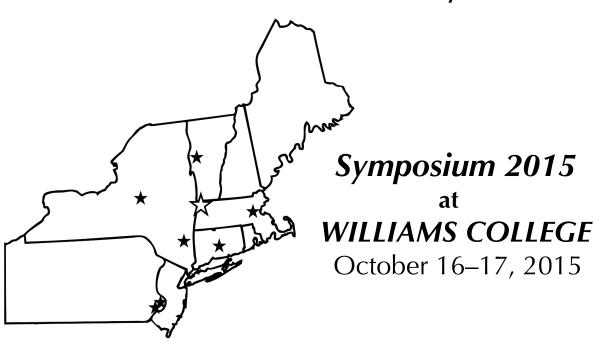
Proceedings of the 26th Annual KECK NORTHEAST ASTRONOMY CONSORTIUM Undergraduate Symposium on Research in Astronomy



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Swarthmore College

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Introduction—The Keck Northeast Astronomy Consortium

Astronomers from eight northeast colleges founded the Keck Northeast Astronomy Consortium (KNAC) in 1990 to address the particular problems and special opportunities characteristic of strong astronomy programs at small institutions. Funded by the W.M. Keck Foundation for its first decade, KNAC continues to enjoy a lively cultivation of ideas through subsequent funding by the eight colleges, as well as by the National Science Foundation (NSF REU awards AST-0353997, AST-0647325, and AST-1005024). Our eight campuses form a *Research Experience for Undergraduates* site.

The goals of the consortium are to (1) promote inter-institutional collaboration among the astronomers (and students) in the consortium; (2) update the research and teaching equipment on our campuses to enhance instruction in modern observation, data acquisition, and data processing; (3) develop and share laboratory exercises, curricular strategies, and research programs to enhance astronomy education within the consortium and the larger community; and (4) promote publication-worthy inter-institutional research collaborations between students and faculty, primarily through a summer student exchange.

The initial funding from the Keck Foundation supported a one-time purchase of CCD cameras, spectrographs, and image-processing workstations for our observatories. The current NSF grant provides stipends for 10 student-faculty summer research collaborations. KNAC-supported student fellows from consortium schools always work at a school other than their home. KNAC also supports fellows from other institutions. Every fall, these students present their results to their peers and the consortium faculty at a grant-funded a research symposium. The consortium uses other funds to support additional students working (often with KNAC fellows) at their home institutions, as well as a summer faculty meeting to exchange ideas on research and teaching.

The papers in this booklet represent the work presented at the 26th KNAC Undergraduate Symposium held at Williams College on October 16–17, 2015. All students funded by the Consortium contributed to this volume, as did a number of students who worked at their home institutions or at other sites.

Many of our students have used IRAF for processing the data for the projects described here. IRAF is distributed by the National Optical Astronomy Observatories, which is operated by the Association of Universities for Research in Astronomy, Inc. (AURA) under a cooperative agreement with the National Science Foundation.

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