Performance and Characterization of X-ray Detection Devices for Laboratory Astrophysics Research\(^1\) MARIANO LOWENSTERN, R. PAUL DRAKE, University of Michigan, NICHOLAS LANIER, Los Alamos National Laboratory, ERIC HARDING, CHANNING HUNTINGTON, J. EDUARDO MUCINO, ANTHONY VISCO, University of Michigan — Various detection tools are utilized in laser driven experiments with a focus on Inertial Confinement Fusion and Astrophysics. Amongst them are framing cameras (devices that convert incident x-rays into electrons that are in turn amplified by a microchannel plate (MCP) and detected by a phosphor material) and x-ray films. We have implemented a detached Au transmission photocathode (160 Å thick) on a MCP. We have evaluated it using a 1.5 keV Al K-alpha x-ray source, finding an improvement in the effective quantum efficiency combined with a modest decrease in the overall resolution of the detection system. We will also report results of the characterization of AGFA-D7 film using laser generated x-rays.

\(^1\)Work supported by the Naval Research Laboratory through NRL N00173-06-1-G906, by NNSA Stewardship Sciences Academic Alliances through DOE Research Grant DE-FG52-04NA00064, by Los Alamos National Laboratory, and by other grants and contracts.

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Date submitted: 17 Jul 2008

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