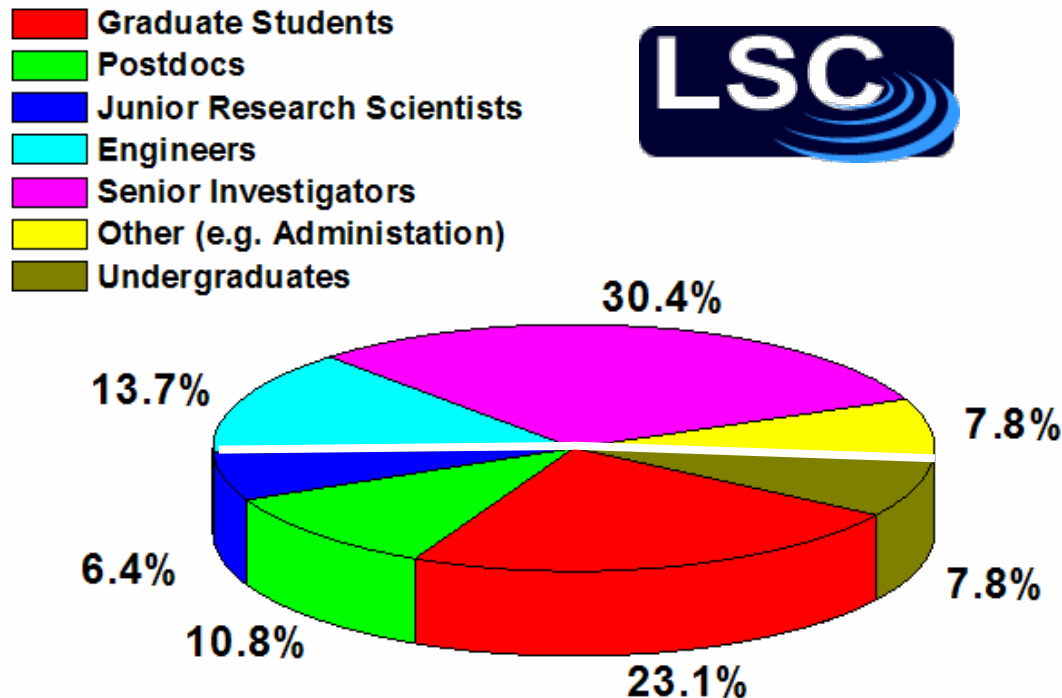
## Observational results

Run	Group	Authors	Journal	Preprint	Title
S1	Detector	LSC	<a href="#">Nucl. Instrum. Meth. A 517 (2004) 154-179</a>	<a href="#">gr-qc/0308043</a>	Detector description and performance for the first coincidence observations between LIGO and GEO.
S1	Burst	LSC	<a href="#">Phys. Rev. D 69 (2004) 102001</a>	<a href="#">gr-qc/0312056</a>	First upper limits from LIGO on gravitational-wave bursts.
S1	Inspiral	LSC	<a href="#">Phys. Rev. D 69 (2004) 122001</a>	<a href="#">gr-qc/0308069</a>	Analysis of LIGO data for gravitational waves from binary neutron stars.
S1	Pulsar	LSC	<a href="#">Phys. Rev. D 69 (2004) 082004</a>	<a href="#">gr-qc/0308050</a>	Setting upper limits on the strength of periodic gravitational waves from PSR J1939+2134 using the first science data from the GEO 600 and LIGO detectors.
S1	Stochastic	LSC	<a href="#">Phys. Rev. D 69 (2004) 122004</a>	<a href="#">gr-qc/0312088</a>	Analysis of first LIGO science data for stochastic gravitational waves.
S2	Burst	LSC	<a href="#">Phys. Rev. D 72 (2005) 042002</a>	<a href="#">gr-qc/0501068</a>	A search for gravitational waves associated with the gamma ray burst GRB030329 using the LIGO detectors.
S2	Burst	LSC	<a href="#">Phys. Rev. D 72 (2005) 062001</a>	<a href="#">gr-qc/0505029</a>	Upper limits on gravitational-wave bursts in LIGO's second science run.
S2	Burst	LSC, TAMA	<a href="#">Phys. Rev. D 72 (2005) 122004</a>	<a href="#">gr-qc/0507081</a>	Upper limits from the LIGO and TAMA detectors on the rate of gravitational-wave bursts.
S2	Inspiral	LSC	<a href="#">Phys. Rev. D 72 (2005) 082001</a>	<a href="#">gr-qc/0505041</a>	Search for gravitational waves from galactic and extra-galactic binary neutron stars.
S2	Inspiral	LSC	<a href="#">Phys. Rev. D 72 (2005) 082002</a>	<a href="#">gr-qc/0505042</a>	Search for gravitational waves from primordial black hole binary coalescences in the galactic halo.
S2	Inspiral	LSC	<a href="#">Phys. Rev. D 73 (2006) 062001</a>	<a href="#">gr-qc/0509129</a>	Search for gravitational waves from binary black-hole inspirals in LIGO data.
S2	Inspiral	LSC, TAMA	<a href="#">Phys. Rev. D 73 (2006) 102002</a>	<a href="#">gr-qc/0512078</a>	Joint LIGO and TAMA300 Search for Gravitational Waves from Inspiral Neutron Star Binaries.
S2	Pulsar	LSC	<a href="#">Phys. Rev. D 72 (2005) 102004</a>	<a href="#">gr-qc/0508065</a>	First all-sky upper limits from LIGO on the strength of periodic gravitational waves using the Hough transform.
