

# SNOWMASS PLANNING

J. Rosner – Meeting at ANL on LHC Results – July 15, 2013

“Snowmass on the Mississippi” organized by DPF

Minneapolis, July 29 - August 6 with seven working groups

Web site <http://www.snowmass2013.org/>

Plenary talks July 29, August 5, and half of August 6

Intermediate days: Parallel sessions (inter-group discussions), colloquia (early afternoons), panels (late afternoons)

Colloquia and panels to have ample time for audience participation

Two days of summary reports at DPF 2013

University of California at Santa Cruz, August 13-17

Web site <http://scipp.ucsc.edu/dpf2013/>

Register by July 28; DOE approval pending

# DPF LEADERSHIP

## Chair line

Past chair: Pierre Ramond (Chair in 2012)

Chair: Jonathan Rosner (2013)

Chair-elect: Ian Shipsey (Chair in 2014)

Vice-Chair: Nick Hadley (Chair in 2015)

Secretary-Treasurer: Howie Haber (2013-2015)

Councillor: Marjorie Corcoran (2010-2013)

## Executive Committee members:

Jonathan Feng (2011-2013)

Nikos Varelas (2012-2014)

Lynne Orr (2011-2013)

Robert Bernstein (2013-2015)

Yuri Gershtein (2012-2014)

Sally Seidel (2013-2015)

Election of 2014 Vice-Chair, two new EC members  
to take place soon

# SNOWMASS 2013 GROUPS

## Conveners of seven “Frontiers”

Energy: Chip Brock, Michael Peskin

Intensity: JoAnne Hewett, Harry Weerts

Cosmic: Jonathan Feng, Steve Ritz

Instrumentation: M. Demarteau, Ron Lipton, H. Nicholson

Facilities (“Capabilities”): Bill Barletta, Gil Gilchriese

Computation: Lothar Bauerdick, Steve Gottlieb

Education and Outreach: Marge Bardeen; Dan Cronin-Hennessy

## Subgroups:

Each group has several subgroups; see web page

Initial plenary meeting was at Fermilab (October 2012)

Many preparatory meetings; last at Seattle, end of June

# SCIENCE QUESTIONS

## Higgs boson properties

Coupling measurements: How precise?

One Higgs or more?

LHC vs. an ILC?

## Long-baseline neutrino experiment

Science yields of each stage of LBNE

Added value of underground detector

Added value of 34 kT vs 10 kT

Added value of enhanced neutrino beam

## Dark matter experiments

Variety of possible types of dark matter

Complementarity of search experiments

“Resource” for informed decision on “downselect”

# MEETING DETAILS

## Registration

DOE approval received; lab people were finally able to register

Early registration closes today; 511 registered by last Thursday

Fee \$260 if before July 15; \$300 after

Hotel deadlines were July 7 (Commons, Metrodome) but try anyway; others may be still available

## Indico page

<https://indico.fnal.gov/conferenceTimeTable.py?confId=6890#20130729.detailed>

## Initial plenary talks

Setting forth the main physics questions

Also: Young Snowmass, Saul Gonzalez (NSF), Jim Siegrist (DOE), Nigel Lockyer (new Fermilab director), note from Moniz (TBA)

## Final plenary talks: How we plan to get there

# COLLOQUIA ('HARD QUESTIONS')

7/29: Dark matter (complementary probes)

7/30: Higgs boson: couplings, sector, naturalness

7/31: Neutrinos: masses, mixings, grand unification

8/1: Precision measurements; new physics in loops

8/1: Cosmic survey: Dark energy, inflation, neutrinos

8/2: Weakly coupled particles: dark photons, axions, ...

8/2: Energies beyond LHC

8/3: Lepton and quark flavor; CP

8/3: High energy cosmic particles

8/4 (AM): Intensities beyond the planned era

8/4 (PM): Transformative technologies (instrumentation)

# PANELS

7/30: New physics? How will we find it?

A. De Gouvea, N. Arkani-Hamed, J. Feng, K. Cranmer, R. Rameika

7/31: Indirect tests from short-distance physics

D. Wark, M. Wise, S. Kettell, D. Hitlin, D. Zerwas, E. Silverstein

8/1: Selling long-term science in Washington

E. Moniz (invited), J. Blazey (OSTP), M. Fisher (ex-Congressional staff), K. Kirby (APS), A. Burke (FRA), S. Vigdor (NP)

8/2: Making common cause with other fields

R. Rosner, L. Greene, K. Dienes (TBC), H. Weerts, H. Murayama

8/3: Overseas vs. domestic facilities

D. Gross, C. Quigg, J. Incandela, K. Scholberg, P. Cushman, S. Henderson

# IN ADDITION ...

Theory panel chaired by Michael Dine: report on 8/4 AM

Education, Outreach, Communication: lunch sessions

Physics Slam: Friday evening, in U of M hockey rink

Bring a sweater! Temperature is 58 degrees

“Big Questions”: <http://dpfnewsletter.org/?p=915>

Reception: Tuesday, 7/30, Weisman Art Museum

Banquet: Sunday, 8/4, McNamara Alumni Center

Tours of Soudan and Ash River labs: see

<http://www.hep.umn.edu/css2013/events.html>



# NEXT STEPS

## Snowmass Report

“White Papers” invited

Input to seven 30-page “Frontier” writeups + Theory report

Executive summaries provide input to 30-page overview

300+ pages to reading and editorial committees by August 31

Report by November 1  $\Leftrightarrow$  Eur. Physics Briefing Book

<http://europeanstrategygroup.web.cern.ch/europeanstrategygroup/>

Setting forth main questions and means to answer them

## Setting priorities

The work of a separate “P5” panel formed by September

“Dear Colleague” letter: Send names for panel to Andy Lankford

Community input from Snowmass Report and “Town Meetings”

P5 to report to HEPAP by mid-2014