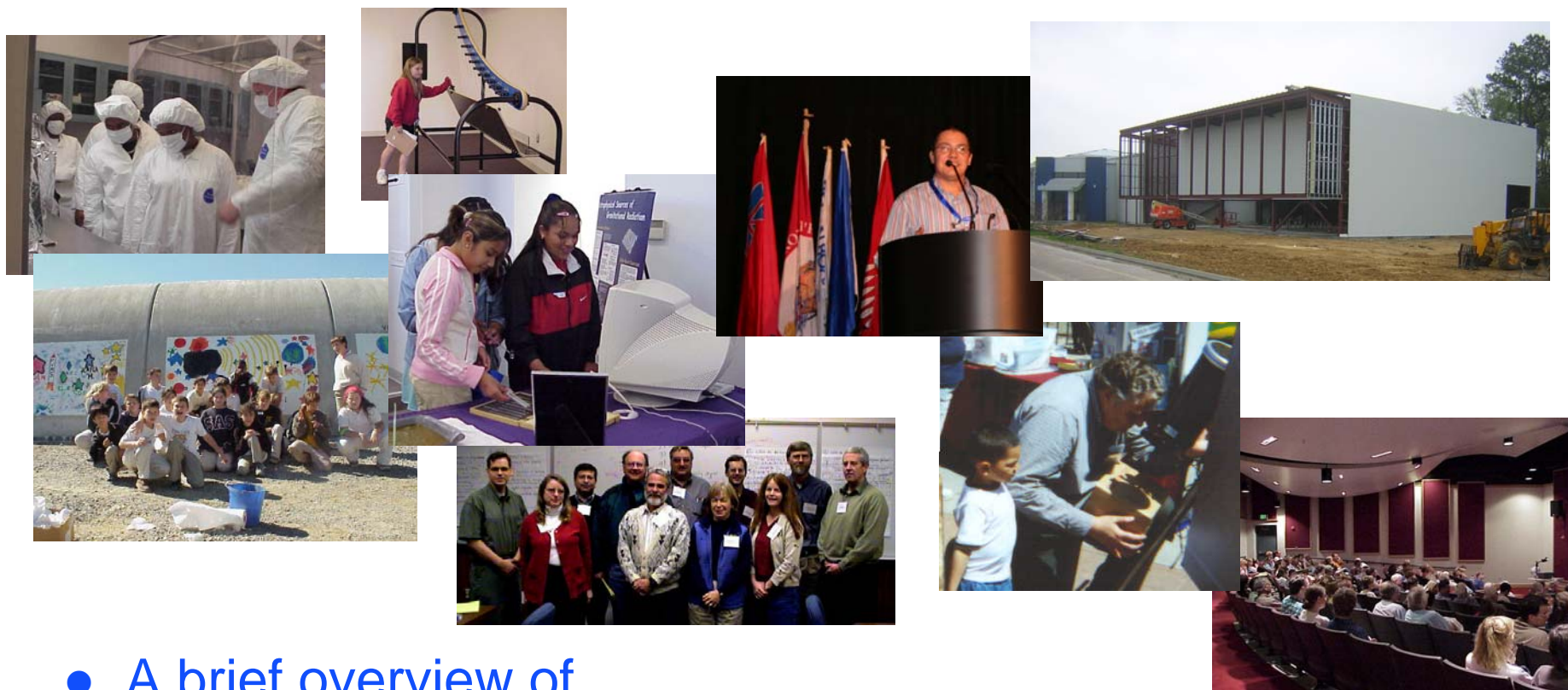


# LIGO Laboratory Outreach, 2006



- A brief overview of outreach operations at LLO and LHO



# Drawing upon the unique attributes of the sites to promote science literacy and science interest



# EOC's: Dale Ingram (LHO) and John Thacker (LLO)

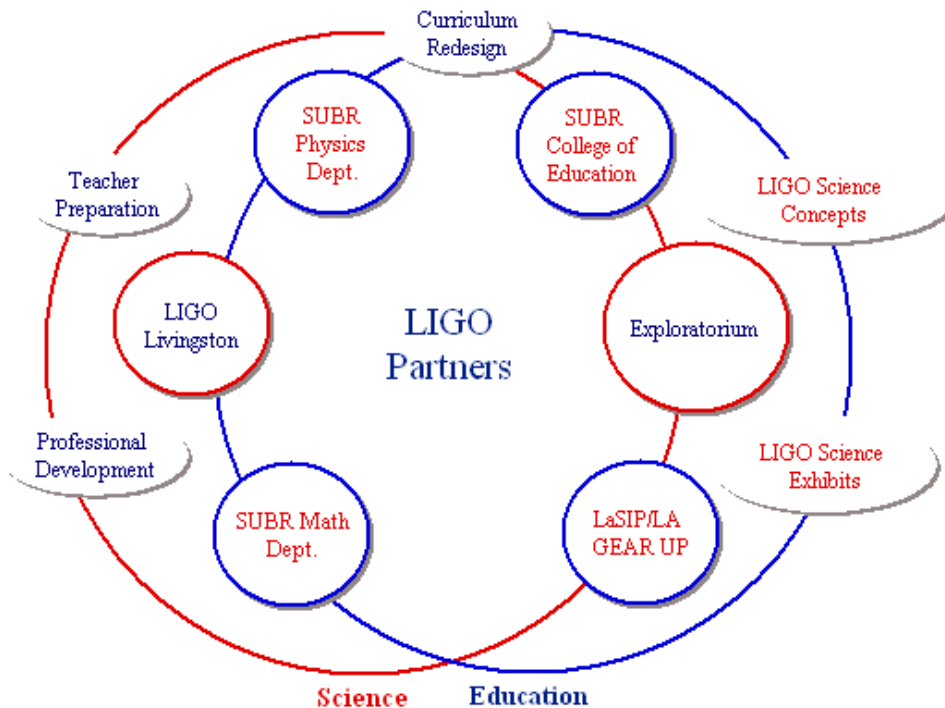


[ingram\\_d@ligo-wa.caltech.edu](mailto:ingram_d@ligo-wa.caltech.edu)



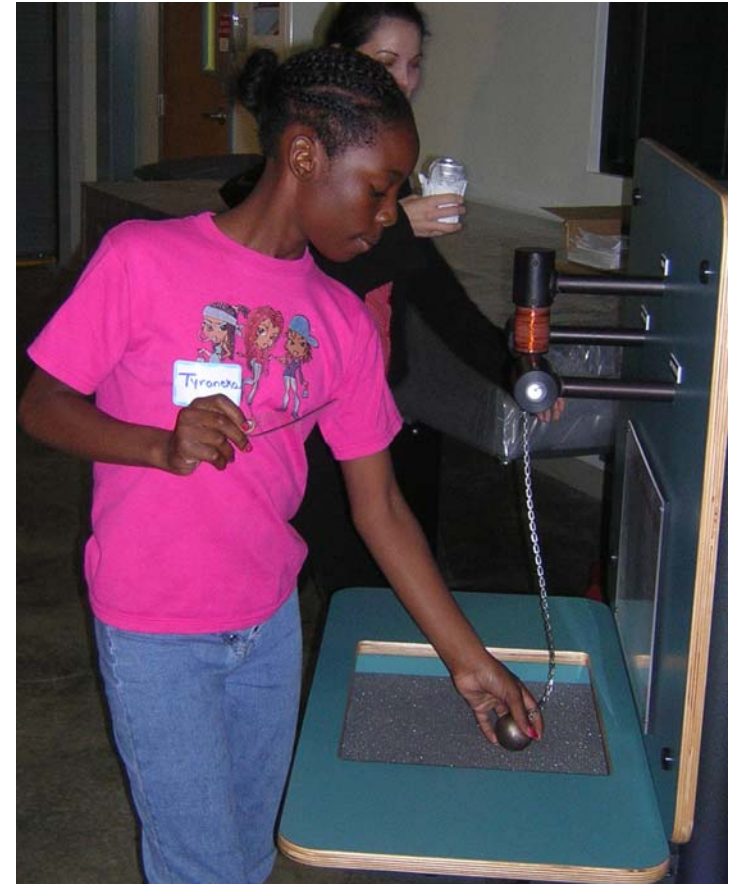
[jthacker@ligo-la.caltech.edu](mailto:jthacker@ligo-la.caltech.edu)

# LLO: Focusing on the development of the NSF-funded LIGO Science Education Center (SEC) through a four-party collaboration



- » Southern University will integrate LIGO Science Education Center into its pre-service and in-service teacher training program
- » Exploratorium -- nation's premier designer of exhibit-based science teaching -- supplies exhibits and teacher training
- » LaSIP/LaGEAR-UP will ensure state-wide visitation by schools, with emphasis on teachers and schools with greatest needs

