Department Heads Meeting
October 18, 2012

David B. MacFarlane
Visitors

- Brian Sherin & Simon Ovrahim
  » Plans for site security
Science program dates and news

- KIPAC Advisory Committee [Aug 22-23]:
  » Report now available; Roger on SPC agenda
- SPC meeting [Nov 1-2]
  » Three talks: above + PPA strategy for Snowmass and growth
- US-China [Nov 5-6] in Daya Bay
- Status of LBNE effort
  » Reviewed proposal for entry into LBNE and MicroBooNE
- Status of investigation of second DM experiment
  » Visit to LUX/LZ Collaboration meeting and Homestake Mine
  » Visit to Gran Sasso Laboratory and DarkSide
  » Expect this to lead to a proposal in the near future
Snowmass process

- Community Planning Meeting at Fermilab [Oct 11-13]
- ICFA Accelerator Workshop: Circular vs Linear Collider options for Higgs Factory
- SLAC and KIPAC hosted meetings
  - Cosmic Frontier Working Group [Mar 6-8, 2013] and Intensity Frontier Neutrino Subgroup [TBD]
- Other working groups will be announcing intermediate meetings in the coming weeks
- Community Summer Study at the University of Minnesota [July 29-Aug 10, 2013]
Questions for the Universe

1) Are there undiscovered principles of nature?
2) How can we solve the mystery of dark matter?
3) Are there extra dimensions of space?
4) Do all the forces become one?
5) Why are there so many kinds of particles?
6) What is dark matter? How can we make it in the lab?
7) What are neutrinos telling us?
8) How did the universe come to be?
9) What happened to the antimatter?
Overarching Principles for US planning

- Particle physics and particle astrophysics is a global enterprise
  - US planning should recognize and integrate into a globally optimized plan
  - Both our domestic program and our overall science program will be stronger as a result

- US HEP needs a strong domestic foundation
  - A healthy Fermilab with a strong physics program planned with the support of the other HEP Labs and Universities
  - A strong domestic science program, centered on LBNE as the central component this decade, with international participation

- Community needs to balance science opportunities with a reasonable appraisal of funding here and abroad
  - Snowmass is about making the case for science opportunities, but should not lose sight of real world constraints
  - At which frontier does the US want to lead - Where does the US contribute
Key issues for US planning process: Energy Frontier

- Future LHC program
  - Expect LHC to be a cornerstone of the program through era of the planned high-luminosity upgrade
  - Need to elucidate the physics case for the LHC upgrades

- Higgs Factory Opportunity
  - Japan expressed willingness to host a 500-GeV ILC machine, beginning initially with a 250 GeV Higgs Factory
  - International consensus about physics case and interest in participation is essential to evaluate whether a new project should go forward and the US contributes
  - Essential to show the powerful combination of LHC discovery and ILC precision physics capabilities
Key issues for US planning process: Intensity Frontier

- The cornerstone in the US HEP program in the next decade:
  - LBNE is the next important step for neutrino physics
  - Elucidate an integrated long-term strategy for neutrino physics, including LBNE & $0\nu\beta\beta$, in a global context
  - Articulate case for importance of precision tests and connections to other frontiers
Key issues for US planning process: Cosmic Frontier

- US Leadership at the Cosmic Frontier:
  - U.S. program should expand on its historical leadership in dark matter and dark energy
  - Elucidate an overall strategy for dark matter searches, including LHC, indirect & direct searches
  - Make the case for a broad suite of science opportunities in CMB, UHE cosmic rays, gravity and dark energy

![Super CDMS](image)
![Fermi LAT](image)
![CTA](image)
Key issues for US planning process

- Snowmass should emphasize connections between Frontiers and the underlying science questions
  - Big unknowns of dark matter and dark energy capture the public’s imagination
  - Discovery of the Higgs opens new windows into the fundamental question of mass and symmetry breaking
  - Precision measurements and test of fundamental symmetries is a window into discoveries
  - Instrumentation, scientific computing and accelerator technology are enabling factors with real world impact

- Snowmass report should explicitly address how individual programs deliver results for other Frontiers
Vision for 2020s and beyond

- Aim is to construct a compelling vision for US program – Do we want to lead and at what Frontier?
- What should the program look like if?
  - Supersymmetry is discovered at the LHC
  - The Higgs sector turns out to be complex
  - CP violation in neutrinos is discovered at LBNE
  - Dark Matter is discovered in next generation experiments
  - Precision cosmology shows that Dark Energy is not the cosmological constant
- How should we position the program for US leadership in the global program in the 2030s?
  - Develop technology for a terascale lepton collider on US soil or elsewhere?
  - Develop the Intensity Frontier with a view to the Energy Frontier?
  - Provide an answer to the Dark Energy/Dark Matter quest?
Administrative news

- Timeline FY2012 performance evaluation process
- Budget update
Performance evaluation timeline

- **August 15:**
  » Access given to supervisors to begin writing evaluations and seek employee and matrixed supervisor / functional lead input

- **September 28:**
  » Directorates complete their normalization process and communicate to supervisors

- **October 31:**
  » All performance evaluations are finalized including higher level review

- **November 12:**
  » Evaluations are released to employees; supervisors begin meeting with employees
Grading scale

- 7 = Consistently exceeds all expectations
- 6 = Frequently exceeds expectations
- 5 = Sometimes exceeds expectations
- 4 = Consistently meets expectations
- 3 = Meets most expectations
- 2 = Needs improvement
- 1 = Does not meet expectations
- 0 = Not applicable
Merit and bonus program timeline

- **November 30:**
  » Directorates finalize salary increase and bonus recommendations

- **December 12:**
  » Executive Council completes approval process for bonuses and salary increases

- **January 21, 2013:**
  » Supervisors complete meetings with employees

- **January 22, 2013:**
  » Salary increases in paycheck; FY bonuses paid out in paycheck
FY2013 Initial Financial Plan

- New this year:
  - Authorization covers only the period up to February 28, 2013
  - Expect update in January time frame
- Initial analysis discussed with DOE on Oct 9, expect follow-up next week
  - Presented current FY2013 spend plan and analysis of funding situation versus FY2012
  - Called out four specific initiatives currently in the spend plan but with uncertain prospects [2\textsuperscript{nd} DM experiment, EXO R&D, HPS experiment, FY2013 computing hardware]
  - Highlighted Energy and Intensity Frontier funding issues
  - Unclear what reserves are being held by program managers
- Expect to slow down filling positions and we are currently evaluating other cost savings