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AEROSPACE

A M E R I C A

2015

NASA mosaic of
#PlutoTime photos

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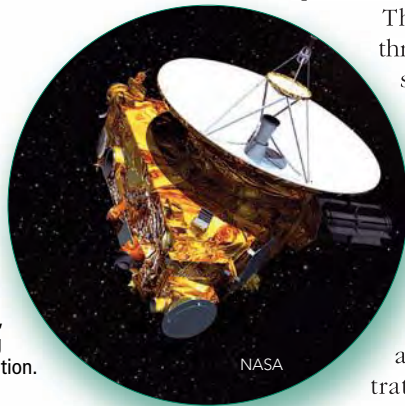
Aerospace news captures the public's attention

by R. Steven Justice and Bradley A. Steinfeldt

The Society and Aerospace Technology Technical Committee promotes the transfer and use of aerospace technology for the benefit of society.

Aerospace technology is so much a part of the fabric of our lives that its benefits go unnoticed by most of us, even by those within the industry.

Sure, we might think about satellite technology when we use **GPS-enabled navigation** systems in our cars or when we access satellite weather images. But how many of us think “aerospace” when we buy fruit in the grocery store in the dead of winter or when we buy the latest must-have children’s Halloween costume? Those items are, of course, flown from overseas by air cargo using aerospace technology.



New Horizons, shown in an artist's rendering, is credited with stirring interest in STEM education.

The year saw three major news stories that captured the notice of the general public. Two showed the power of technology to inspire and another illustrated the challenges sometimes inherent in introducing new technologies into society. Three major news stories captured the public's attention in 2015 by highlighting how technology can inspire people — as well as how it can stir fears and trepidation.

Nothing in 2015 captured the trepidation aspect more than the **explosive growth** of the commercial unmanned aircraft market. Early uses of unmanned aircraft in the commercial arena include film production, agriculture, infrastructure inspection, and possibly even package delivery. The Aerospace Industries Association notes that “with countless benefits it is not surprising that society is waiting to fully

utilize these systems.” But society is not waiting. Technology has now made small electric, unmanned aircraft available to almost anyone who wants one. The FAA estimates that almost 1 million small unmanned aircraft will be sold in the U.S. in 2015.

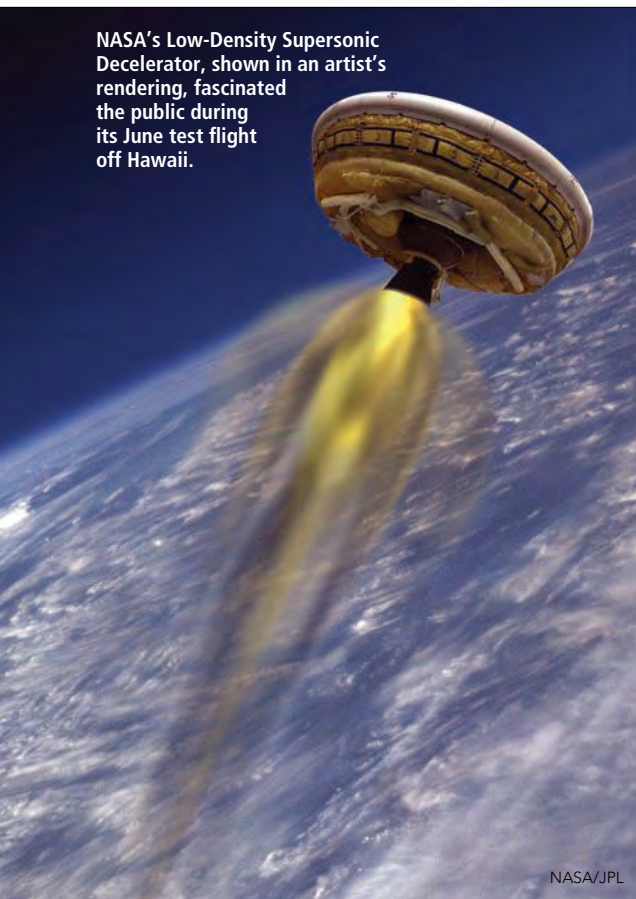
This proliferation of “drones” is concerning to segments of the public worried about safety and the erosion of privacy. In July, a Kentucky man was reportedly arrested after he shot down a neighbor’s drone that he believed was hovering over his yard taking pictures. A local judge later dismissed the case, ruling that the drone represented an invasion of privacy. In response to concern by their constituents, over 30 state legislatures have either passed or contemplated **laws on “drone” use**, which could deter the growth of this new market. President Obama directed the Commerce Department’s National Telecommunications and Information Administration to develop privacy, transparency, and accountability rules for both government and public drone use.

On a more positive note, NASA’s New Horizons spacecraft, which had been traveling for a decade in relative obscurity, burst on the scene with a flyby of the dwarf planet Pluto in July. In an age when spaceflight seemed to lose its luster with the public, New Horizons attracted weeks of coverage by all the major news outlets and numerous blogs.

A major benefit of the media coverage of New Horizons was to inspire a new generation of people to pursue careers in STEM, science, technology, engineering and math. One article, headlined, **“The Women who Power NASA’s New Horizons Mission to Pluto,”** quoted a deputy project scientist who said “girls will be inspired to be scientists and boys will grow up to be ‘gender blind,’ seeing women in science as the norm.”

Closer to Earth, NASA’s Low Density Supersonic Decelerator fascinated people in June with its resemblance to a **“flying saucer”** during a flight off Hawaii. A key technology for future Mars missions, the LDSD project’s goal is to develop entry, descent, and landing technology that is capable of landing 2,000 to 3,000 kilograms on Mars through the use of new drag devices — larger parachutes and supersonic inflatable aerodynamic decelerators.

The LDSD test flight in June drew coverage via Livestreams, Twitter, blogs, Instagram and Reddit, in addition to newspapers and television, demonstrating the public’s connection to this new and exciting technology.



NASA’s Low-Density Supersonic Decelerator, shown in an artist’s rendering, fascinated the public during its June test flight off Hawaii.

NASA/JPL