



UNIVERSITY OF CALIFORNIA  
HIGH-PERFORMANCE ASTROCOMPUTING CENTER

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FOR IMMEDIATE RELEASE

**UC Funding Discontinued  
for the  
University of California High-Performance AstroComputing Center (UC-HiPACC)**

**Alternative Sources of Funding Sought**

Funding has not been renewed for 2015 and beyond for the five-year-old University of California High-Performance AstroComputing Center (UC-HiPACC). UC-HiPACC's major programs are therefore suspended: the advanced International Summer Schools on AstroComputing (ISSAC), the spring and fall program of small grants for students and researchers, the support of relevant meetings and workshops, plus the computational science press room outreach news service and the popular AstroShorts for astronomy clubs.

Alternative sources of funding are now being sought. Meantime, a No-Cost Extension to the grant has been approved through March 31, 2015, to support limited operations for UC-HiPACC, including the pioneering AGORA research effort, preparation of a five-year report detailing UC-HiPACC's record of accomplishments, and crafting of proposals for outside support. Pending receipt of alternative funding, some suspended programs may be resumed. The UC-HiPACC website at <http://hipacc.ucsc.edu/> with its archive of useful resources will remain online for the foreseeable future.

**Summary of Achievements**

In 2009, UC-HiPACC was one of 37 new Multicampus Research Programs and Initiatives (MRPIs) created through funding from the University of California Office of the President (UCOP). The MRPI program was dedicated to strengthening research throughout the entire UC system by instituting mechanisms to encourage and fund multicampus collaboration and sharing of resources. UC-HiPACC involved representatives and participants from nine of the ten UC campuses (all but UC San Francisco, a medical campus), plus all three UC-affiliated U.S. Department of Energy national laboratories (Lawrence Berkeley National Laboratory and Lawrence Livermore National Laboratory in California, and Los Alamos National Laboratory in New Mexico). UC-HiPACC funding was approximately \$350,000 per year.

“UC-HiPACC tremendously enhanced the ability of astrophysicists to cooperate across the UC system and to attract students and funding,” said Joel R. Primack, UC-HiPACC's founder and director. “It took years to build UC-HiPACC, and its loss is devastating.”

In its five years of operation from 2010 through 2014, UC-HiPACC

- *Founded and ran five advanced International Summer Schools on AstroComputing (ISSAC).* The ISSACs each had a different computational astrophysics topic, and the morning lectures were supplemented by afternoon hands-on sessions for students to gain practical experience using relevant codes on a major supercomputer. Altogether, in the five ISSACs leading astrophysicists from around the world taught and coached more than 200 graduate students and postdocs at four different venues (UCB, LBNL, UCSC, UCSD). Support from UC-HiPACC included tuition, all housing, some meals, and transportation for faculty and students, with additional funding from NSF and DOE. Slides and videos of all ISSAC lectures are on the UC-HiPACC website.
- *Created the international AGORA (Assembling Galaxies of Resolved Anatomy) collaboration,* a major research initiative launched in 2012, which now has over 115 members from 8 countries. Reproducibility is fundamental to scientific research. Thus, AGORA is comparing how 10 leading simulation codes model the evolution of galaxies at high resolution, starting with the same physical assumptions and analyzing all the simulation outputs the same way, to compare the results with each other and with real galaxies in the universe. AGORA support from UC-HiPACC included major working meetings in 2012, 2013, and 2014; remote access for ongoing monthly progress meetings and impromptu working sessions through a web conferencing platform; several development workshops for the analysis codes; and sponsorship of a visualization laboratory to develop powerful new methods that will be widely used in astrophysics and beyond.
- *Cosponsored 10 conferences at UC campuses on aspects of computational astrophysics, each involving 50 to 120 leading astrophysics researchers from around the world.* UC-HiPACC also provided staff support for a three-week Institute for the Philosophy of Cosmology. Videos and slides from talks at all 11 meetings as well as photos of speakers and participants are archived on the UC-HiPACC website.
- *Awarded 43 small grants totaling \$165,000 to researchers at eight UC campuses and all three DOE labs.* The small grants encouraged multicampus collaborations by offering support for activities not normally covered under federal grants, such as mini-conferences and travel between campuses or labs to do research. Small grants also supported undergraduate research projects in computational astronomy, and offered matching funds for computational equipment.
- *Published half a dozen feature articles on computational astrophysics research in major science magazines and assisted in the preparation of major planetarium shows, plus conducted other education and outreach.* Two of the articles—both for *Sky & Telescope* (July 2012 and June 2014)—were magazine cover stories. Major planetariums that benefitted included Adler in Chicago, Hayden in New York City, and Morrison in San Francisco.
- *Sponsored the first journalism boot camp ever held on computational astrophysics, and the first on astronomy ever held on the West Coast.* With the theme of “From Planets to Cosmos,” the three-day intensive boot camp of lectures and field trips attracted 20 of the world’s top science journalists in all media whose publications and programs reach as estimated 10 million readers and viewers. At least 10 feature publications and programs resulted on research in computational astronomy.
- *Created the monthly series of 600-word AstroShort short features on current UC/DOE lab research in computational astrophysics.* Modeled on the successful series of NASA Space Place stories, AstroShorts were intended for reproduction in astronomical society newsletters, newspapers, websites,

and other lay media, but they also drew a following among scientists who appreciated the succinct summaries of current work outside their immediate research field. The complete archive of AstroShorts from January 2012 through December 2014 is at <http://hipacc.ucsc.edu/AstroShorts.html>.

- *Presented on the UC-HiPACC website a monthly digest of press releases on computational astrophysics and data science, plus education/outreach in both areas from UC campuses and affiliated DOE labs.*

“These all have been tremendously useful activities strengthening computational astrophysics at the University of California and beyond,” said UC-HiPACC director Primack. “We very much hope that it will be possible to continue at least some of them in preparation for discoveries about the formation of galaxies and the nature of dark matter and dark energy in the new era of giant telescopes—such as the Large Synoptic Survey Telescope (LSST) and the Thirty Meter Telescope (TMT).”

**For interviews, contact:**

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Illustration: UC-HiPACC logo (Credit: UC-HiPACC)

**CAPTION:**

In its first five years, the University of California High-Performance AstroComputing Center (UC-HiPACC) founded and ran five advanced International Summer Schools on AstroComputing (ISSAC); created the international AGORA (Assembling Galaxies of Resolved Anatomy) collaboration for comparing 10 leading galaxy simulation codes; cosponsored 10 conferences at UC campuses on aspects of computational astrophysics; awarded 43 small grants totaling \$165,000 to researchers at eight UC campuses and all three DOE labs; published half a dozen feature articles on computational astrophysics research in major science magazines and assisted in the preparation of major planetarium shows; sponsored the first journalism boot camp ever held on computational astrophysics; and created the monthly series of 600-word AstroShort short features on current UC/DOE lab research in computational astrophysics.