

Empowering Research by the Undergraduate ALFALFA Team: An NSF-Sponsored Model for Involving Undergraduates in Major Legacy Astronomy Research ()

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The NSF-sponsored Undergraduate ALFALFA (Arecibo Legacy Fast ALFA) Team (UAT) is a collaborative, multifaceted program of faculty and undergraduate research at a consortium of 23 diverse U.S. institutions, founded to promote undergraduate research and faculty development within the extragalactic ALFALFA HI blind survey project and follow-up programs. The objective of the UAT is to provide opportunities for faculty and students from a wide range of public and private colleges and especially those with small astronomy programs to learn how science is accomplished in a large collaboration while contributing to the scientific goals of a legacy radio astronomy survey. Partnering with Arecibo and Green Bank Observatories, the UAT has worked with 334 undergraduates (40% women) and 32 (48% women) faculty in the past 10 years, offering annual workshops, observing runs, and research projects (academic year and summer), and presentation of results at national meetings such as the AAS (at AAS233: Burhenne et al., Cane et al., Gault et al., Hetrick et al., Jong et al., Kumagai et al., Luna et al., Olivieri Villalvazo et al., Page et al., Poulin et al., Rea et al., Rehmn et al., Reiter et al.,). In this presentation, we summarize the UAT program and outcomes, highlight several current Team research efforts, including multiwavelength followup observations of ALFALFA sources, the UAT Collaborative Groups Project, and the Arecibo Pisces-Perseus Supercluster Survey (APPSS), and suggest how our model could be applied to other legacy projects. This work has been supported by NSF grants AST-0724918/0902211, AST-075267/0903394, AST-0725380, AST-1211005, AST-1211683, and AST-1637339.

Publication:

American Astronomical Society, AAS Meeting #233, id.337.02

Pub Date:

January 2019

Bibcode:

2019AAS...23333702H



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