

Abstract Submitted
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Remote Sensing: Radio Frequency Detection for High School Physics Students DANIEL HUGGETT¹, MICHAEL JEANDRON², LARRY MADDOX, SANICHIRO YOSHIDA, Southeastern Louisiana University — In an effort to give high school students experience in real world science applications, we have partnered with Loranger High School in Loranger, LA to mentor 9 senior physics students in radio frequency electromagnetic detection. The effort consists of two projects: Mapping of 60 Hz noise around the Laser Interferometer Gravitational Wave Observatory (LIGO), and the construction of a 20 MHz radio telescope for observations of the Sun and Jupiter (Radio Jove, NASA). The results of the LIGO mapping will aid in strategies to reduce the 60 Hz line noise in the LIGO noise spectrum. The Radio Jove project will introduce students to the field of radio astronomy and give them better insight into the dynamic nature of large solar system objects. Both groups will work together in the early stages as they learn the basics of electromagnetic transmission and detection. The groups will document and report their progress regularly. The students will work under the supervision of three undergraduate mentors. Our program is designed to give them theoretical and practical knowledge in radiation and electronics. The students will learn how to design and test receiver in the lab and field settings.

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