

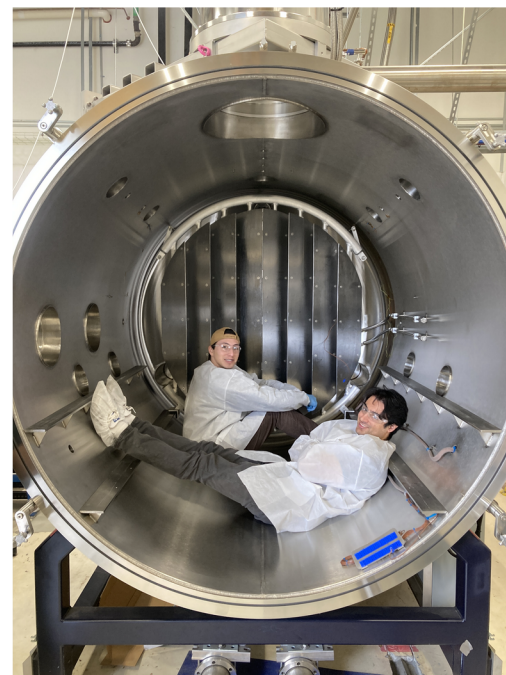
California Polytechnic State University, San Luis Obispo (Cal Poly SLO) is a primarily undergraduate institution focusing on hands on engineering education through “**learn by doing**”.

Aerospace Engineering Department has approximately 400 undergraduate and 40 masters students

Over 30 students currently participating in electric propulsion related research either as part of a tech elective or through a newly formed student “independent research association” (IRA) Poly Electric Propulsion and Plasma Research (PEPPR)

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Facilities:



- 6x10 foot STELLA EP chamber (convertible to 6x6 foot TVAC)
- multiple belljars and small chambers
- CCP atomic oxygen chamber
- hypersonic wind tunnel



Current Projects:

- Effort to restart thrusters utilized by prior Cal Poly students: RF thermal “Pocket Rocket”, 15cm and 3cm gridded ion thrusters, HEMPT, PPT, electrospray
- Successfully demonstrated Pocket Rocket operation on air, argon, and xenon, currently investigating feasibility as a molecular propellant cathode
- Spring 2027 master’s thesis on the use of HEMPT for multimode applications, collaboration with a local aerospace firm specializing in hydrazine monoprops
- Development of an in-house HET through PEPPR
- Build up of the STELLA EP chamber, including DAQ and thrust stand
- Development of instrumentation for mapping chamber neutral and plasma environment, taking advantage of 3 CQCMs and 2 TQCMs donated by JPL and QCM Research
- Numerical simulations of RF discharges and facility effects

