



LIGO Hanford Observatory Outreach Program

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Main Components of LHO Educational Outreach 1997-2001

- Informal Education
- K-12 programs in collaboration with Pacific Northwest National Laboratory (PNNL) and Educational Service District (ESD) 123 in southeast Washington.
- University-level programs



LHO Informal Education Activities

- Observatory tours draw approx. 800-1000 visitors/yr
 - » Einstein, interferometers and the work that we do.
 - » Audience comes from professional groups, boy scouts, families, bicycle club, etc.
 - » Hosting WA State Science Teachers in Nov 01
- Public talks and LIGO Public Lectures
 - » Wheeler/Thorne lecture (00) drew > 350 people
 - » Kamionkowski lecture (01)
 - » Rotary/Kiwanis clubs & professional societies
 - » Adler Planetarium lecture
- Cooperative “happenings” w/ other outreach groups
 - » Wheeler book signing at CREHST
 - » B-Reactor reunion



LHO K-12 Outreach

- LIGO-SST involved 2 HS teachers, 6 students in summer w/ ~30 students each academic year
- “The Scientific Method on the Job” video developed as Middle/High School science resource
- Distance learning initiative with ESD 123 to develop interactive science programming for WA K-20 teleconferencing network
- Teacher interns nominated by CREHST, ESD123 developed exhibit guide, lesson plans and K20 scripts in Jul01



LHO University-Based Activities

- REU program involves 3-4 undergrad research interns/yr
 - » Betsy Weaver developed/commissioned vac-prep facility
 - » Eric Morganson wrote earth-tides prediction software
 - » Tom Corbitt developed automated laser sideband analyzer
- Typically 2-4 grad students doing research
 - » U.Rochester, U. Oregon, U. Michigan, Caltech, MIT, Penn.St.
- Visitors program
 - » U. Michigan, U. Oregon on long-term appointments



Main Components of LHO Educational Outreach 2002-2006

- Expand SST participation to more schools and more sites throughout nation via LSC.
 - » Budgeted funding for program
 - » Extension to Livingston Observatory
 - » Also applying for RET funding to expand scope
- Expand “distance learning” initiative through K20
 - » More interactive programming
 - » More teacher involvement through summer internships
- University-level programs
 - » Continue current scope through REU program
 - » Goal to increase “breadth” of graduate-level students from other fields



LHO Educational Outreach 2002-2006, continued

- Improve informal educational program within current envelope
 - » More exhibits with “hands-on/minds-on” content
 - » Teacher-developed “use” plans and classroom materials
- Work toward development of a regional science center for the inland Northwest
 - » Develop exhibition plan with input from STC professionals and teachers
 - » Develop 503-c group to govern and begin fund raising
 - » Deal with special nature of DOE-NSF-private enterprise
 - » Develop regional science consortium



Regional Science Center

● Partners/Resources

- » Columbia River Exhibition of History, Science & Technology
 - Access to non-classified Hanford DOE artifacts
 - Active K-6, summer & “latchkey” programs in science & environment
 - Museum at ‘gateway’ to Hanford Works & Nat’l Monument
- » Alliance for Science Teaching Through Astronomy
 - Robot 0.8-m observatory atop Rattlesnake Mountain for internet use in classrooms
- » B-Reactor Museum Society
 - World’s 1st production nuclear reactor
- » Economic, Community and Tourism Development Agencies
 - Hungry to develop economic independence from D.O.E.



Looking Forward from Today

- Now that LHO has passed the “green-field” stage, we focus on constituencies where our outreach has the most potential –rural populations and groups traditionally under-served and under-represented in physical science
- Under-represented groups surrounding LHO
 - » Native Americans
 - » Latino Americans