



U.S. DEPARTMENT OF
ENERGY

Office of
Science

HEP Response to 2013 Committee of Visitors Final Report

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Office of Science

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Report of the 2013 Committee of Visitors Review of HEP

- HEPAP was charged in Sept 2013 with conducting an external review to assess the operations, process and procedures of the Office of High Energy Physics (HEP) in the DOE Office of Science, and evaluate the resulting research portfolio.
 - This is the fourth in a series of recurring triennial reviews (2004, 2007, 2010)
- The Committee of Visitors (COV) met in Germantown, Maryland October 9-11, 2013. The COV consisted of 29 expert reviewers from across HEP disciplines.
- The Report of the COV was presented to HEPAP December 6, 2013. The Report contained 34 distinct recommendations.
- HEPAP requested a few revisions to the COV report before final approval. The final report was delivered Dec 26 2013. In this talk we address only the revisions.
 - See the HEPAP website for Dec. 2013 COV presentation and original DOE response
- Past COV Reports and Responses to the Recommendations can be accessed at http://www.science.doe.gov/SC-2/COV-HEP/HEP_Reviews.htm or http://www.science.doe.gov/hep/panels/reports/hepap_reports.shtml



Revisions To Initial COV Report

(From P. Grannis summary)

[HEP response]

1. A new section II.B addresses the management of the program in response to previous HEPAP and P5 recommendations. [New text on following slide. No new recommendation.](#)
2. An updated section II.L adds some more comments related to the recommendation concerning laboratory/university balance. [Reworded text on following slide.](#)
3. Recommendations 10 and 19 have been reworded. The previous Recommendation 22 has been removed and addressed in the comments section. (New) recommendation 31 has been reworded to avoid confusion of the words 'project-like' and 'project' as applied to reviews. [New or revised HEP responses on following slides.](#)
4. (New) recommendation 26 has been reworded to provide some discretion to OHEP in its implementation, but the sense of the Committee is that this recommendation (institute a theory postdoc fellowship program) followed from consideration of the concerns raised during the HEPAP meeting. [The situation regarding DOE-sponsored training programs is evolving, see slides and further discussion on this topic tomorrow.](#)

The Committee appreciates the discussion and comments from HEPAP which helped to sharpen the report, and is pleased that HEPAP has already moved toward implementing some of the recommendations from the Committee.



New Section II.B, *Management of the HEP Program*

- Advice on the priorities for the HEP program was given by the 2008 P5 subpanel. The main recommendations – maintaining the priority of the LHC program and conducting R&D on the ILC at the energy frontier, working toward a world class neutrino program based on an underground experiment in South Dakota using a high power beam from Fermilab, and pursuing $\mu 2e$ and $0\nu\beta\beta$ experiments at the intensity frontier, and continuation of experiments on dark matter and dark energy at the cosmic frontier – were heeded and made central components of the OHEP program. The P5 subpanel was reconvened in 2010 to examine the limited question of extended Tevatron operations, but at this time the panel was not charged to provide a broader review
- With six years elapsed since the main P5 recommendations, much has changed both scientifically and in the budgets. The DOE scope in the underground neutrino experiment was enlarged. When JDEM did not go forward, the LSST program emerged as the major new initiative for studies of dark energy, and various other new thrusts were proposed. As the situation changed, OHEP made decisions somewhat incrementally, sometimes with focused panels convened to provide advice within limited sectors of the program. All of these developments are natural in a healthy dynamic program, but the roadmap laid out in 2008 became less useful as time went on.
- On balance, OHEP has done well in managing the program in the face of the changing circumstances. We are pleased that the P5 evaluation of program priorities has begun again this year, but feel that a full review of program priorities at more frequent intervals would have been beneficial. The primary responsibility for the strategic oversight of the program should be retained by HEPAP



Reworded Section II.L, *Balance of University and Laboratory Programs*

- This COV had neither the appropriate documentation nor the time to adequately assess the balance in the program between university and laboratory research programs. The new comparative reviews in both sectors were not yet fully in place during the period reviewed. Although the roles of laboratories and universities differ and the programs are managed quite differently, there are often similarities in the roles played by individuals both in experiment and theory. We found anecdotal evidence that the balance, at least in funding, varied among the frontiers. Senior scientists at universities often perform similar activities to laboratory staff scientists, but are evaluated differently. We comment elsewhere on differences in Early Career Awards made to laboratory and university physicists. The balance between senior experienced scientists and junior investigators is important to strike carefully, and some anecdotal evidence was found to indicate that this balance may be shifting towards more junior scientists. These are important topics and we look forward to their consideration in a forthcoming HEPAP subpanel.
- *{Recommendation 18 which follows is unchanged}*



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

HEP Response

Was:

10) Work with the community to leverage and coordinate funding sources for the HEP research program such as university startup packages or other non-DOE funding sources.

