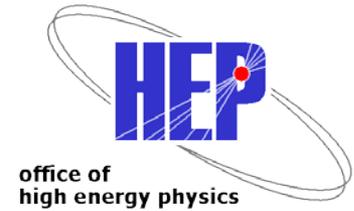




U.S. DEPARTMENT OF  
**ENERGY**

Office of  
Science



# Comparative Reviews

Glen Crawford  
HEPAP Meeting  
August 28 2012

# Outline

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- **Housekeeping Items**
- **Overall Research Outlook**
- **Lab Comparative Reviews**
- **University Comparative Reviews**



# Housekeeping Items I

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- **Current DOE funding opportunities**

- General Office of Science FOA: DE-FOA-0000600. Closes Sep 30, will be renewed. Renewal proposals, supplemental funding, conferences. Rolling start dates.
- HEP Comparative Review FOA: DE-FOA-0000733. Closes Sep 10. New research proposals only. Awards start April 2013.
- Office of Science Early Career FOA: DE-FOA-0000751. Parallel lab funding announcement LAB-12-751. Mandatory pre-applications due Sep 6. Full applications due Nov 26. Eligible junior investigators only. Awards start summer 2013.
- SBIR/STTR Phase I. Letter of Intent due Sep 4. Applications due Oct 16.
- No additional FOAs planned for FY2013.

<http://science.energy.gov/hep/funding-opportunities/>



# Housekeeping Items II

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- **Expiring Grants**

- Pls with expiring grants need to submit a Final Report within 90 days of end of grant.
- Note that all grants with prior (FY11) DOE funding that underwent comparative review in 2012 are now expired.
- See HEP website for instructions.

- **Conferences**

- Per order of DOE Dep Sec'y, all conferences/workshops exceeding \$100k of cost to DOE (including DOE lab travellers) **must obtain prior approval before committing any funding.**
- Anybody planning large(ish) HEP conferences/workshops should contact HEP office (J. Boger) immediately.





# SciDAC 3 Awards

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- **Office of Science (SC) Program - Third Cycle**
- SciDAC (Scientific Discovery through Advanced Computing)
  - Joint HEP-ASCR Funding Opportunity Announcement. Posted Sept 2011, Closed Jan 2012
  - Research to advance the HEP mission by fully exploiting DOE/SC leadership class computing resources and bringing together researchers working in topical areas with computer scientists.
  - HEP Projects funded in the areas of:
    - Cosmic Frontier Scientific Simulations,
    - Lattice Gauge Theory Research, and
    - Accelerator Science Modeling and Simulation
  - Three-year awards, progress against milestones will be reviewed in 2014.



# Implementing the Priorities

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- **Research funding will decrease at ~2% a year for the next several years.**
  - Program priorities and comparative reviews will be used to implement the cuts.
  - Both the universities and the laboratories will be affected.
    - Comparative lab reviews in Energy Frontier and detector R&D this year
    - Cosmic and Intensity Frontiers next year; Accelerator Science TBD
- **Operations funding approximately flat-flat**
- **Seeking approval of CD-0 for mid-scale dark matter, dark energy; ATLAS and CMS upgrades; and muon g-2 this fall.**
  - Investing in cosmic, energy, and intensity frontiers.
  - CD-1 approved for LSST, Belle-II & Mu2e; CD-1 review for LBNE in Oct
- **Embarking on a community planning process.**
  - APS Division of Particle and Fields is organizing it.
  - Working groups meeting now.
  - Major meeting next summer.



# Lab Research Reviews

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- **Held external, comparative peer review of HEP lab programs in July:**
  - Detector R&D
  - Energy Frontier
- **Generally positive comments, still waiting on some review letters. Review reports in October.**
- **Lessons learned**
  - Need more time for exec sessions and more structured agendas
  - Need clearer instructions for labs
  - Structured closeout appreciated



# University Comparative Reviews

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- **Process for 2013 HEP comparative reviews well underway**
  - Alan Stone is HEP POC
  - Funding opportunity, revised and updated FAQ is available at [web link]
  - Prospective PIs are urged to read the FOA and FAQ carefully
- **Timeline:**
  - Panel reviews in Nov
  - Decisions (internal) in Dec
  - Negotiation/revised budgets in Dec/Jan. Awards in April 2013.
- **Continuing follow-up on FY2012 outcomes:**
  - Received DPF questions early July
  - Formulated responses and met (phone call) last week
  - Some highlights to follow
  - Next steps TBD after HEPAP



# University Comparative Reviews

- **DPF Questions:**

- 17 questions on a variety of topics
- Many of these have been addressed at previous HEPAP talks, and/or site visits. Will focus on new or additional material here
- Still working on data collection/analysis for some inquiries
  - Historical data, personnel distributions
  - Data on Jr Faculty below. New (to DOE) proposals indicated by ().

