

**IMPRESSIONS FROM THE  
2010 DOE OHEP COV  
and  
A RECOMMENDATION**

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# BACKGROUND

- US is a leader in theoretical particle and cosmological theory. Its continued health is central to US particle physics and an important topic for Snowmass
- From talks by Simona and Keith, we know that theory funding may not be particularly rosy in the near future
- Two obvious responses in times of shrinking budgets
  - Stop the shrinking (Sunday talk)
  - Improve efficacy of existing resources (today's talk)
- DOE OHEP COV with ~24 members meets every 3 years to review research portfolio and procedures. In 2010, 3 theorists spent 3 days reviewing the DOE university theory program. The 2013 COV meets in October with 5 theorists

# 2010 DOE COV RECOMMENDATIONS

- **3. Recruit and hire additional OHEP staff.**
  - At the time, this was of special concern for theory, where the program manager was leaving without a named replacement. Infrastructure issues are important, program managers are underappreciated, and we need to work together to make progress.
- **4. Use comparative review panels on a regular basis.**
  - This has been put into place, probably the most important change in recent years.
- **8. Work with the Office of Science to address the disparity of funding between university and national laboratory Early Career Awards, taking into account differences in underlying costs.**
  - Laboratory ECA is fixed by Office of Science to \$500K/year
- **Many others – see complete COV report.**

# DOE AND NSF

- The comparative review process increases flexibility, allows funding to more accurately reflect the results of peer review, increasing US research productivity in the long run without extra resources. Can this be furthered? Where is the market inefficient?
- There is a well-known disparity between DOE and NSF funding
  - The average \$/PI/year is ~70% higher for DOE than NSF
  - Roughly 15% of NSF PIs are better funded than the DOE average
  - After summer salary, etc. is subtracted, comparable DOE PIs have roughly twice as many spendable grant dollars as NSF PIs
  - The disparity is increased by NSF funding of faculty at non-R1 universities, etc. The difference between comparable groups remains large, however
- **These numbers are based on incomplete, old data (DOE 2009, NSF 2005-2010), requires you to trust my evaluation of “comparable,” etc.** It would be wonderful to establish the true, current numbers.

# A RECOMMENDATION

- Create a pilot program in which DOE and NSF resources are pooled, with proposals reviewed by a joint panel.
- Potential objections:
  - This is bureaucratically impossible
    - See the NSF-DOE Partnership in Basic Plasma Science and Engineering, [http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5602](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5602) . Note that the motivations for this program were different (thanks to Nigel Sharp for correspondence); I mention it here merely as an existence proof that NSF and DOE cooperation in this way is possible.
  - DOE and NSF have different cultures: mission driven vs. proposal driven
    - This is a huge difference in other fields, but less so in particle theory
    - The melding of cultures may have some positive affects in these hard times (e.g., fewer review committees, broader impacts for DOE groups, currently NSF-supported neutrino physicists could be DOE-supported)
  - Many others Keith and Simona will come up with
    - I would be happy to learn!