HEP will continue to optimize its resources in coordination with other funding providers in order to advance the goals of the HEP research program.

Now:

10) Refrain from using university startup funds as a consideration in establishing grant funding levels.

We disagree. As stewards of taxpayer funds, it is the responsibility of OHEP staff to manage funding appropriated by Congress in a way that optimizes the scientific productivity of the US HEP program. Consideration of other sources of funding (such as university startup funds, or other pending federal or private support) are valid programmatic and budgetary factors in determining grant funding levels.



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

HEP Response

Was:

19) Make previous proposals and levels of support available to reviewers.

We disagree. Previous proposals are generally not considered relevant to the case under review. We find the previous level of support tends to bias the discussion of proposals and their relative ranking, and is contrary to one of the primary purposes of comparative reviews and findings of the 2010 COV: judge the current proposal on its merits, not the past history of the group. If there is a perceived lack of progress in a particular research group, the panel chair can bring that up for discussion at her discretion.

Now:

19) Provide summary information on previous proposals, PIs, FTEs, experiments and funding allocations to reviewers.

We will consider providing appropriate summary information as needed and relevant, but we note that explaining the historical roles and responsibilities of a given HEP group is the job of the PI(s) . Current and pending sources of support must be provided in the application and this information also gives some context to reviewers. **We reiterate that historical levels of support are not relevant to current proposals under review.**



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

HEP Response

Was:

22) Consider a mechanism for seeking factual clarification of proposal issues from the PIs during the comparative review process.

We disagree. Once proposals are under review we do not contact the PIs for any reason until funding decisions are made. This practice is designed to avoid any unfair advantage that might be gained by PIs who have additional interactions with PMs during proposal reviews. As a practical matter, obtaining timely factual clarifications during the course of a panel review can be difficult. Individual PMs have actively worked in 2014 with the PIs to provide guidance in writing clearer proposals.

Now:

[removed]

n/a



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

HEP Response

Was:

32) Perform project-style reviews for programs that have significant budgets and extend over multiple years.

Agreed. This has been done on an *ad hoc* basis in the past. We will develop a consistent methodology to review such efforts.

Now:

31) Perform reviews that allow the establishment of well-defined goals, deliverables and multi-year budget plans for programs that have significant budgets and extend over multiple years.

(no change)



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

HEP Response

Was:

27) Create a new theory postdoc fellowship program, with recipients chosen via national competition and supported for three years at any DOE supported university or lab group of the recipient's choosing.

We agree with the importance of postdoc support in the Theory program and will look to develop additional modes of support for these positions.

Now:

26) Create a new theory postdoc fellowship program. The detailed structure of the program should be determined by OHEP, but could be modeled via selection of recipients from a national competition, with three years of support to recipients working at a DOE supported university or lab group of their choice.

We note that education programs are generally not considered part of the DOE mission and therefore we can no longer support any "fellowship" or "scholarship" programs, or those which have a purely educational mission. However, we also note that advanced training and workforce development *are* considered part of the DOE mission and we are exploring ways of incorporating advanced training in HEP Theory as part of future DOE programs. [*See also discussion of SC charge to HEPAP on training and workforce development*]



Summary of Responses (updated)

- **We agreed with most of the HEP COV recommendations and will work to implement them in a timely fashion**
 - We can report back to HEPAP at a future date on how the implementation is proceeding
 - We appreciate clarification on some of the recommendations due to rewordings suggested by HEPAP
- **A few of the recommendations are outside the purview of the COV**
 - We will undertake review of Accelerator Stewardship program at an appropriate future date and do not intend to provide formal responses to Suggestions #29-31 at this time
- **We disagree with two recommendations (#10, 19 (partial))**
 - We do not consider these recommendations beneficial to the HEP review process for reasons discussed above
 - We appreciate the removal of old recommendation #22 which was unworkable, and the softening of recommendation #19.