Panel	# Proposals	# Declined	Total # Jr Fac	# Jr Fac Funded
Adv Technology	31 (11)	10 (7)	2 (1)	1 (0)
Cosmic Frontier	10 (3)	5 (3)	4 (3)	0
Energy Frontier	27 (11)	6 (4)	19 (12)	14 (8)
Intensity Frontier	18 (4)	3 (1)	6 (5)	3 (3)
Theory	35 (18)	12 (11)	18 (13)	9 (5)
<b>HEP Total</b>	<b>121 (47)</b>	<b>36 (26)</b>	<b>49 (34)</b>	<b>27 (16)</b>



# University Comparative Q&A I

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- **Strategy**

- The only strategy we had going into the process was to identify and support the best proposals and PIs.
- There were no targets for number of new grants to be funded or existing grants to be renewed
- When the panels met the reviewers were given the outlook of the HEP budget available to cover the research thrust in question, and the total of the requests from all the proposals.
  - In the Energy Frontier area (for example) the total requests were 70% higher than the available HEP budget. Similar mismatches between requests and available funding were found in other programs.



# University Comparative Q&A II

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- **Format of Reviews and Uniformity of Reviewers.**
  - This varied by thrust:
    - Mail-only: Detector R&D
    - Panel-only: Intensity Frontier
    - Mail+Panel: Accelerator R&D, Cosmic, Energy, Theory
  - For Intensity Frontier all reviewers were panelists so they could speak to and discuss their reviews in real time.
  - Mail and panel reviews were very uniform for Cosmic, Theory
    - Less so for Accelerator and Energy
  - Any conflicts/outliers in reviewer ratings were generally resolved via a thorough panel discussion about the proposal.
    - For the Energy and Cosmic Frontier , notes summarizing the panel discussion were compiled by the Chair and provided as part of the reviewer comments sent to the PIs.
    - In all cases the panelists had the opportunity to revise or add to their reviews based on the panel discussion



# University Comparative Q&A III

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- **Shared Infrastructure and PIs split across activities.**
  - PIs with different areas of interest were evaluated by different panels of experts in that specific interest area. The final funding of the PI was then determined in accordance with the aggregate outcome of the individual reviews.
    - Efforts which reviewed well were typically supported and those which did not review well were not.
    - Examples: one PI with a split proposal for energy and cosmic, reviewed well by both panels and funded; one PI in Energy Frontier proposed a part-time effort on the Intensity Frontier that did not review well and was not funded.
  - Reviewers were also asked to comment on shared resources and infrastructure in their overall comments and rating of a given proposal.
    - These elements were also discussed in the panel deliberations and folded into the HEP program manager discussions and programmatic decisions for “umbrella” grants.



# Lessons Learned I

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- **Changes for FY2013 Process.**
  - We consider the 2012 comparative peer review process was successful in identifying the best research proposals (or elements thereof) in a generally strong pool of applications.
  - Therefore we are maintaining the external peer review elements of this process for the 2013 review cycle.
  - In addition, we will implement the following changes in 2013 to help improve the process:
    - Starting the review process earlier to allow more time for programmatic decisions
    - Making the panel (+mail) review process more uniform across all research thrusts
    - Asking panel chairs to write brief summaries of panel deliberations for *all* proposals and PIs (as appropriate)



# Lessons Learned II

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- **Communications.**
  - Continuing to communicate process/outcomes/impacts to the community:
    - Developed FAQ for HEP website and continuing to update it
    - Talks at HEPAP, community meetings, site visits
    - Interactions with DPF
  - In 2013, working to involve reviewers with experience from 2012 process as well as those who will be writing proposals in 2014.
  - Questions?
    - Proposal technical areas: see contacts in FOA
    - Formatting, attachments, general: email to [SCHEPFOA@science.doe.gov](mailto:SCHEPFOA@science.doe.gov)



**BACKUP**

# University Comparative Q&A II

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- **Charge to Reviewers**

- Per the FOA, the charge given to the reviewers, both mail-in and panelists followed the same guidance. The reviewers were asked to review about 2-6 proposals in each panel. They were asked to provide comments and numerical scores for each of these criteria:

- 1) Scientific and/or Technical Merit of the Project
- 2) Appropriateness of the Proposed Method or Approach
- 3) Competency of Research Team and Adequacy of Available Resources
- 4) Reasonableness and Appropriateness of the Proposed Budget
- 5) Relevance to the Mission of the HEP Program

- In addition, they were asked to provide scoring and comments for each individual senior investigator for these criteria:

- Merit and Potential Impact of the Proposed Work
- Competency of the investigator and the likelihood of success

- Finally, reviewers were asked for any overall comments and rating on the application.