S2	Pulsar	LSC, Kramer, Lyne	<a href="#">Phys. Rev. Lett. 94 (2005) 181103</a>	<a href="#">gr-qc/0410007</a>	Limits on gravitational wave emission from selected pulsars using LIGO data.
S2	Pulsar	LSC	To appear in PRD	<a href="#">gr-qc/0605028</a>	Coherent searches for periodic gravitational waves from unknown isolated sources and Scorpius X-1: results from the second LIGO science run.
S3	Burst	LSC	<a href="#">Class. Quant. Grav. 23 (2006) S29-S39</a>	<a href="#">gr-qc/0511146</a>	Search for gravitational-wave bursts in LIGO's third science run.
S3	Stochastic	LSC	<a href="#">Phys. Rev. Lett. 95 (2005) 221101</a>	<a href="#">astro-ph/0507254</a>	Upper limits on a stochastic background of gravitational waves.
S4	Burst	LSC	Submitted to PRD	<a href="#">astro-ph/0703419</a>	Search for gravitational wave radiation associated with the pulsating tail of the SGR 1806-20 hyperflare of December 27, 2004 using LIGO
S4	Burst	LSC	Submitted to CQG	<a href="#">arXiv:0704.0943</a>	Search for gravitational-wave bursts in LIGO data from the fourth LSC science run.
S4/S3/S2	Burst	LSC	In preparation		Search for Gravitational Waves Associated with 39 Gamma-Ray Bursts Using data from the Second, Third, and Fourth LIGO Runs
S4/S3	Inspiral	LSC	Submitted to PRD	<a href="#">arXiv:0704.3368</a>	Search for gravitational waves from binary inspirals in S3 and S4 LIGO data
S4/S3	Pulsar	LSC, Kramer, Lyne	Submitted to PRD	<a href="#">gr-qc/0702039</a>	Upper Limits on Gravitational Wave Emission from 78 Radio Pulsars.
S4	Pulsar	LSC	In preparation		Search for Periodic Gravitational Waves with the LIGO Detector.
S4	Stochastic	LSC	<a href="#">ApJ 659 (2007) 918</a>	<a href="#">astro-ph/0608606</a>	Searching for Stochastic Background of Gravitational Waves with LIGO.
S4	Stochastic	LSC	Submitted to PRD	<a href="#">astro-ph/0703234</a>	Upper limit map of a background of gravitational waves.
S4	Stochastic	LSC, ALLEGRO	Submitted to PRD	<a href="#">gr-qc/0703068</a>	First Cross-Correlation Analysis of Interferometric and Resonant-Bar Gravitational-Wave Data for Stochastic Backgrounds.

# LIGO Scientific Collaboration Demographics

- There are **563** people in the LSC (including undergraduates)
- Number of colleges, universities, and research institutions in the LSC: **55**
- Women make up **15%** of the LSC
- Minorities\* make up **6%** of the LSC

