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DUNMORE MLI Films and Polyimide Tapes Protect New Horizons on its Long, Cold Journey to Pluto

DUNMORE Corporation's thermal protection materials keep Pluto-bound New Horizons spacecraft warm for historic flyby.

Bristol, PA, July 14, 2015 - In January 2006, a medium-sized NASA spacecraft named New Horizons was headed for just that, to become the first principal investigator of the ex-planet turned ice-dwarf Pluto and its moons. DUNMORE Corporation has protected the mission in a series of firsts: first journey to Pluto, first journey to study Kuiper Belt objects and the first planetary mission to carry a student-built instrument. DUNMORE's multi-layer insulation films (<u>http://www.dunmore.com/products/multi-layer-films.html</u>) and polyimide tapes (<u>http://www.dunmore.com/products/polyimide-tape.html</u>) are used to thermally protect the New Horizons spacecraft.

About the size of piano, New Horizons' primary mission is an encounter with Pluto and its five icy moons followed by a study of one or more Kuiper Belt Objects beyond the orbit of Pluto. In its "ancient" history, New Horizons spent a brief period in May 2006 observing asteroid 2002 JF56, now named "APL" to recognize the Applied Physics Laboratory's critical role in New Horizons. In February 2007, New Horizons was around Jupiter, testing its instruments and using its gravity to assist with its journey to Pluto. It was the most recent spacecraft to venture to Jupiter, with the spacecraft Juno scheduled to arrive in 2016. After nearly eleven years the big day has come: New Horizon's nearest encounter with ice dwarf Pluto occurring today at 7:49:57 a.m. EDT.

The craft will study Pluto's dense atmosphere, its topography, and take the best images we will have to date of the dwarf and its moons. In the time New Horizons has been in flight its targeted planet has been reclassified as a dwarf planet and four unknown moons have been discovered: Nix, Hydra, Styx, and Kerberos to join big sister Charon, a moon nearly the size of its "planet". This is not the first time APL has relied on DUNMORE's multi-layer insulation films and polyimide tapes to protect its mission; the MESSENGER mission to Mercury, which came to a crashing end into the surface in April, utilized material to protect the spacecraft from extreme heat near the sun; the exact opposite of the cold and desolate journey of New Horizons.

Since 1985 DUNMORE has continuously solved extreme cooling and critical overheating with continuous advances in the technology and manufacturing of multi-layer insulation films, tapes and electrostatic dissipative films. DUNMORE products are engineered to reflect infrared heat radiation from the sun as well



New Horizons spacecraft assembly at Johns Hopkins University Applied Physics Laboratory (APL).

as maintain a comfortable interior for mission critical payloads. Heat reflecting multi-layered blankets and other film products are used to protect antennas, wiring harnesses, scientific instrumentation and other critical systems from extreme temperature fluctuations. Since early days of SpaceLab, DUNMORE has been proud to serve as a trusted manufacturer supporting space exploration, spacecrafts and satellite programs around the world.

About DUNMORE

DUNMORE Corporation is a global supplier of engineered coated and laminated films and foils. DUNMORE offers film conversion services such as coating, metalizing and laminating along with contract film manufacturing. DUNMORE produces coated film, metallized film and laminating film substrates for the photovoltaic, graphic arts, packaging, aerospace, insulation, surfacing and fashion industries. DUNMORE is privately held, ISO 9001:2008 and OSHA VPP Star certified. For complete information on DUNMORE's products, services and industries served, please visit DUNMORE's website http://www.dunmore.com/.

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