SUCCESSFUL COUPLING TEST BETWEEN AST MINIATURIZED FLOW CONTROL UNIT AND SITAEL HALL EFFECT THRUSTERS

PISA, Aug.2016. A miniaturized flow control unit (µFCU) developed by AST Advanced Space Technologies GmbH has been successfully tested together with a Hall Effect thruster HT100 of Sitael.

The coupling test covered the full operational range of a low power electric propulsion system and demonstrated the maturity of this new product.

AST's µFCU has a total mass of only 63 grams and supplies the thruster anode and cathode with an independently controlled propellant flow. The unit can be configured for different flow ranges from 0.01 mg/s to 20mg/s without changing the design.

µFCU makes use of AST's fluid SMD technology. Fluid SMD is a key technology for the miniaturization of space fluidic components. It allows large volume series production by design.

Previous tests with gridded ion thrusters already showed an excellent performance and stability. With the new tests at Sitael's Pisa facility, the readiness for all flight proven electric propulsion thrusters has been demonstrated.

AST Advanced Space Technologies GmbH is a technology leader in fluid components for space propulsion systems. The Germany base company offers a product line ranging from components to control units for flow and pressure. With the portfolio of cold gas thrusters, valves, pressure sensors, filters, flow control units and pressure regulators a full xenon propellant management system can be set-up.