Abstract Submitted
for the MAR10 Meeting of
The American Physical Society

Table-top Femtosecond Ultra Fast Time Resolvable ARPES Facility at LANL[1] YINWAN LI, GEORGI DAKOVSKI, TOMASZ DURAKIEWICZ, GEORGE RODRIGUEZ, KEVIN GRAHAM, Los Alamos National Laboratory — A table-top ultra fast time resolved ARPES facility with time resolution of tens of femtoseconds is being constructed at Los Alamos National Laboratory. The system enables pump-probe scheme measurement with pump photon beam at low energy laser pulses and high energy probe photon beam obtained by higher harmonic generation (HHG). The pump-probe scheme enables the extension of the ARPES technique to measure the unoccupied states. The tunability of time-difference between probe pulse and pump pulse can be used in the dynamics study of the solids by measuring the decay of the excited states. In this presentation, I will introduce the principle of the technique and the current stage of the system at LANL.

[1]Research supported by DOE BES and LANL LDRD.

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Date submitted: 27 Nov 2009 Electronic form version 1.4