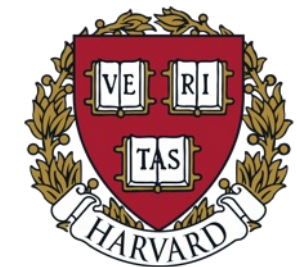


TAMBO: Searching for ν_τ in the Peruvian Andes

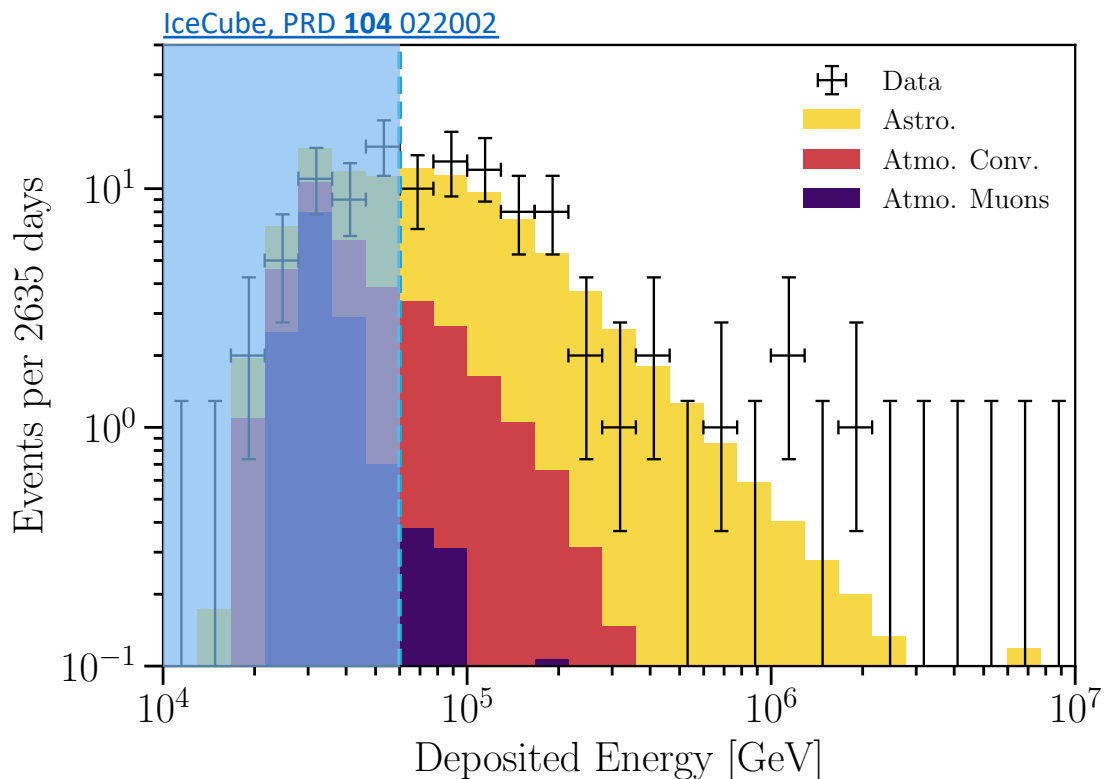
Will Thompson

P5 Townhall

