



專題演講

ThrustMe – a provider of space propulsion systems for next generation satellites

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Time : 108 年 12 月 30 日 星期一 14:00-16:00

Place : 健雄館(科四館) S4-810 教室

摘要/Abstract :

10,000+ satellites are expected to be launched in the next ten years, with small satellites accounting for the majority of the growth. These are increasingly able to perform high-performance missions including but not limited to Earth Observation, Atmospheric Studies, Solar Physics and Interplanetary missions. However, they currently lack low-cost and low-complexity orbital control.

One of the key innovations that ThrustMe is working on is the use of iodine as propellant. Iodine offers several key advantages compared to more traditional propellants like xenon: lower cost, higher density and absence of pressurization. Space agencies like NASA and ESA have spent the last decade working with industry to develop propulsion systems with iodine as propellant. But iodine comes with its set of challenges, including corrosion, thermal management and external deposition.

On November 18th 2019, ThrustMe's I2T5 iodine cold gas system was turned on in space and successfully demonstrated initial performance. This demonstration paves the way for the use of iodine for ThrustMe's electric propulsion system, the NPT30-I2. The system's low cost and complexity makes it a good candidate for SmallSat constellations, and batch production capability is currently being set up.

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