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**Project:** Stellar Radio Source Observations

**Abstract**

Although the field of radio astronomy encompasses a wide range of sources, this project focuses on observations of three sources. Specifically, the goal is to collect data from Jupiter, the Sun, and another source that is yet to be determined. The first step is the construction of the equipment necessary for observing Jupiter and the Sun, then performing the observations. After completion of the first stage, the equipment will be modified and data will be collected from the third source. Furthermore, the physics underlying radio emissions from Jupiter and the dipole antenna operation will be explained.

For Jupiter observations, a kit that includes the materials for constructing a 20.1 MHz receiver and a dipole antenna array was purchased from NASA's Radio Jove Project. The kit is designed for a narrow range of frequencies centered around 20.1 MHz because Jovian radio emissions are typically intense in that range. The receiver was built and tested successfully. When the antenna construction is finished, the receiver and antenna will be capable of receiving Jovian and solar radio signals.

A third radio source will be determined based on the frequency and intensity of the radio emissions. After selection, the Radio Jove receiver and antenna will be modified to receive the new signal. Data from the third source will be combined with the data from Jupiter and the Sun, and then analyzed to complete the project.

**References**

- NASA's Radio Jove Project, <http://radiojove.gsfc.nasa.gov/>, 2007.  
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NASA Radio Jove RJ1.2 Antenna Kit Assembly Manual; Dec., 2004.  
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