

Outreach Programs for the Public

Neutrinos and Society Subgroup
SLAC, March 6, 2013

Jose Alonso (MIT/LBNL)

Outline

- Rationale and Importance of Public Outreach
- Interesting Example
- How would one structure an outreach program around Neutrinos?
- How would one implement it?

Outreach... Why?

- WE NEED PUBLIC SUPPORT!
- Taxpayer money funds our work!
 - Obligation to justify, show value for their investment
- Our field has a LOT of exciting developments,
 - Our challenge: convey our excitement to the Public, and Congress;
 - AND particularly students!

Example: CERN's response to Angels and Demons

- Provide template for public talks
- Organize network of speakers
- Orchestrate series of talks coordinated with release of blockbuster movie



ANGELS & DEMONS™
Lecture Night
THE SCIENCE REVEALED

Antimatter

in Film & in Science

Jose Alonso

Director, Sanford Laboratory

Black Hills State University

Spearfish, SD, 4/16/09



Could such a model be applicable in our Neutrino community?

- Nothing quite as time-critical as a film release
- We're not a single Laboratory, and neutrinos aren't the Higgs Boson – we have a more diverse set of groups and physics goals
- These give us a lot of fascinating things to talk about!
 - Large, sophisticated, and... very photogenic detectors
 - IceCube, SuperK, Borexino, SNO, ...
 - Almost unbelievably large-scale experiments
 - 1000 km baselines
 - Interesting results!
 - Supraluminal neutrinos... (well...)

And... what we've learned about neutrinos

- The “undetectable” (Pauli) particle CAN be seen
- Oscillations
 - Particles morphing into other particles
 - Counterintuitive, and ... fascinating to think about (just try to explain it so your grandmother can understand it!)
- Astrophysics
 - Supernova neutrinos – seen
 - Astronomical point sources – still looking
- Nonproliferation and Arms Control
 - Antineutrinos have the potential to benefit international nuclear monitoring and control of nuclear material
- Bottom line: Neutrinos can be “stars” in public lectures

What's needed: thoughts and suggestions

- Resources
 - Collections of talks, slides, graphic material
 - Audience: potential students, Congress, general public
 - Centralized “library” or server?
 - Who manages?
- Structure
 - Build on and perhaps broaden existing outreach activities
 - Community clearing house
 - E.g. APS’s Centennial lecture series
 - Pool of lecturers available to respond to requests for talks

Concrete Suggestions

- Reports being generated at these preparatory Workshops should address Outreach needs
- Further thoughts and suggestions should be solicited and collected
 - I'm willing to work on this