

A first review of facility effects on electric thruster testing

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Evaluating a thruster performances in a representative operational environment is a key milestone towards its use in space. However, the limited size and pumping speed of currently available test facilities limit the validity of most performance measurements, from the plume divergence to the thruster lifetime expectancy. Based on a literature review, this poster features a panel of the different effects related to the vacuum facility that apply to the thruster itself, the measurement devices and the plume. Several comments are made about how these effects differ between HET and GIE thrusters, large and small thrusters, and between classic Xenon propellant and more recent innovative propellants such as the use of iodine in GIEs.

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