Charge to the Scintillator R&D Review Committee

R&D for HEP experiments in the US will have high priority for the next 5-10 years as we work to define the next generations of experiments that will push the boundaries of our knowledge in the energy, intensity, and cosmic frontiers. To that end, Fermilab needs to have a well-focused program of detector R&D so that the directions taken are appropriate, understood, and supported. PPD in collaboration with CD is organizing a series of mini-review/workshops to review the status, progress, and prospects for all known R&D efforts in the division.

Over the past 20 years, Fermilab has led development in a number of areas of scintillation detectors from scintillating fiber to extruded scintillator. However this development has slowed over the past few years due to loss of funding. In FY10, it proposed that generic scintillator R&D resume starting with investigation of the feasibility of extruding scintillator around WLS fiber. We would like the review committee to evaluate the plans for this R&D. We would also like to start planning for longer term R&D in areas of solid and liquid scintillator. Since the plans for the long term are not yet well defined, we would like to engage the reviewers and others attending this meeting to participate in a discussion of what direction that research should take.

For the short term R&D, we would like to have of talks covering:

- What is the planned R&D and why should it be supported?
- What are the prospects for its use in future detectors?
- What is the specific plan for the next year?
- What is the level of financial and personnel resources needed for the next year or two?
- Where could this lead, on the »five year time scale, or in what experiment?
- At what point would this transition to detector specific or project work?

For the longer term planning discussion we would like to have a talk or talks to stimulate discussion about possible areas of investigation. These could include: neutron sensitive scintillator, water based liquid scintillator etc.

Our plan is to have a half-day mini-workshop whose outcome is a short report to the Division head covering the above questions. Please suggest an agenda with 2-3 hours of talks, including breaks, which address the above questions.
The workshop will be open to interested scientists at the lab and user community as well. Your research efforts are vital to the labs future, and we look forward to a very interesting and productive workshop.