



## First Iodine Fueled Ion Engines Pass Major Milestone

NATICK, MA, JULY 31, 2017 – Space propulsion firm Busek Co. Inc. confirms its ‘BIT-3’ ion thruster system completed two separate Critical Design Reviews (CDR) for upcoming CubeSat spaceflight programs. CDRs are major milestones prior to manufacturing flight hardware, the initial set of BIT-3 flight systems being scheduled for delivery Q1 2018. The iodine fueled solar electric propulsion systems are the first of their kind which enable an entirely new range of small spacecraft missions.

Two public missions relying upon the BIT-3 for high delta-v propulsion include Morehead State University’s Lunar IceCube and Arizona State University’s LunaH-Map. The NASA-funded, University-lead science missions will each place a 14 kilogram (30.9 lbs.) CubeSat into lunar polar orbit after deployment from NASA’s Space Launch System EM-1 mission. The miniature solar electric propulsion system incorporates several patented and patent-pending features, including the use of solid iodine propellant versus traditional high-pressure Xenon gas.

“This mission wouldn’t be possible without the BIT-3, and we’re proud to have Busek as a partner. It’s a game-changing technology for the whole CubeSat community.” said Prof. Ben Malphrus, Principal Investigator of Morehead State University’s Lunar IceCube mission.

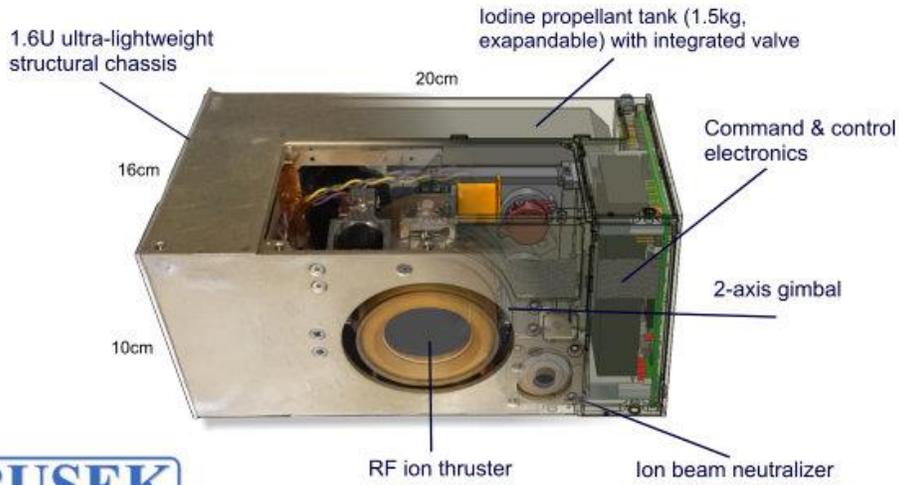
Prof. Craig Hardgrove, Arizona State University’s Principal Investigator for LunaH-Map added, “The BIT-3 is critical technology that will allow small spacecraft and CubeSats to acquire high quality scientific results on interplanetary missions throughout the solar system. It truly enables the science of the LunaH-Map mission, mapping water-ice at the lunar south pole with a miniature neutron spectrometer.”

The BIT-3 iodine thruster system is capable of generating over two kilometers per second (4,474 MPH) of delta-v for 6U cubesats, opening the possibility for small spacecraft to complete a range of missions previously reserved for large, high-cost satellites. Each compact BIT-3 system includes highly integrated control electronics, iodine tank and feed system, thruster, and gimbal for primary propulsion and attitude control. While an increasing number of miniature electric propulsion systems are advertised in today’s marketplace, the BIT-3 system utilizes flight-proven gridded ion engine technology in a new miniaturized form. The BIT-3’s performance has been accurately measured and published in peer-reviewed journals, and is one of the most mature miniature solar electric propulsion systems available for order today.

About Busek: Busek Co. Inc. is an Industry leader in the development and manufacture of high performance in-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, as well as green monopropellant thrusters. Busek’s expertise across multiple space propulsion disciplines enables it to provide unbiased technology solutions to best fit customers’ needs.

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**BIT-3  
ION THRUSTER SYSTEM**



BIT-3 thruster and neutralizer firing on Xenon (top), Iodine (bottom)