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Nanoscale Electric Field Sensor-Development and Testing JON BRAME, Brigham Young University, NATHAN WOODS, University of Colorado, NASA GODDARD SPACE FLIGHT CENTER COLLABORATION — The goal of this project is to test a carbon nanotube based electric field sensing device. The device consists of a miniature gold needle suspended on a mat of carbon nanotubes over a trench on a Si/Si02 substrate. Field tests were made by recording the electric field inside dust devils in a Nevada desert, and those electric fields were simulated in a lab environment. Further tests to determine the device sensitivity were performed by manually manipulating the gold needle with an Atomic Force Microscope (AFM) tip. We report on fabrication techniques, field and lab test results and AFM testing results.

Jon Brame
Brigham Young University

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