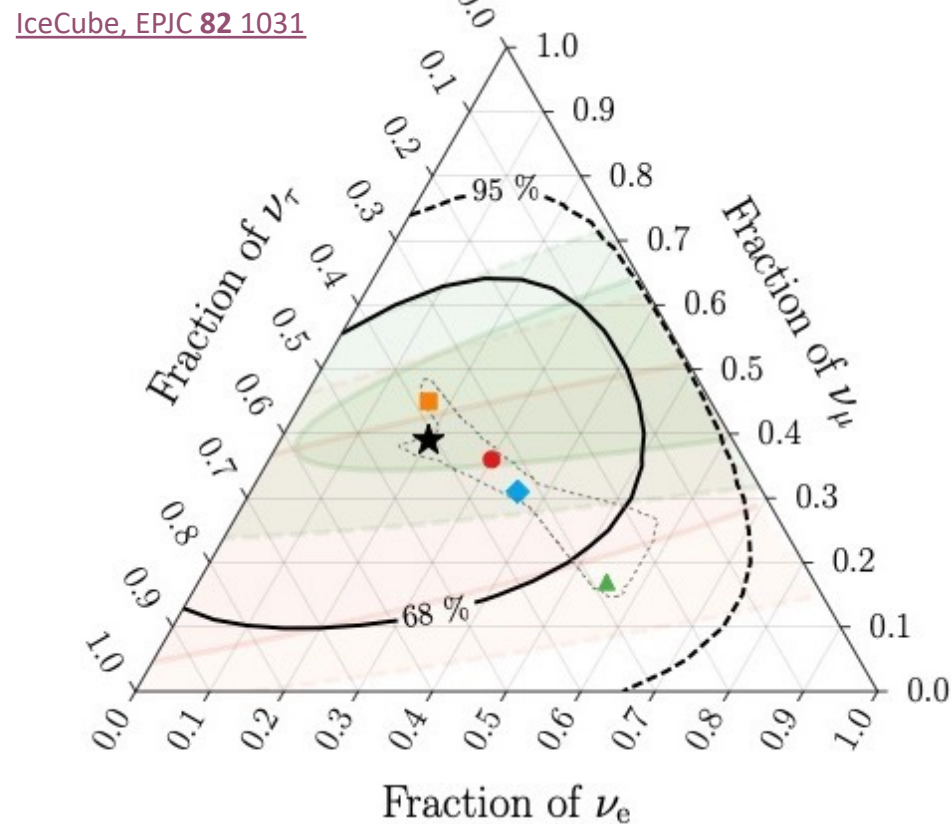
June 27th, 2023



Current State of Neutrino Astronomy

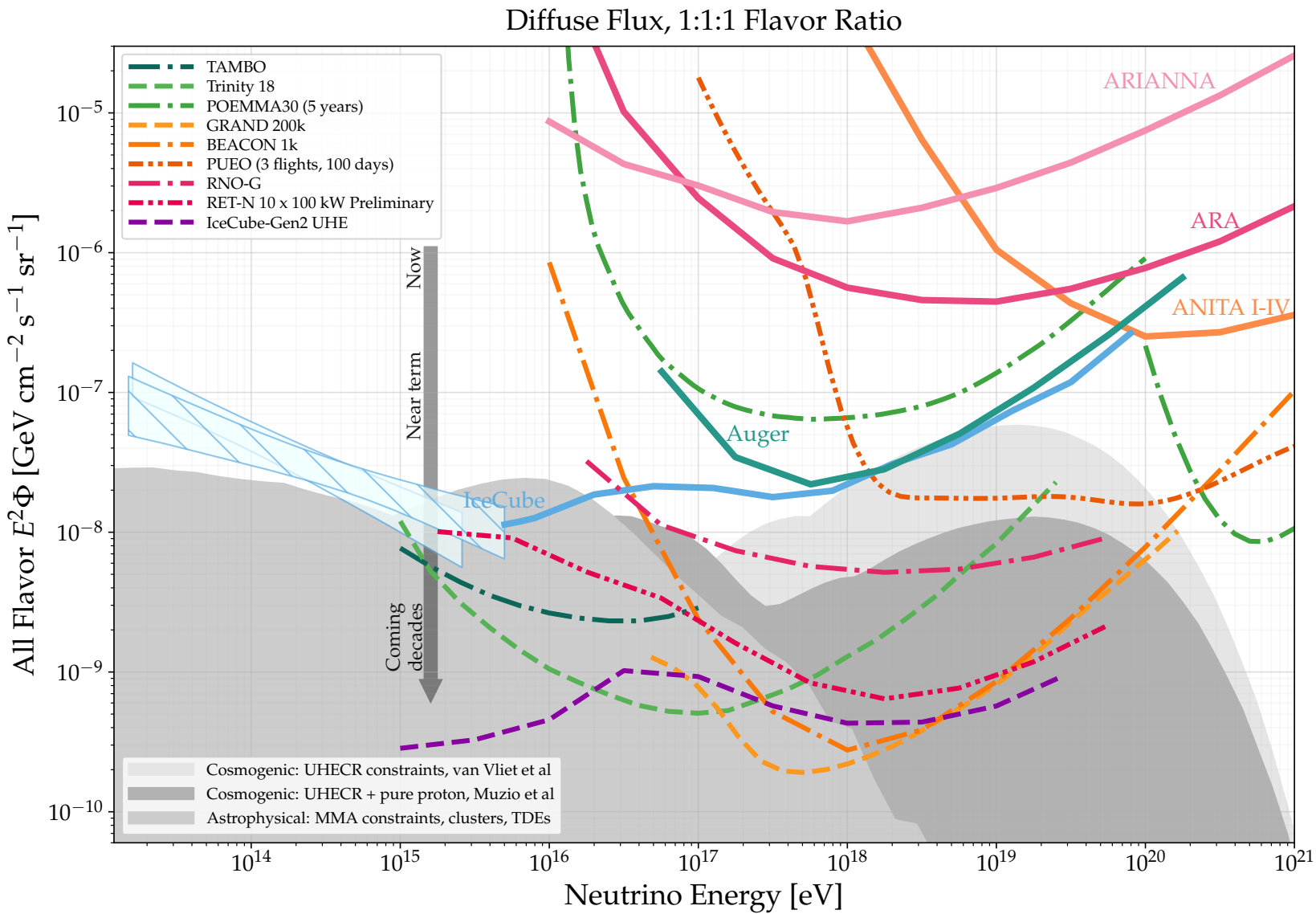


- Diffuse astrophysical flux discovered by IceCube
