Abstract Submitted
for the 4CF17 Meeting of
The American Physical Society

Resistivity of Nickel Thin Films[1] MICHAEL MAYNARD, Dixie State University, JAMESON CURTIS, Dixie High School, SAMUEL TOBLER, Dixie State University — As metal films get thinner, their resistivity increases. We study this phenomenon using nickel films. The nickel films are made in a vacuum system with pressures below 10ˆ-7 Torr. A nickel filament is heated to 1200C to sublimate the nickel onto our glass substrate. A four-point measuring probe was used to measure voltage drops across the film at known currents. This gave a sheet resistance. Thickness of the thin films was verified by images on a scanning electron microscope. Thicknesses varied from 40 nm – 255 nm. Resistivity of films were calculated to be between 22 - 147 Ω nm. A graph of resistivity vs thickness will be presented and discussed on this poster.

[1]Support in part from Utah NASA Space Consortium

Samuel Tobler
Dixie State University

Date submitted: 20 Sep 2017 Electronic form version 1.4