

Abstract Submitted  
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**Overview of the Lockheed Martin Compact Fusion Reactor (CFR) Project** THOMAS MCGUIRE, Lockheed Martin — The Lockheed Martin Compact Fusion Reactor (CFR) Program endeavors to quickly develop a compact fusion power plant with favorable commercial economics and military utility. The CFR uses a diamagnetic, high beta, magnetically encapsulated, linear ring cusp plasma confinement scheme. Major project activities will be reviewed, including the T4B and T5 plasma heating experiments. The goal of the experiments is to demonstrate a suitable plasma target for heating experiments, to characterize the behavior of plasma sources in the CFR configuration and to then heat the plasma with neutral beams, with the plasma transitioning into the high Beta confinement regime. The design and preliminary results of the experiments will be presented, including discussion of predicted behavior, plasma sources, heating mechanisms, diagnostics suite and relevant numerical modeling. ©2019 Lockheed Martin Corporation. All Rights Reserved.

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