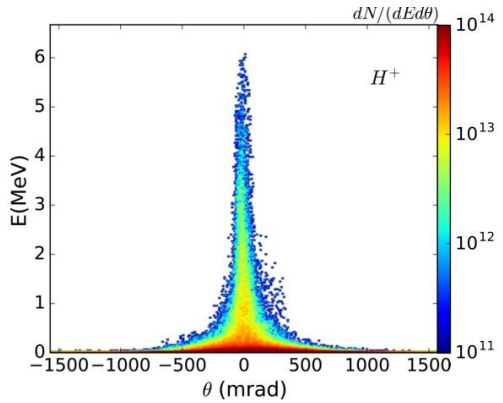
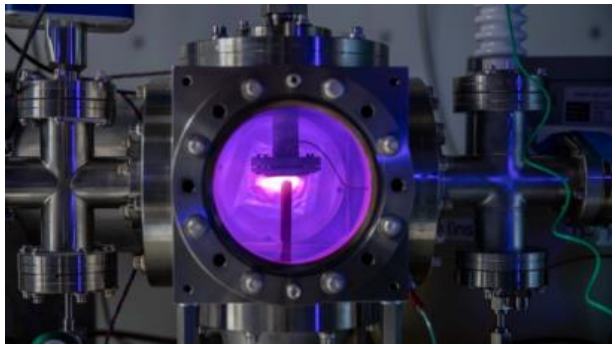
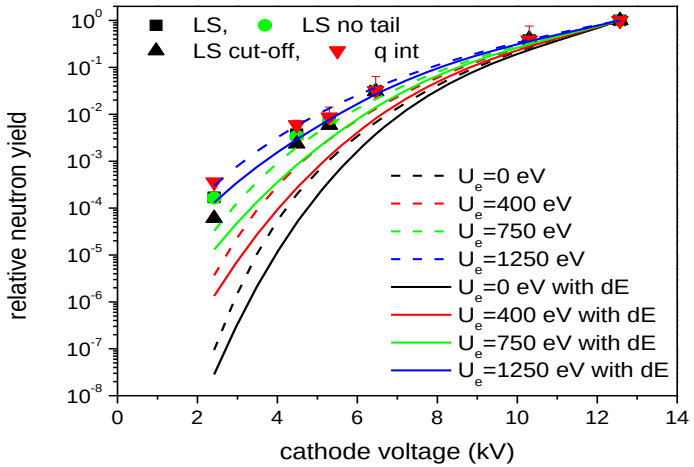
Fundamental studies of fusion processes with high impact potential

Fusion rates are determined by tunneling through the Coulomb barrier. Can we discover new ways to enhance tunneling rates? Electron screening in dense plasmas is a known-unknown, let's hack it !





Exploratory; opportunities to advance basic understanding and master new control vectors to enhance fusion rates. Theory, simulations and fusion experiments with ion pulses, lasers, plasmas, …



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- T. Schenkel, et al., https://arxiv.org/abs/1905.03400
- C. P. Berlinguette, et al., Nature 570, 45 (2019)
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Beam, magnets, and modeling to advance the quest for fusion energy science at Berkeley Lab

Steve Gourlay
LBNL POC for INFUSE

Slides provided by Qing Ji

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