

Large/Relatively Shallow Working Group

- Physics: PDK, LBL, Low Energy, ...
- Depth and Size (Physics and Detector Technology Dependent)
- Detector technology
- Engineering
- R & D \$\$s and Time Needed

Water Cherenkov vs Liquid Argon

- WC
 - Known technology
 - Modest extrapolation (safe)
 - Is X 10 enough for discovery?
 - Needs large cavity
 - Megaton size
 - Modularity may be necessary
 - Detailed geometry, orientation, etc., needs study
 - Required depth >2000 mwe
 - R & D for Photo-detectors needed

LAr

- Still in R&D (No guarantees for enlargement)
- Safety issues
 - Ventilation shaft to surface?
 - (Safety) prototype at WIPP
- Large extrapolation
- More manageable cavity size
 - 200 K ton gives 10^{35} yr in 10 years for K v mode
- Shallow depth acceptable: 2000 mwe (Less?)
- R & D Money required

Engineering Concerns

- Unknown territory to build cavities with 60 meter cross sections
- Need a depth verses cost evaluation
- Construction very site dependent
 - R & D needed when site is assessable (several years)
 - Money should be in S2 proposal ?
 - R & D is the Science for the Bio-geo-engineering fields
 - Interdisciplinary R & D