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Proposal Title: Technology to Enable Rapid Application of Laser Propulsion

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Firm

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Abstract: The objective of the proposed research and development effort is to conduct the basic research that is necessary to populate a matrix of validated design inputs for future flight systems. The research effort will demonstrate the feasibility of laser propelled systems with greatly simplified hardware and improved performance. This will be accomplished through application of an advanced propellant system. The performance

of the system will be characterized with respects to chemistry, ambient air pressure, laser fluence and gas dynamic conditions in the thruster. This technology will help to enable a responsive, low-cost launch system for micro-satellites, based on the combination of a high efficiency multi-stage electromagnetic gun and laser beam propulsion. The technology will be experimentally demonstrated during the research program.