



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Nathan Bales; Daniel Trubey	Project Number S0701
Project Title Detecting Radio Anomalies in the ULF to ELF Spectrum	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals We are trying to create a device that can detect radio anomalies in the radio frequency range of sub-1 Hz to 30 Hz.</p> <p>Methods/Materials We created the inductor coil using 37,000 feet of 30-gauge magnet wire. The #receiver# or signal-processing unit was made from schematics off of the ELFRAD web site. We wound the wire around a PVC pipe and inserted a mu-metal core to make it more sensitive. We record these signals through our coil into the #receiver# and then into our computer through an analogue to digital converter. If we can detect an event called a Schumann resonance then we were successful.</p> <p>Results We have made the coil and the receiver but have yet to successfully record with this set-up. We are working on a variety of little problems and should have it fixed by the time of the fair.</p> <p>Conclusions/Discussion By what we have seen so far and what we know of our coil, we believe that we will be able to successfully record the Schumann Resonances. We are working on getting our system up and running.</p>	
Summary Statement We are trying to create a device that can detect radio anomalies in the radio frequency range of sub-1 Hz to 30 Hz.	
Help Received Bruce Mount from Hamilton Sundstrand helped with electrical engineering questions	