

Abstract Submitted  
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**Overview of Stanford's Activities in the Development of a Coaxial High Energy Thruster** MARK CAPPELLI, FLAVIO POELMANN, NICOLAS GASCON, Stanford University — This poster gives an overview of Stanford's current efforts in the development of a coaxial gas-fed pulsed plasma accelerator that draws steady state power on the 1 to 10 kW level, but delivers thrust through high power, high density pulses. This Coaxial High ENerGy (CHENG) Thruster operates at number densities on the order of  $10^{15}$  cm<sup>-3</sup> and process peak input powers of 1 MW over 10  $\mu$ s pulses. The high specific impulse, high thrust density, low beam divergence and low electrode erosion originally made the Deflagration thruster very attractive for missions to the outer planets and beyond. Stanford is exploring the scalability of this device for possible applications in orbit raising or travel to neighbor planets. The poster gives an overview of experimental work and theoretical models currently being developed at Stanford.

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