

The Southeast Laboratory Astrophysics Community: Our experience and outlook

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Abstract

The Southeast Laboratory Astrophysics Community (SELAC) was formed in 2002 through a collaboration of researchers from eight institutions and its activities have had broad participation from many others within the region and nationwide. SELAC's primary goal is to stimulate communication and deep interaction between the laboratory astrophysics and the modeling and observer communities by providing various forums. In these forums, the needs for new, improved, more comprehensive, and recommended data can be made known as well as the recent accomplishments and capabilities of experimental and theoretical laboratory astrophysicists.

Towards these ends, SELAC has organized two major workshops thus far: the first was held in 2003 at the University of Georgia ("Frontiers in Laboratory Astrophysics") and the second at the University of Kentucky in 2005 ("Understanding the Universe through IR and Submillimeter Astrophysics"). Each brought together speakers and participants from a national and international scope who surveyed topics of recent astrophysical interest along with the associated status and needs for laboratory astrophysics.

In addition to providing such forums, SELAC seeks to promote laboratory astrophysics broadly to help raise the level of recognition of the importance of the field and to encourage the development of the next generation of laboratory astrophysicists. SELAC has also served as a vehicle by which new collaborations and joint proposals for new work have been spurred and facilitated.

The members of the SELAC plan to continue activities such as these in the future, but also have recognized the need to do more. In particular, profound funding and demographic changes threaten the future of the laboratory astrophysics field motivating action. Specifically, funding agencies outside of NASA (i.e. NSF, DOE, DOC, ...) have greatly shifted or curtailed their support of research providing collisional and spectroscopic data, as well as the collection and organization of such data, decreasing dramatically the number and capabilities of research groups, facilities, and even individual PIs that are the foundation on which rests all of the laboratory astrophysics legacy and future production for space- and ground-based observations and models.

The SELAC Executive Committee believes that this situation must be addressed by a firming of NASA's commitment to its existing programs that support laboratory astrophysics and, moreover, that new action must be proposed on the roadmap for the future. For example, SELAC believes that a network of new laboratory astrophysics facilities, centered around a synergistic ensemble of new apparatus, theoretical science, data collection and evaluation, and a strong interface with modeling and observations, should be created.