

SPACE EDUCATION AND OUTREACH SYMPOSIUM (E1)  
Lift Off - Secondary Space Education (1) (2A)

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EXPANDED EDUCATION USING THE FALCON TELESCOPE NETWORK INTERNATIONAL  
SITES

**Abstract**

The Falcon Telescope Network (FTN) is a global network of small aperture telescopes developed by the Center for Space Situational Awareness Research in the Department of Physics at the United States Air Force Academy (USAFA). Consisting of commercially available equipment, the FTN is a collaborative effort between USAFA and other educational institutions ranging from two- and four-year colleges to major research universities. USAFA provides the telescope and computer equipment while the educational partners provide the building and infrastructure to support an observatory. The user base includes USAFA along with K-12 and higher education faculty and students. The diversity of the users implies a wide variety of observing interests, and thus the FTN collects images on diverse objects, including satellites, galactic and extragalactic objects, and objects popular for education and public outreach. The raw imagery, all in the public domain, will be accessible to FTN partners and will be archived at USAFA. Currently, there are five Falcon telescopes installed, two in Colorado and one each in Pennsylvania, Chile, and Australia. These five telescopes are in various stages of operational capability but all are remotely operable via a remote desktop application. For each site the FTN team has conducted STEM First Light Projects, soliciting proposals from middle and high school students and teachers that suggest and then become what is observed as official STEM first-light objects. The IAC2015 presentation Education and Outreach Using the Falcon Telescope Network introduced the project's impact after being conducted for the three U.S. observatories. Since that time, the team has completed STEM First Light Projects for the two international sites, inviting the first international teachers and students to participate. Particularly for the international projects, teachers in the U.S., Chile, and Australia expanded or used the STEM First Light Project in unique ways to enhance the learning potential for their students. In this paper we present the international participation in the STEM First Light Project, the expanded curriculum used

by three teachers, including the process and results from a student's cluster study, and feedback from middle and high school students and teachers.