Abstract Submitted for the MAR10 Meeting of The American Physical Society

Shubnikov-de Haas oscillations in microwave-irradiated twodimensional electron systems<sup>1</sup> ANTHONY HATKE, HUNG-SHENG CHIANG, MICHAEL ZUDOV, University of Minnesota, JOHN RENO, Sandia National Laboratories — We have studied Shubnikov-de Haas Oscillations in a high-mobility two-dimensional electron system irradiated by microwave radiation up to 100 GHz. We have found that the amplitude of Shubnikov oscillations is suppressed by microwaves in the vicinity of certain magnetic fields. These fields depend on the microwave frequency indicating resonant response. This talk will discuss frequency, temperature, and power dependences of the phenomenon and compare observations to earlier studies by other experimental groups.

<sup>1</sup>This work is supported by DOE DE-SC0002567.

Michael Zudov University of Minnesota

Date submitted: 20 Nov 2009

Electronic form version 1.4