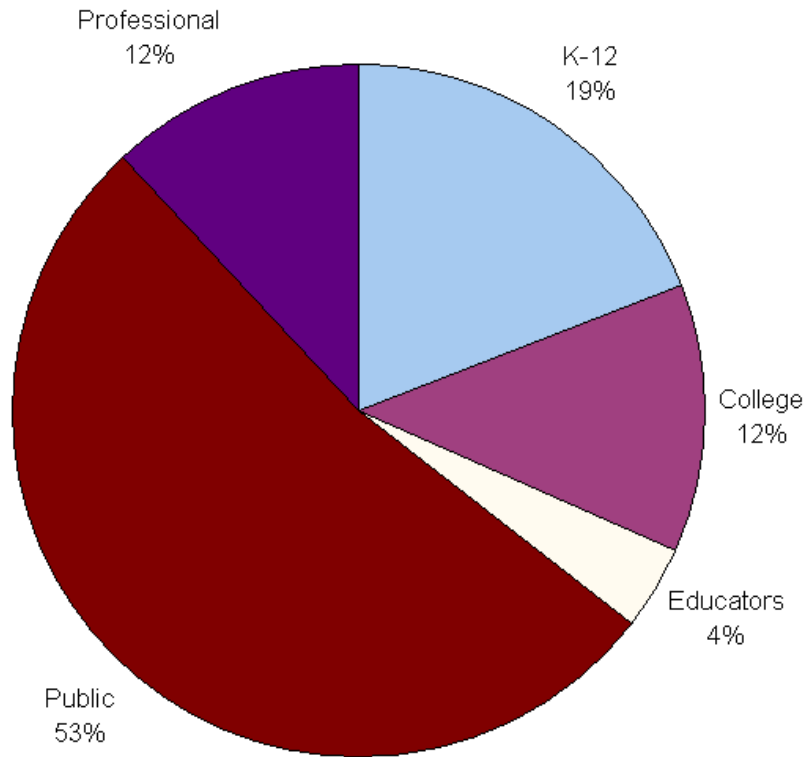
# Exploratorium exhibits are tools for teacher training and for student experiences with LIGO science themes



LLO's ~3K annual visitors are mainly students and teachers




# LHO: Also ~3K per year at present, majority are general public




3/17/2006

LIGO-G060057-0



## Public Lecture



### *The Bizarre Quantum World of Light*

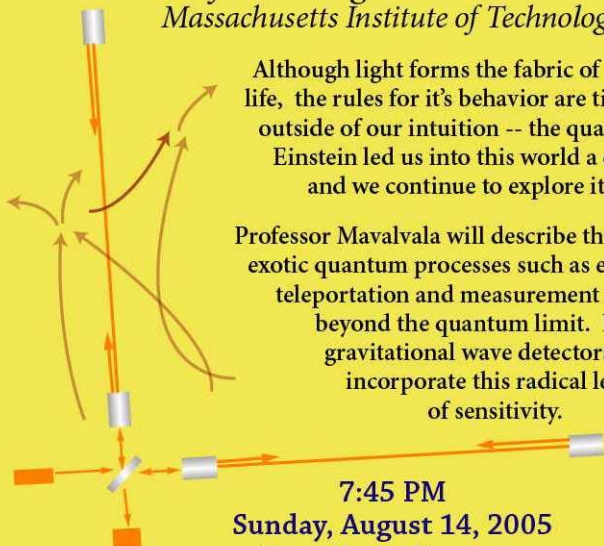
*Non-Classical States of Light and Precision Measurement*

*Professor Nergis Mavalvala*  
*Massachusetts Institute of Technology*


Although light forms the fabric of our everyday life, the rules for its behavior are tied to a world outside of our intuition -- the quantum world. Einstein led us into this world a century ago and we continue to explore it today.

Professor Mavalvala will describe the ideas behind exotic quantum processes such as entanglement, teleportation and measurement sensitivity beyond the quantum limit. Future gravitational wave detectors will incorporate this radical level of sensitivity.


7:45 PM  
Sunday, August 14, 2005  
Battelle Auditorium  
North Richland  
Free Admission



