ILC Workshop Education and Outreach

Engaging the general public, what physicists can do.



Supported by NSF, CROP & QuarkNet



Education and Outreach Volunteers

Marge Bardeen, Fermilab **Cheryl Brooks, Northside High** School, Fort Worth TX **Neil Calder. SLAC** Marcela Carena, Fermilab Ken Cecire, Hampton Jose Cembranos, Irvine Susen Clark, Bioscience & Health **Careers School at Franklin**, **Rochester NY** Diana Cruz, Basalt High School, CO **Nicolas Delerne, Oxford Rick Dower, Roxbury Latin School,** West Roxbury MA Mike Fetsko, Godwin High School, **Richmond VA** Gene Fisk, Fermilab Sean Fottrell, Castro Valley High School, CA Laura French, Roaring Fork High

School, Carbondale

Ulrich Heintz, BU Judy Jackson, Fermilab Young-Kee Kim, U Chicago Paul Lebrun, Fermilab Alejandro Lovca, DESY Swapan Majhi, Baylor **Beth Marchant. Notre Dame Jeff Marchant, Notre Dame** Hitoshi Murayama, Berkeley Vaia Padimitrioui, Fermilab Michael Peskin, SLAC **Bob Peterson, Fermilab Randy Ruchti, NSF** Peter Skands, Fermilab **Greg Snow, U Nebraska** Lauren Tomkins, Berkeley Carlos Wagner, U Chicago & Argonne Kris Whelan, Berkeley Andy White, UT Arlington Herman White, Fermilab Jae Yu, UT Arlington

Education - Formal Activities

Support for 20 young scientists and engineers



Dark matter workshop for 8 high school teachers



Detector workshop & practicum for 8 high school teachers

Outreach - Informal Activities

Reaching hundreds of people through public lectures & . . .



Browsing the Quantum Universe



Cosmic Ray Showers on the Aspen mall

E&O Challenges

Education is national (local); Linear Collider is international.

E&O is not necessarily an area of expertise for physicists and engineers.



E&O requires support from

the top ...



and involvement from the community.

E&O Opportunities

- Develop E&O along with the ILC GDE.
- Take advantage of existing programs & resources
 - REU, RET, QuarkNet.
- Collaborate with formal/informal educators.
- Commit real time and \$\$.
- Develop a plan Identify & prioritize:
 - Audiences.
 - Activity/program formats.
 - Resources existing & new.

Timelines - Traditional

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Timelines – Non Traditional

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0					0			0		
0					1			1		
5					0			5		
7	8	9	1 0	1 1	1 2	U G		G R		



QuarkNet, ILC R&D



QuarkNet, ILC R&D

What to do?

- Participate in ongoing programs
 - QuarkNet
 - CROP
 - NALTA
 - CHEPREO
 - Mariachi
 - ...
- Work on new initiatives
 - New Proposals for Base Funding
 - New Proposals for R&D Funding

Broader Impacts

- Education
 - Formal, Informal, Traditional
 - Underrepresented Groups
- Other Areas of Research and Applications
 - Engineering, Materials Science, Medicine ...
- Business/Private Sector
 - Technology Development, Computing ...
- Other Geographic Regions
 - Including engaging the Southern Hemisphere

Comments

- While the ILC may be a number of years away to be fully realized...
 - Broader impacts issues can and should be emphasized early.
- Broader Impacts efforts can help:
 - Develop a national interest in the ILC
 - Build and sustain an ILC program