\*Hispanic, African American, Native American, US-based institutions only



# LIGO

# LIGO Scientific Collaboration

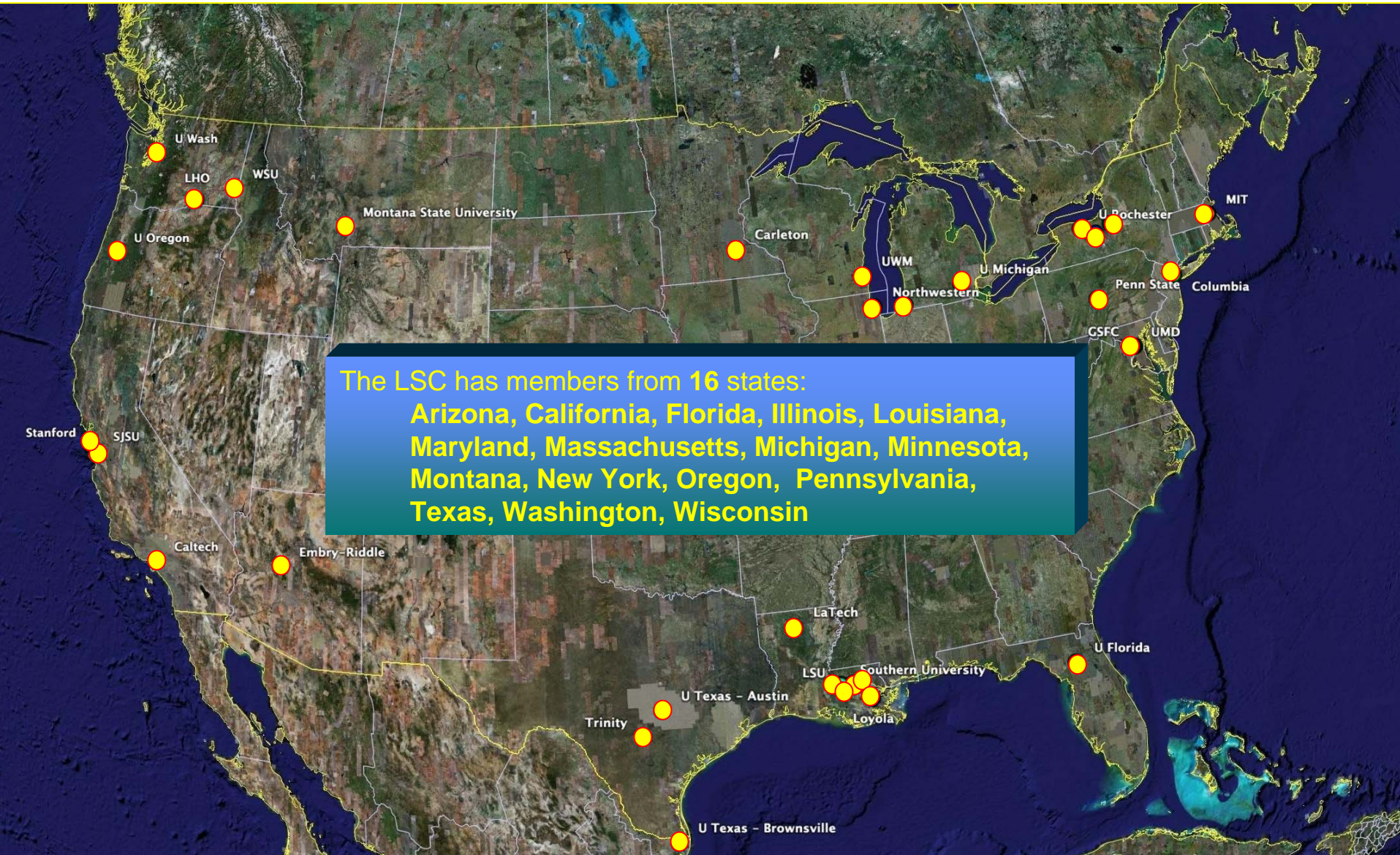


- Australian Consortium for Interferometric Gravitational Astronomy
- The Univ. of Adelaide
- Andrews University
- The Australian National Univ.
- California Inst. of Technology
- Cardiff University
- Carleton College
- Columbia University
- Embry Riddle Aeronautical Univ.
- Eotvos Lorand University
- University of Florida
- German/British Collaboration for the Detection of Gravitational Waves
- University of Glasgow
- Goddard Space Flight Center
- Universitat Hannover
- Hobart & William Smith Colleges
- Institute of Applied Physics
- India Inter-University Centre for Astronomy and Astrophysics
- Louisiana Tech University
- Loyola University New Orleans
- Louisiana State University
- University of Maryland