- Is there a high energy cutoff?

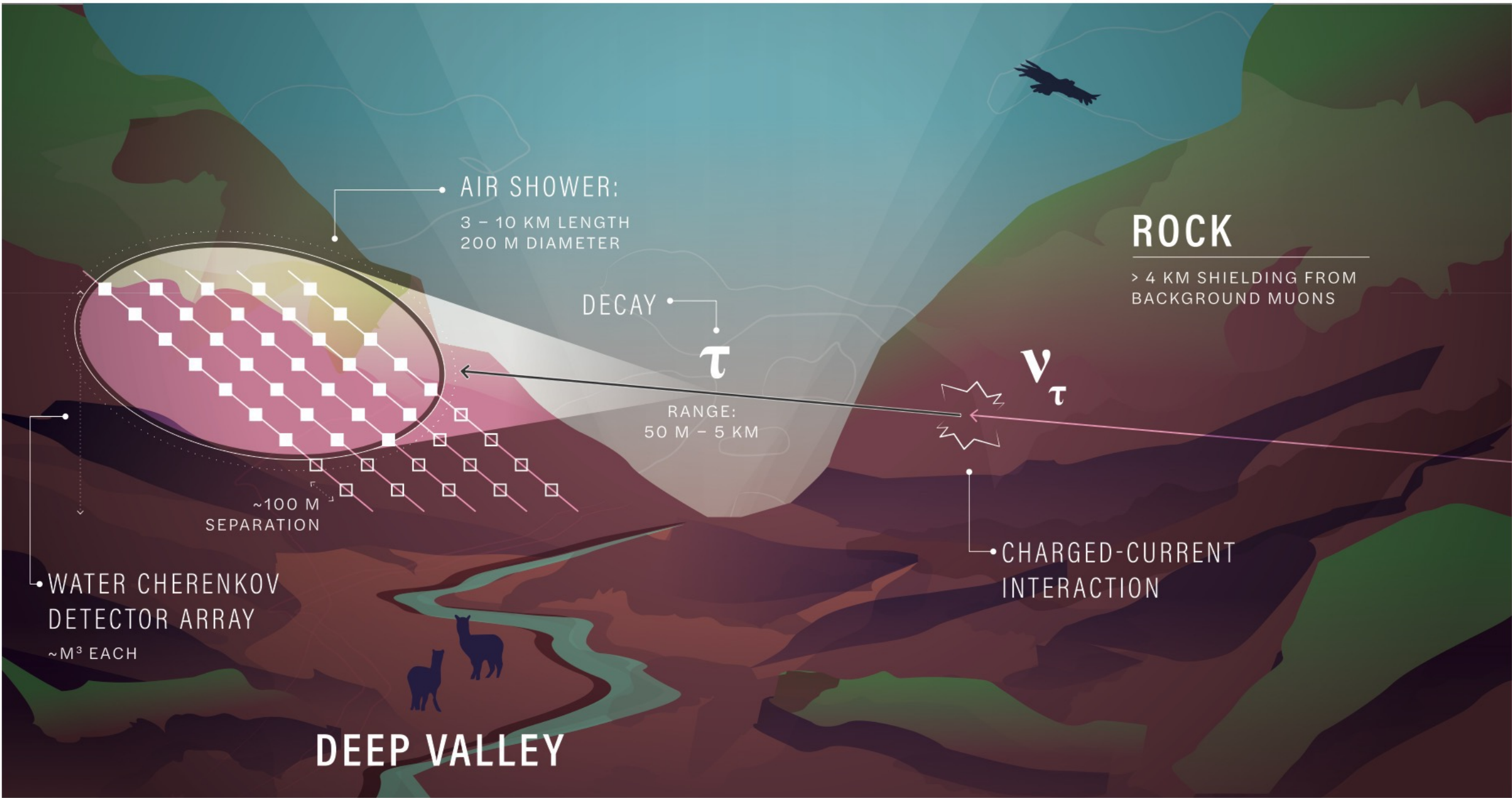


- Astrophysical flavor ratio can probe new physics
- How can we better constrain these measurements?

