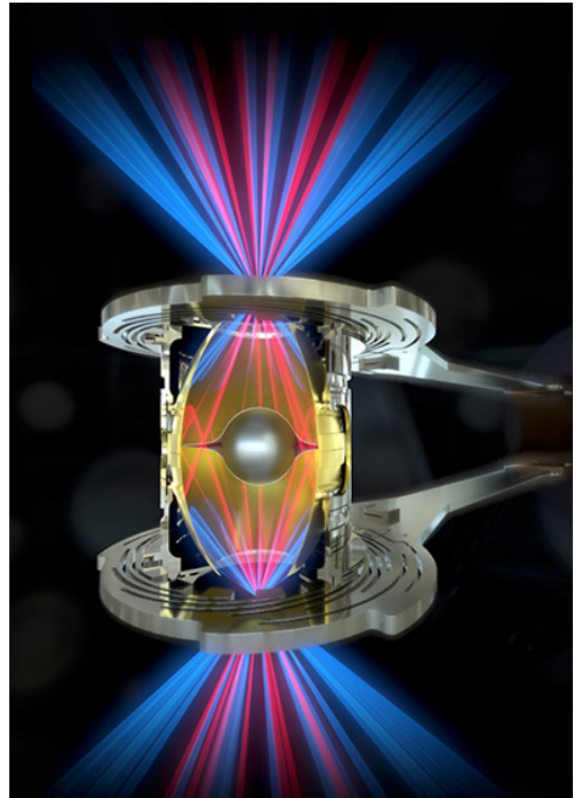


Physics Department Seminar

11 am April 19, 2024 Science Building Room 126

Advancements in Laser Ignition and the Future of Fusion Energy

Kyle Bishop
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With climate change's detrimental impacts and increasing global demand for power, our need for sustainable energy has never been higher. Nuclear fission has long been the most efficient generator of relatively clean power, but it carries the burden of mining Uranium ore and creating radioactive waste. Nuclear fusion can be the

solution by providing vast carbon-free power. This review will cover the achievement of fusion by laser ignition at the Lawrence Livermore National Laboratory (LLNL), focusing on the history of laser development, optical systems, and the prospects for harnessing fusion energy.