STEM Students go Suborbital with BIRST Intern Program

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ABSTRACT

The growing use of suborbital platforms enables a new element of science, technology, engineering and math (STEM) engagement and ways to inspire and excite students and the general public about STEM. The Ball Intern Remote Sensing Team (BIRST) program is an example of this type of engagement. As part of the BIRST program, Ball Aerospace interns participate in an intensive, after-hours project to develop payloads of their own creation from concept to launch. Interns team up with Ball volunteer mentors to design, integrate and test payloads that launch on a United Launch Alliance (ULA) intern-built sport rocket or an Edge of Space Sciences (EOSS) high-altitude balloon. This unique opportunity to send a payload to suborbital heights allows interns to work on real engineering problems outside of textbooks or the classroom. Interns from all departments are invited to participate in BIRST, even those without a technical background. It's not uncommon to see a communications intern soldering or a mechanical engineer intern writing code for their payload. This hands-on experience has proven to be invaluable when it comes to developing the STEM workforce and has even reached its way to elementary, middle and high school levels.

Figure 1. Interns prepare payloads for EOSS balloon launch.

Figure 2. Interns construct Arduino for rocket drone payload.

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