

Report on “Proposal for DOE HEP funding to support the International Workshop on ‘Sterile Neutrinos’ at Virginia Tech, September 26-28, 2011”

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Program Manager: Alan Stone (previously John Kogut)

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This report details how the \$5,000 DOE grant to support the workshop titled “Sterile Neutrinos at the Crossroads” (or SNAC11) was allocated and spent. The SNAC11 workshop covered three days during which there were 28 talks, multiple discussion sessions, a poster session with 9 posters delivered, and an impromptu public lecture on the OPERA superluminal neutrino result by the former project manager of OPERA (this was the first official OPERA talk on the subject in North America). The workshop scientific agenda can be viewed at <http://www.cpe.vt.edu/snac/program.html>.

Emerging out of the workshop discussions, was the idea to write a comprehensive white paper describing the current state of the light sterile neutrino. This effort soon became an international collaboration. The final document, titled “Light Sterile Neutrinos: A White Paper” has nearly 200 authors, is 267 pages long, and cites 730 unique references. It has been posted the preprint archive as arXiv:1204.5379 [hep-ph]. Workshop local organizing committee co-chairs, Patrick Huber and Jonathan Link, are the white paper’s head editors. The white paper’s sections and section editors are as follows:

1. Theory and Motivation (Gabriela Barenboim, Valencia and Werner Rodejohann, MPI Heidelberg)
2. Astrophysical Evidence (Kev Abazajian, UC Irvine and Yvonne Wong, Aachen)
3. Evidence from Oscillation Experiments (Joachim Kopp, FNAL and Bill Louis, LANL)
4. Global Picture (Thierry Lasserre, CEA Saclay and Thomas Schwetz, MPI Heidelberg)
5. Requirements for Future Measurements (Bonnie Fleming, Yale and Joe Formaggio, MIT)
6. Appendix: Possible Future Experiments (Patrick Huber, Virginia Tech and Jon Link, Virginia Tech)

In all 56 people participated in the workshop, of these 11 were young scientists. The workshop was covered in a feature article in Science (Science, 334, (2011), 304-306.).

The DOE award was spent, as budgeted, as contractual services to VT CPE, which is the unit within the University which organizes conferences. Specifically, the travel cost of the speakers P. Langacker, K. Schreckenbach and P. Vogel was covered as well as bus transportation to KURF and to/from the airport.