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# 2016

## YEAR IN REVIEW



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Shaping the Future of Aerospace

## A year that caught public's notice

BY R. STEVEN JUSTICE

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

**M**any major events in the aviation and space sectors enthralled the public in 2016 and exemplified how aerospace technology continues to impact our world. Several stories captured attention from the general public and demonstrated the power of technology to inspire while also sometimes illustrating the challenges inherent in introducing new technologies.

One impact is readily demonstrated by the ongoing expansion of unmanned aircraft system operations. The FAA issued its first rules for the commercial operations of small UAS, resulting in over 1,000 applications for “remote pilot” certificates in the first month. “We are part of a new era in aviation, and the potential for unmanned aircraft will make it safer and easier to do certain jobs, gather information, and deploy disaster relief,” said U.S. Transportation Secretary Anthony Foxx.

But while many welcome UAS operations, others remain concerned over privacy and safety issues. Kentucky Republican state representative Diane St. Onge said in *USA Today* in July that “I am alarmed by media reports that the FAA predicts that between **10,000 to 30,000 drones** could be lurking in our skies by 2020.” In fact, the registrations of UAS — more than 325,000 — eclipsed that of manned aircraft within the U.S. in 2016. The National Conference of State Legislatures recently reported that eight states have enacted legislation to control the use of drones, with 35 others considering it. But as *Baseline* magazine stated, “it’s apparent that drones are here to stay and will impact a wide swath of industries. The resulting disruption will be enormous — and this is just the beginning.”

Big events in spaceflight continue to draw public interest both in traditional and social media. The first successful landings of rocket boosters by both SpaceX and Blue Origin generated 5 million views each on YouTube with subsequent landings drawing millions more views. The **Falcon 9** pre-launch explosion in September also drew 5 million-plus views, and according to the *Los Angeles Times*, “planned launches of communications satellites that support international mobile



▲ **Solar Impulse 2 in July** completed its multistop circumnavigation of the world on solar power.

phone service and digital television are delayed and put in doubt” — a very real-world impact for consumers.

Astronaut Scott Kelly’s yearlong stay at the International Space Station not only expanded our knowledge of the physical impact of zero gravity but also captured social media attention as described on LinkedIn Pulse by Bob Mitchell: “As Scott’s Year In Space captured the world’s attention, it was truly those micro-moments captured through Twitter, Instagram and Facebook of his journey that emotionally connected millions to his story in real time.” Planetary missions, such as NASA’s Juno probe, which entered Jupiter’s orbit this summer, generate positive media attention. ABC News posed the question “why should you care” and answered it this way: “Understanding what makes Jupiter tick will help us better understand how our solar system — and others — evolved.”

Environmental issues face aviation as well. The **International Civil Aviation Organization** proposed international standards to avoid a patchwork of rules across the globe that often conflict with each other and “hurts us financially and certainly does no good for the environment,” according to an industry executive quoted at *EurActiv.com*. But new technologies are emerging to address these environmental issues. In July, the **Solar Impulse 2 aircraft** completed its 16-month, multistop circumnavigation of the world on solar power to demonstrate the potential for future solar-powered flight. The piloted aircraft spent a cumulative 23 days in flight. According to *The Guardian* in the U.K., U.N. Secretary-General Ban Ki-moon said: “Solar Impulse has flown more than 40,000 kilometers without fuel, but with an inexhaustible supply of energy and inspiration.” ★

**Contributors:** Amir S. Gohardani, Bradley Steinfeldt, Soumyo Dutta, Michelle Rouch