National Science Foundation  
WHERE DISCOVERIES BEGIN



Call 509-372-8181 for more information



**LIGO**

*Celebrate the  
International Year of Physics*

with the

**LIGO Hanford Observatory**

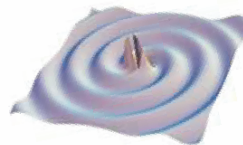


Event	Date	Appetizer
Say Hello to Einstein@Home	Saturday, January 8	Enjoy an evening of Einstein and neutron stars. Learn how to search for gravitational waves on your own computer
Einstein@The Movies	Saturday, February 5	A showing and discussion of the film "Runaway Universe" in LIGO's auditorium
Einstein@The Movies	Saturday, March 5	"Death Star." View and discuss this fascinating glimpse into gamma ray bursts, perhaps the most violent events in the universe
National Astronomy Day	Saturday, April 16	Explore the wonders of the night sky. All ages and levels of experience are welcome
El Cielo en Mayo	Saturday, May 21	Un acontecimiento de la astronomía de la lengua Española para las familias
Shadows, Sticks, the Earth & You	Saturday, June 18	Welcome the Summer Solstice by measuring the size of the earth. We'll provide the sticks!
Einstein@The Movies	Saturday, July 16	"Time Travel." Join us for a viewing and discussion of this mind-bending aspect of Einstein's legacy
Watch the Space Rocks Roll	Friday, August 12	Take in the Perseid Meteor Shower from the darkness of the LIGO night sky
LIGO Public Lecture	Sunday, August 14	Learn how Einstein's ideas continue to influence the big questions in astrophysics
Einstein@The Movies	Saturday, Sept. 17	"The Elegant Universe, Part One." Einstein's work set in motion the quest for a theory of everything
Einstein@The Movies	Saturday, October 15	"The Elegant Universe, Part Two." What are strings, and are they part of everything?
Einstein@The Movies	Saturday, Nov. 19	"The Elegant Universe, Part Three." 3 dimensions, or 4, or 10? How many are there, and where are they hiding?
Here Comes the Sun	Saturday, Dec. 17	Winter Solstice means more daylight is on the way. Get ready - come and build a take-home Sundial!



Free Observatory Tours on the 2nd Saturday of every month

For times, driving directions and more information about World Year of Physics events, find LIGO Hanford on the Web at <http://www.ligo-wa.caltech.edu> or call 509-372-8300 ext 248



Free admission for all events





# School visits are increasing



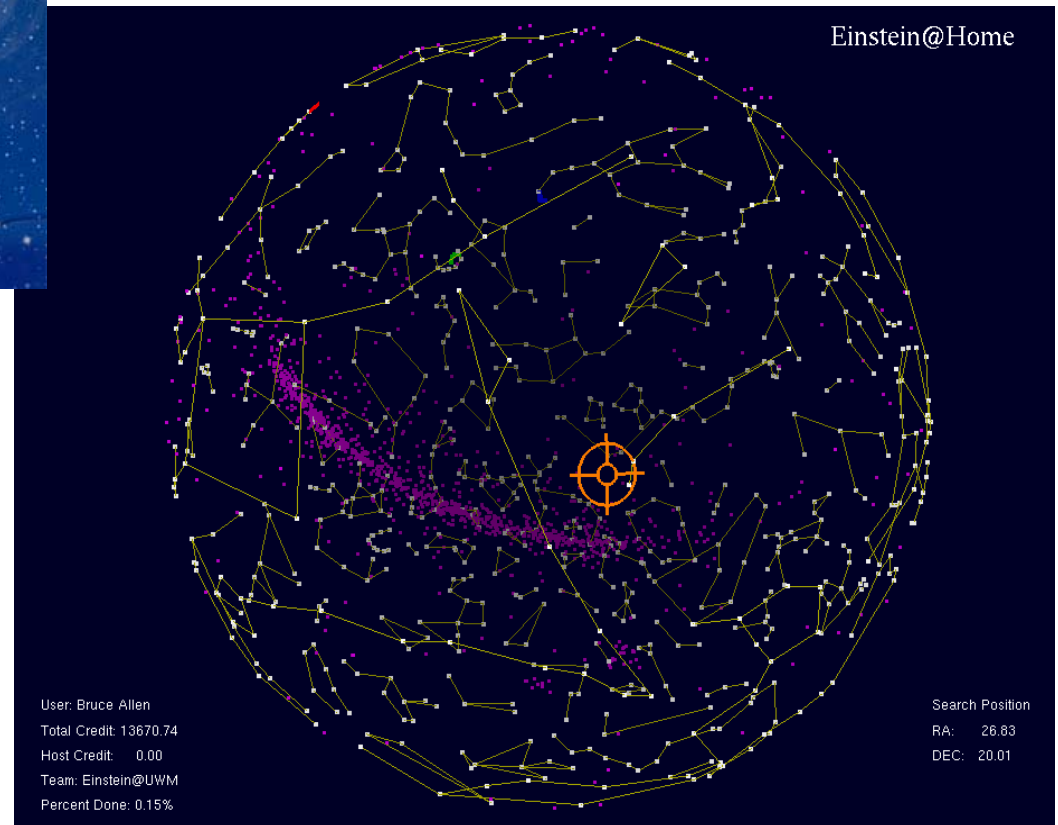
**Exhibits  
&  
Activities**



**Teacher  
Training**



# LSC Outreach . . . 200K contacts and growing!



# Potential outreach interactions with the Lab . . .

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- Broader Impact Consultations
  - » What works, what might work, what doesn't work
  - » Find out about wheels that have been invented already
  - » Avoid getting lonely over outreach
- Practical Help
  - » There may be site-based services that we can broker to provide assistance in your work
- Opportunities for Scaling
  - » Regional and national outreach endeavors to which the Lab is connected (NSF's I2U2, AAPT projects, Einstein's Messengers, more to come) may provide avenues for LSC participation