

THE DUSEL PAC

9/3/10

Heidi Schellman for the PAC

DUSEL PAC

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- Program Advisory Committee
- Reports to University of California
- Two chairs
 - ▣ Mike Witherell - Physics
 - ▣ Mark Zoback – Earth Sciences
- First meeting in Berkeley, July 27-28, 2010
- [http://www.dusel.org/workshops/fallworkshop10/
PAC report 8-2010 final.pdf](http://www.dusel.org/workshops/fallworkshop10/PAC_report_8-2010_final.pdf)

DUSEL Program Advisory Committee (PAC) Members

Physics Members:

3 Michael Witherell (UC Santa Barbara)
(Physics Chair)

Allen Caldwell (Max Planck Institute)
Boris Kayser (Fermilab)
Hitoshi Murayama (IPMU & UCB)
Peter Parker (Yale)
Michael Ramsey-Musolf (Univ. of Wisconsin)
Heidi Schellman (Northwestern)
Abe Seiden (UC Santa Cruz)
Yoichiro Suzuki (Univ. of Tokyo)

Earth Sciences Members:

Mark Zoback (Stanford)
(Earth Sciences Chair)

Don DePaolo (LBNL)
Steve Hickman (USGS)
Art McGarr (USGS)
Patricia Sobecky (Univ. of Alabama)

Charge for the DUSEL Program Advisory Committee 2010

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The **UC Berkeley Vice Chancellor for Research** requests the Committee to review and advise on the following elements of the plans and approach to create the DUSEL facility and scientific program.

1) DUSEL Preliminary Design Baseline and Approach to the MREFC

Proposal – Is the Project on an appropriate path to complete a comprehensive Preliminary Design and one likely to obtain National Science Board approval?

2) DUSEL Generic Suite – Is the proposed Generic Suite of Experiments appropriate to the vision of a world-class facility? Are there experimental elements missing from the suite? Should experiments be reconsidered for inclusion in the generic suite?

3) Planning for the Scientific Program – Are the proposed preliminary plans and timescale for review and definition of the DUSEL scientific program, including the evolution of the experimental activities at the Sanford Laboratory, appropriate?

Presentations

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Introductions	Jim Siegrist (Berkeley)
Welcome	Vice Chancellor for Research, Graham Fleming (Berkeley)
Review Meeting Goals	Mike Witherell (PAC)
DUSEL Project Overview and Status	Kevin Lesko (DUSEL)
DUSEL Facility Design Overview	Kem Robinson (DUSEL)
Sanford Laboratory Science Program (Early Science)	Jaret Heise (Sanford)
DUSEL Physics Experiments	M. Gilchriese (DUSEL)
DOE's Long Baseline Neutrino Experiment	Gina Rameika (FNAL)
DUSEL Biology, Geology, and Engineering Experiments –	
	William Roggenthen (DUSEL) and Rohit Salve (DUSEL)
DUSEL Construction Project Baseline and Key Assumptions	Jim Yeck (DUSEL)
Agency Perspectives:	
National Science Foundation	David Lissauer (NSF)
Department of Energy	Eli Rosenberg (DOE)

Conclusions

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- The proposed scientific program for DUSEL is very strong.
- We particularly want to recognize the impressive accomplishments of the Sanford Underground Laboratory in bringing the project to this point.
- The generic suite of experiments is exceptionally useful for developing the preliminary design report without being overly prescriptive of the final program.
- Where do we go from here?

Planning process

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- While the general parameters of the DUSEL scientific program have been explored in sufficient detail to allow the PDR to be prepared with a reference suite of experiments, decisions on specific scientific programs have not been made.
- Over the next year, the PAC will work with the DUSEL management to develop a framework for solicitation and evaluation of proposals for specific experiments.

Planning process [BGE]

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- The parameters of the physics program are currently better understood than Biology, Geology and Engineering programs.
- The most interesting BGE experiments might be done by scientists who have not yet considered working at the Homestake site.
- The PAC stands ready to help facilitate the advertisement of this opportunity, to introduce DUSEL BGE science with appropriate programs within NSF, DOE and other agencies and to assist in the scientific review process as appropriate.