Retreat Process

- everybody came and stayed whole time
- we looked at two module configurations only
- 3 weeks of prep meetings on phone
- Seattle PWG meeting
- everybody had scheduled time just for their concerns
- principles and the decision process (not only FD issues, but how Project and Collaboration work together) were also topics of discussion.
- managed to come to a few concrete conclusions

Executive Committee

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W.Louis
M.Marshak
R.McKeown
E.Blucher
E.Kearns
R.Kadel
K.Scholberg
J.Klein
B.Fleming
G.Rameika
G.Sullivan

R.Svoboda
M.Diwan
M.Goodman
J.Strait
V.Papadimitriou
C.Mauger
J.Stewart
B.Baller
E.McCluskey

Recommendations

- The (Fall 2010 PWG) report written by the physics working group conveners was considered of high quality, informative and crucial for discussion of the far detector configurations. We urge collaborators to send corrections, questions and comments about the report to the PWG and we intend to endorse a final document at the January 2011 meeting
- The report included a comparison of the long-baseline physics potential of Argon and water detectors, based on the assumption that detector size scale with the efficiency in a ratio of 1:6. The analyses of physics sensitivity in the report verified this assumption, and the executive committee concurs. There was consensus that the long-baseline physics sensitivities for each configuration were comparable for further planning purposes.
- We call attention to Table XXIX (page 92 of v1.1) which is a useful summary of the physics comparisons. It allows a weighting exercise for various physics preferences to give numerical scores which compare configurations.
- The 200kt WCE physics reach of proton decay in any configuration was considered incremental, (compared to the expected sensitivity of Super-K in 2030). Nevertheless, this capability should be retained, due to the transformational nature of the physics and it would be enhanced with additional mass

Proton Decay

- The limits for any two module configuration are only factors 3-7 above extrapolated SK performance, assuming no SK improvements.
- Nevertheless, it was thought that this incremental improvement would be useful and likely come without large additional costs.
- Additional modules would be required to make further progress.

Recommendations (cont.)

- Based on a preliminary differential cost estimate for the deep (4850) versus moderate depth liquid argon option (>100$M), further work on this option is not justified.
- Better costing information, which should come in November, will present us with an opportunity to make a branch point in the water/ argon considerations.
- The recommendation on Far Detector Configuration should be made on the timescale of CD-1. One possibility is to decide on the configuration of one detector first.