Next-Generation Prospects



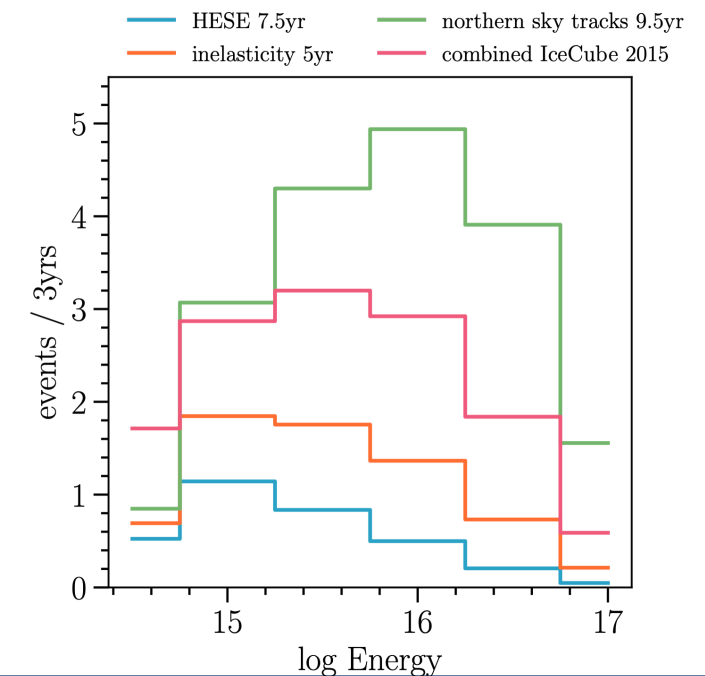
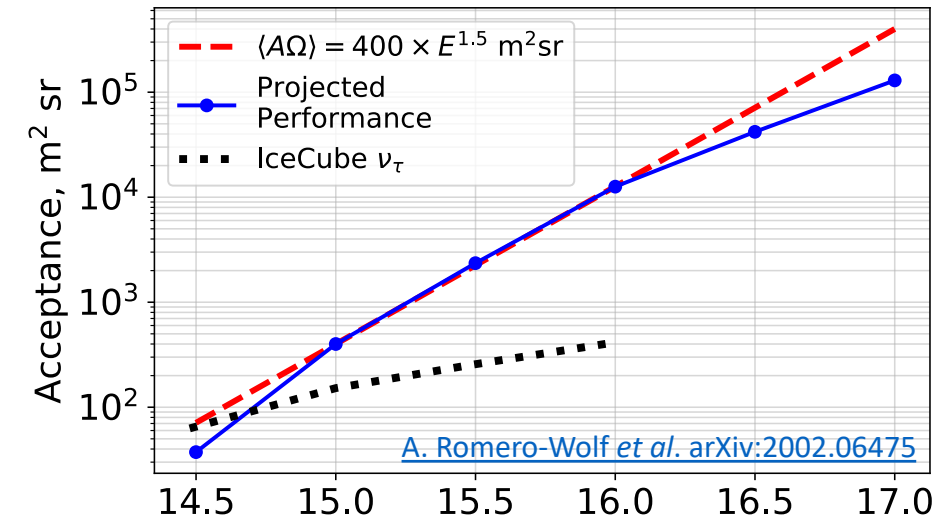
- Community has heeded call for UHE neutrino observatories
 - But fewer experiments planned for 1-100 PeV
- TAMBO will:
 - Bridge the gap between HE & UHE observatories
 - Perform unambiguous measurement of astrophysical ν_τ flux



TAU AIR-SHOWER MOUNTAIN-BASED OBSERVATORY (TAMBO) • COLCA VALLEY, PERU

What Can We See with TAMBO?

