SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)
Open Space: Participatory Space Education and Outreach (8)

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DEEP SPACE ROBOTIC IMAGING SYSTEMS [R.I.S] FOR STUDENT

Abstract

We introduce a new remotely-operable telescope facility for use in research and education, constructed from 'off-the-shelf' hardware, operated via the World Wide Web from any place across the globe. The system is currently used to follow up potential hazard asteroids, binary star systems, transiting extra solar planet candidates, with further experiment, as well as to hunt for novae in M31 and other nearby galaxies. It is operated by a mixture of commercially available software and proprietary software developed. The facility is serving several arrays of educational and research applications, including organizations such as NASA JPL. NASA identified space science education as a method for engaging students in the pursuit of STEM careers, with astronauts seen as role models for students of all ages. They recognized that career choices would be built on experiences that could only happen if students became aware of the programs available and engaged in explorations, either real or virtual. During the lecture we shall discuss problems associated with performing precision astronomical measurements by students – controlling the entire astronomical facility via the Internet. Investigating the overall performance of the impact of such unique research activities on high school and college students. We will emphasize solutions in both research and teaching applications. We will show that the remote web-accessible facility is a cost-effective educational-research facility, and also provides exciting prospects for undergraduate astronomy. The system has broken new ground in offering practical astronomy education to distance-learning students in their own homes.