THE GOLDSTONE-APPLE VALLEY RADIO TELESCOPE
EDUCATION PROJECT

Michael J. Klein
Jet Propulsion Laboratory / Caltech
Pasadena CA 91109

James P. Roller
Lewis Center for Educational Research
Apple Valley, CA 92307

The Goldstone-Apple Valley Radio Telescope project (GAVRT) is bringing "hands-on" scientific discovery to life in America's classrooms. Middle and high school students at participating schools remotely control a dedicated 34-m radio telescope at NASA's Deep Space Network Goldstone Complex. Connected via the Internet from their classrooms, they point the massive dish at natural radio sources, analyze the data and report their findings to Mission Control located at the Lewis Center for Educational Research in Apple Valley, CA.

A primary objective of the GAVRT project is to address the need to improve scientific literacy among America's youth. With the support and participation of NASA/JPL scientists and engineers in partnership with the staff and volunteers at the Lewis Center, GAVRT students and teacher are able to experience the real world of scientific research and discovery. Participating teachers are provided with comprehensive scientific curriculum, in-depth training opportunities and a growing library of teaching tools and technological resources.

Participating students study basic principles of radio astronomy, learn antenna operations and create detailed mission plans. With the first mission, Jupiter Quest, students plan a hypothetical space mission to the Jovian system. Built into the curriculum are experiments using the radio telescope to measure the temperature of Jupiter's atmosphere and observe the variations in the synchrotron emission from the radiation belts. In addition to Jupiter Quest, new curricula are being developed to map the microwave brightness of the sun and radio emissions near the galactic plane.

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