LISA Pathfinder's Electric Thrusters Complete In-Space Commissioning

World's First Operational Electrospray Thrusters in Space

NATICK, MA / DARMSTADT GERMANY, FEBRUARY 1, 2016 – On Monday, satellite propulsion firm Busek Co. confirmed commissioning of the firm's electrospray thrusters aboard the LISA Pathfinder spacecraft. All eight of the electric propulsion devices on board the spacecraft successfully test fired along the satellite's journey to Lagrange Point 1, a destination some 1.5 million kilometers (0.932 million miles) from earth. The electric propulsion systems are the first of their kind to be operational in space and provide the precision control necessary for the spacecraft's science mission.

The novel electric propulsion system was developed by Busek under contract with NASA's Jet Propulsion Laboratory (JPL), and are part of JPL's Disturbance Reduction System (DRS). "We're elated to report that the DRS has successfully passed our first on-orbit commissioning with all thrusters passing their functional tests. The Busek thrusters are performing well and we look forward to our operational experiments later this summer.", said Phil Barela, Project Manager for the Space Technology-7 Program at JPL.

"Today's in-space commissioning is an enormous milestone for all of us at Busek, our partners at NASA JPL, and our friends at ESA." said Vlad Hruby, Principal Investigator of LISA Pathfinder's electrospray thrusters and President of Busek. "The fully fueled thrusters were delivered eight years ago… their operation after this long dormant period is both a relief and a testament to our technology and approach. I'm proud of the team's work on LISA Pathfinder, and excited about the higher power electrospray systems Busek is building for CubeSats, and small satellites." added Hruby. The electrospray thruster technology has direct applications in spacecraft formation flying, laser communications, and CubeSat propulsion.

About Busek: Busek Co. Inc. is an industry leader in the development and manufacture of high performance space propulsion systems. The firm's satellite products include highly efficient solar electric propulsion systems such as Hall thrusters, electrospray thrusters, radio frequency ion thrusters, and pulsed plasma thrusters, in addition to green monopropellant thrusters. Busek's expertise across multiple space propulsion disciplines enables it to provide unbiased solutions to best fit customers' needs.

Busek electrospray thrusters aboard ESA LISA Pathfinder (credit: ESA)

LISA Pathfinder Launch, Credit: ESA

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