

# THE RADIO JOVE PROJECT: CITIZEN SCIENCE FOR RADIO ASTRONOMY

Ch. Higgins<sup>\*</sup>, J. Thieman<sup>†</sup>, S. Fung<sup>‡</sup>, F. Reyes<sup>§</sup>, D. Typinski<sup>¶</sup>,  
W. Greenman<sup>||</sup>, R. Flagg<sup>\*\*</sup>, J. Brown<sup>††</sup>, T. Ashcraft<sup>‡‡</sup>, N. Towne<sup>§§</sup>,  
J. Sky<sup>¶¶</sup>, L. Garcia<sup>\*\*\*</sup>, and B. Cecconi<sup>†††</sup>

## Abstract

The Radio Jove Project (<http://radiojove.gsfc.nasa.gov>) has been operating as an educational activity for 18 years to introduce radio astronomy activities to students, teachers, and the general public. Participants may build a simple radio telescope kit, make scientific observations, and interact with radio observatories in real-time over the Internet. Recently some of our dedicated citizen science observers have upgraded their systems to better study radio emission from Jupiter and the Sun by adding dual-polarization spectrographs and wide-band antennas in the frequency range of 15–30 MHz. Some of these observations are being used in conjunction with professional telescopes such as the Long Wavelength Array (LWA), the Nançay Decametric Array (NDA), and the Ukrainian URAN2 Radio Telescope. In particular, there is an effort to support the Juno mission radio waves instrument at Jupiter by using citizen science ground-based data for comparison and polarization verification. These data will be archived through a Virtual European Solar and Planetary Access (VESPA) archive (<https://voparis-radiojove.obspm.fr/radiojove/welcome>) for use by the amateur and professional radio science community. Another effort will be coordinated observations to study the ionosphere during the upcoming solar eclipse for North America in August, 2017. We overview the citizen science program and display recent observations that will be of interest to the radio science community.

---

<sup>\*</sup> Dept. of Physics and Astronomy, Middle Tennessee State University, Murfreesboro, TN, USA

<sup>†</sup> University of Maryland, Baltimore County, MD, USA

<sup>‡</sup> NASA, Goddard Space Flight Center, Greenbelt, MD, USA

<sup>§</sup> University of Florida, Gainesville, FL, USA

<sup>¶</sup> AJ4CO Observatory, USA

<sup>||</sup> SLGM Observatory, USA

<sup>\*\*</sup> Windward CC Observatory, USA

<sup>††</sup> HNRAO Observatory, USA

<sup>‡‡</sup> Heliotown Observatory, USA

<sup>§§</sup> Towne Observatory, USA

<sup>¶¶</sup> Radio-Sky Publishing, USA

<sup>\*\*\*</sup> Wyle Inc., Goddard Space Flight Center, Greenbelt, MD, USA

<sup>†††</sup> LESIA, CNRS-Observatoire de Paris, Meudon, France