Thanks

- **We would like to take this opportunity to thank the HEP COV members and particularly the Chair for their hard work and valuable input**
 - Past COVs have helped to make the HEP office function better and strengthened the overall US HEP program
 - We very much appreciate the validation of many elements of the HEP office and their praise for the excellent work of HEP PMs
 - We expect the current round of recommendations will continue to drive this cycle of improvement





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Backup Slides Follow

HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

1) HEP should strive to keep the overall program management coherent, keeping in view the connections and balance among the frontiers, and minimizing the obstacles to well-motivated transfers of funds across frontier boundaries.

2) Continue the comparative reviews. These should be augmented with independent mail-in reviews.

3) Ensure that comparative reviews evaluate a particular proposal in the context of the full program over the full three year cycle within each frontier.

Preliminary HEP Response

We agree with the principle enunciated here, and will work to develop mechanisms to maintain balance among programs and ease funding transfers across program boundaries as consistent with programmatic needs and priorities.

Agreed.

It is difficult to require reviewers to evaluate the “full program” for large umbrella grants (though we currently invite them to do so). We will consider adding appropriate guidance to the FOA and the reviewer instructions to emphasize context of the full program when evaluating proposals.



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

Preliminary HEP Response

4) Ensure that review committees are given appropriate charges, that there are sufficient reviewers of each proposal, and that program manager oversight of reviews is uniform.

Agreed.

5) Modify the FOAs to request that proposals which address topics in several different review panel areas include a discussion of the synergy gained from this broader scope.

Done. Guidance to PIs on preparing a better common narrative in a proposal was included in the FY14 HEP Comparative Review FOA.

6) Institute mechanisms to streamline the movement of PIs moving from one frontier to another. The past record of such PIs should be considered in the reviews.

We will consider appropriate measures to ease transitions of PIs across frontiers. We note it is incumbent upon the PI to provide context and relevant past record of achievement in the proposal

7) HEP should charge the comparative review panelists to collectively discuss the relative strengths and weaknesses of proposals so that the program managers can judge the relative rankings of proposals.

This is currently done in all comparative review panels.



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

Preliminary HEP Response

8) Ensure that program manager's comments in grant folders clearly document the reasons for the action taken.

Agreed.

9) Work to further reduce the time between proposal and proponent notification and to provide appropriate redacted review comments that will enable PIs to refine future proposals. Provide information to proponents on their comparative review score and the distribution of scores over all proposals reviewed by a panel.

We will continue to work to reduce the time between proposal deadlines and final decisions and providing redacted reviews. We will consider providing comparative review scores or other indicative measures of a proposal's relative ranking within a given panel for future comparative reviews.

10) Work with the community to leverage and coordinate funding sources for the HEP research program such as university startup packages or other non-DOE funding sources.

HEP will continue to optimize its resources in coordination with other funding providers in order to advance the goals of the HEP research program.



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

Preliminary HEP Response

11) Further increase in the budget fraction devoted to projects is desirable but should be subject to the recommendations of the 2014 P5 report and budget constraints.

Agreed.

12) Allocate a few dedicated pages in proposals for senior research scientists to describe their activities and critical accomplishments.

We will take this under consideration.

13) Once goals, milestones and costs have been established for small scale experiments, formal HEP project oversight should be kept to a minimum.

We agree with the principle. Formal project oversight should be the minimum necessary to successfully manage and execute the project. Customization of management tools is often needed and should be tailored to the particular requirements of the project.



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

Preliminary HEP Response

14) HEP should develop a coherent and stable approach to funding detector R&D which embraces the broad range of proposals for new ideas and techniques appropriate to its mission.

Agreed.

15) An additional IPA serving the theory program should be found.

Done. New Theory IPA will join HEP in January.

16) Seek to increase the HEP travel budget

HEP does not control this budget (SC does). Strong arguments will be needed to make the case that HEP has unique and compelling travel requirements.

17) We urge HEP to redouble and improve its communications both with the HEP community and in the wider governmental circles

Agreed. We have a AAAS fellow (M. Cooke) on board helping with P5 and communications issues generally. We will look for other ways to improve HEP communications.