- Baseline design: 22k detectors, 150 m spacing
- Probe diffuse spectrum from 1-100 PeV
- Synergistic flavor ratio measurements
 - ν_τ discrimination difficult for many neutrino telescopes
 - IceCube has identified only 2 ν_τ in 7.5 years (2.8σ)
- Dark matter from the Galactic Center
- Unique geometry for cosmic ray measurements



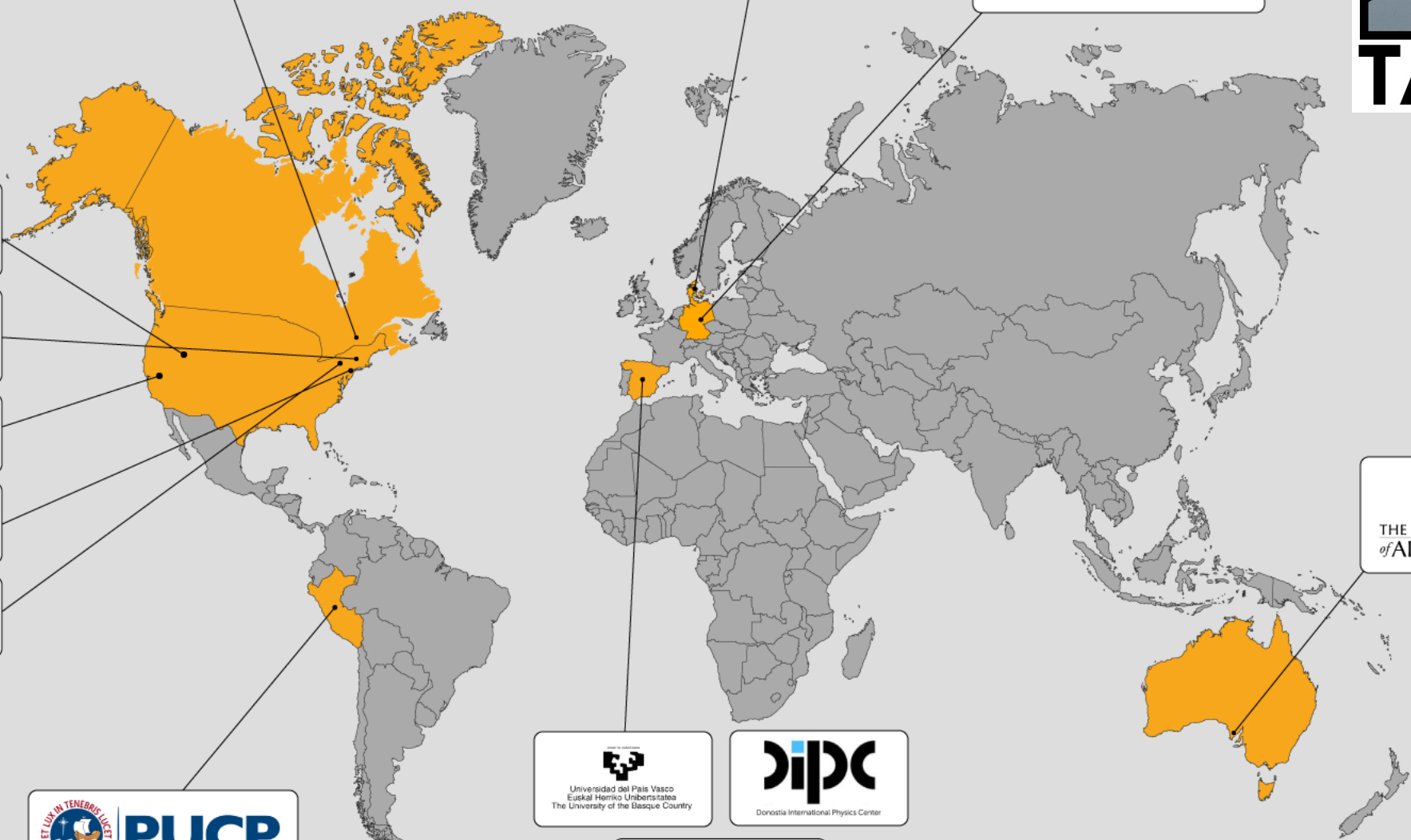
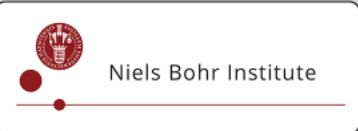
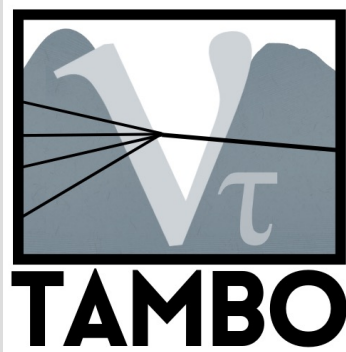
Our Collaboration & Community Partnership

- Met with Peruvian & local officials last autumn
- Developing workshop to help scientists interface & form partnership with local communities



Photo Credit: Universidad Nacional de San Agustín de Arequipa





Thanks for your attention!