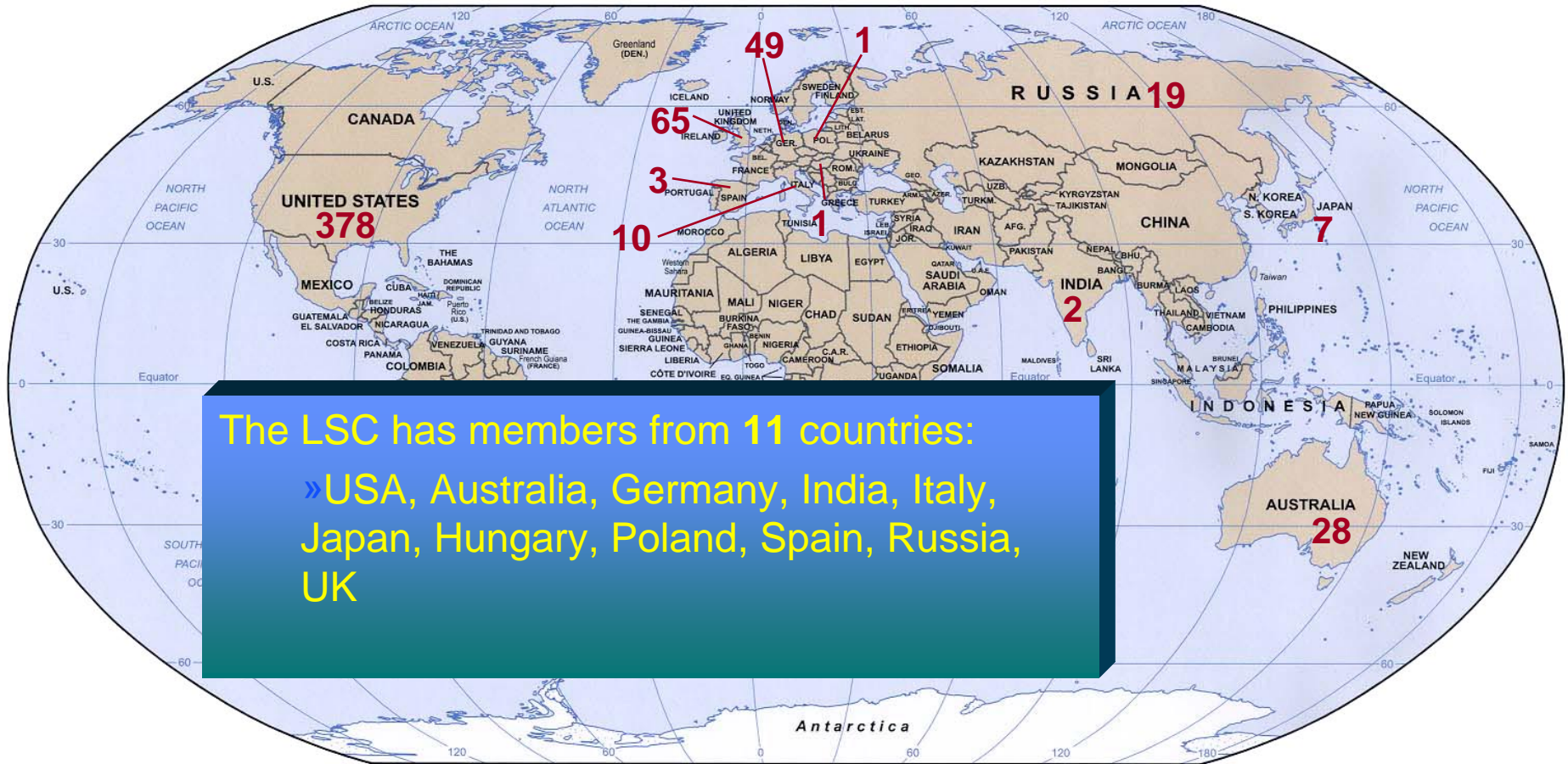


- University of Michigan
- Massachusetts Institute of Technology
- Montana State University
- Moscow State University
- National Astronomical Observatory of Japan
- Northwestern University
- University of Oregon
- Pennsylvania State University
- Rochester Inst. of Technology
- University of Rochester
- San Jose State University
- Univ. of Sannio at Benevento, and Univ. of Salerno
- Southeastern Louisiana Univ.
- Southern Univ. and A&M College
- Stanford University
- Syracuse University
- Univ. of Texas at Austin
- Univ. of Texas at Brownsville
- Trinity University
- Universitat de les Illes Balears
- Univ. of Massachusetts Amherst
- University of Western Australia
- Univ. of Wisconsin-Milwaukee
- Washington State University
- University of Washington

# LSC Geographic Makeup by State



# LSC Geographic Makeup by Country





# Advocacy for Advanced LIGO

- Advanced LIGO funding for FY 2008 working its way through the Congressional budget process
- While there are reasons to be optimistic, success is not guaranteed...
- ... so this is your chance to make your voices heard and influence the US government!
  - » US institutions
- It's easy
- And it really does help!