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

Preliminary HEP Response

18) Undertake a separate review of the balance between the Laboratory and university research programs.

We expect this issue to be taken up by HEPAP.

19) Make previous proposals and levels of support available to reviewers.

We disagree. Previous proposals are generally not considered relevant to the case under review. We find the previous level of support tends to bias the discussion of proposals and their relative ranking, and is contrary to one of the primary purposes of comparative reviews and findings of the 2010 COV: judge the current proposal on its merits, not the past history of the group. If there is a perceived lack of progress in a particular research group, the panel chair can bring that up for discussion at her discretion.



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

Preliminary HEP Response

20) If there are clear guidelines on COLA for overseas experiments, provide them to the reviewers.

Done. This was covered in the 2014 Energy Frontier panel instructions and we will continue this practice. We will also work with the experiments (e.g., LHC) to understand whether more uniform COLA rates can be developed between the different experiments.

21) The management of the research, operations and upgrade components of the LHC experiments should be closely coordinated.

Agreed. DOE managers of the respective programs meet regularly. One will be assigned responsibility for ensuring coordination.

22) Consider a mechanism for seeking factual clarification of proposal issues from the PIs during the comparative review process.

We disagree. Once proposals are under review we do not contact the PIs for any reason until funding decisions are made. This practice is designed to avoid any unfair advantage that might be gained by PIs who have additional interactions with PMs during proposal reviews. As a practical matter, obtaining timely factual clarifications during the course of a panel review can be difficult. Individual PMs have actively worked in 2014 with the PIs to provide guidance in writing clearer proposals.



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

Preliminary HEP Response

23) Improve the quality of administrative support.

Agreed. We are working on this.

24) Maintain U.S. science in the lead of the Cosmic Frontier.

Agreed. The integration of the Cosmic Frontier with the other “traditional” HEP experimental areas is one of the signature successes of the US HEP program.

25) Support computation, simulation, and phenomenology that are directly needed for planning, execution, and analysis of Cosmic Frontier Stage III and Stage IV experiments

Agreed. Cosmic Frontier, Theory and Computation PMs are aware of the issues and working to develop mechanisms to appropriately review and support these efforts.

26) HEP should explicitly recognize that a thriving theory program is essential for identifying new directions and opportunities for the field, in addition to supporting the current program.

Agreed.



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

Preliminary HEP Response

27) Create a new theory postdoc fellowship program, with recipients chosen via national competition and supported for three years at any DOE supported university or lab group of the recipients choosing.

We agree with the importance of postdoc support in the Theory program and will look to develop additional modes of support for these positions.

28) Evaluate the General Accelerator R&D (GARD) program to identify and prioritize components that are central to the evolving HEP mission, after delivery of the 2014 P5 report

Agreed.



HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Suggestion

Preliminary HEP Response

29) Identify goals and areas of mutual and/or complementary accelerator R&D interest jointly with other parts of the Office of Science and other agencies and stakeholders, at the foundation of the Accelerator Stewardship program.

30) Establish procedures to jointly review proposals addressing Accelerator Stewardship goals, including those outside traditional boundaries, at the initiation of the program.

31) Review the progress of the Accelerator Stewardship program periodically (e.g. annually), reporting to HEP, including reviewers representing other parts of the Office of Science, and representing other governmental agency stakeholders. Consider including SciDAC accelerator activities in the periodic reviews.

We agree with the principles put forward here but note that Accelerator Stewardship is intended to be a coordinated SC-wide program managed by HEP, and is (as yet) a proposed new subprogram that has not received Congressional approval, and therefore beyond the scope of the COV charge. We welcome the COV subcommittee's strong interest in the nascent Accelerator R&D Stewardship program and will respond to these Suggestions in an appropriate venue at a later date.

HEP Response to the Report of the 2013 Committee of Visitors Review of HEP

COV Recommendation

Preliminary HEP Response

32) Perform project-style reviews for programs that have significant budgets and extend over multiple years.

Agreed. This has been done on an *ad hoc* basis in the past. We will develop a consistent methodology to review such efforts.

33) Request that the LARP leadership address the recommendations from a compilation of the 2010-2012 LARP reviews.

Agreed.

34) Monitor activities that are transitioning from R&D to full construction (e.g. LARP magnet program) so as to clearly define and track the transition steps

Agreed.

