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Comparison of the Recently proposed Super Marx Generator Approach to Thermonuclear Ignition with the DT Laser Fusion-Fission Hybrid Concept (LIFE) by the Lawrence Livermore National Laboratory. FRIEDWARDT WINTERBERG, University of Nevada, Reno — The recently proposed Super Marx pure deuterium micro-detonation ignition concept [1] is compared to the Lawrence Livermore National Ignition Facility (NIF) laser DT fusion-fission hybrid concept (LIFE) [2]. A typical example of the LIFE concept is a fusion gain 30, and a fission gain of 10, making up for a total gain of 300, with about 10 times more energy released into fission as compared to fusion. This means a substantial release of fission products, as in fusion-less pure fission reactors. In the Super Marx approach for the ignition of a pure deuterium micro-detonation gains of the same magnitude can in theory be reached. If the theoretical prediction can be supported by more elaborate calculations, the Super Marx approach is likely to make lasers obsolete as a means for the ignition of thermonuclear micro-explosions. [1] "Ignition of a Deuterium Micro-Detonation with a Gigavolt Super Marx Generator," Winterberg, F., Journal of Fusion Energy, Springer, 2008. http://www.springerlink.com/content/r2j046177j331241/fulltext.pdf. [2] "LIFE: Clean Energy from Nuclear Waste," https://lasers.llnl.gov/missions/energy_for_the_future/life/

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