T Plus Six Years and Counting:
The Journey of the Commercial Space Student Payload
"Launch, Land, and Repeat!"

Bobby Russell, CEO/Founder Quest for Stars

Summary

At NSRC 2016, we brought a student payload to the conference as a first article demonstrator of design. That payload ended up being signed by many VIPs and space dignitaries for good luck during the show. Since then, the payload has conducted epic flights, including the first K-12 student view of a sub-orbital sunrise, live video from the 2017 Great American Eclipse, and an Apollo 50th-anniversary memorial flight over Neil Armstrong Hall at Purdue University.

This session will take you through the latest on the ("Comspace") commercial space student payload and our upcoming four launches in 2023. It will also feature an overview of our latest tech, including 64MP 360* photo/video AR technology and our new mobile ground station technology that enables students on the chase team to watch real-time live mission video on their cellphones for the duration of the flight.

Nine near-space missions later, the commercial space research payload utilizes state-of-the-art social media tools, FPV streaming technologies, and rich 360VR media to extend its "science excitement reach" coast-to-coast.

Payload accomplishments/Upcoming flights:

- **Comspace-2:** First live video downlink
  - Test flight of new flight computer and video downlink and rebroadcast "hotspot."
- **Comspace-7**: First K-12 student payload video of a suborbital sunrise
- **Comspace-9**: First FPV live stream video of a Total Eclipse from above 30KM
  - Edge of Space Facebook Live video coverage over Jackson Hole, WY, and Driggs, Idaho
  - Epic Aerial Search and Recovery on Facebook Live
- **Upcoming 2023 launches**
  - North Manchester Indiana Schools
  - Other TBA (Sacramento, CA)

Mentoring and partnerships:

In addition to the "Comspace" payload, Quest for Stars continued sharing our technical advances with other nonprofits, such as the Arete STEM foundation. We believe everyone in the educational realm should have access to low-cost, flight-proven technologies, and we are on a mission to make that happen.

About Quest for Stars

Quest for Stars was founded as an educational non-profit in 2010. At the core of Quest for Stars' mission is the desire to expose students to the excitement and STEM career opportunities in the ever-expanding Commercial Spaceflight industry. We are on a mission to bring excitement to science! Quest for Stars is also a credentialed STEM media outlet, which allows us to bring a front-row seat to historic space events into the classroom.

How does the program operate?

Quest for Stars is a citizen-science-based STEM program that operates in two modes. The first mode of the program is an outreach program. The second mode of the program combines the outreach presentation with student design competitions, culminating in flight to the edge of space.

Flight opportunities and Partnering:

Please get in touch with us at contact@questforstars.com to arrange an educational outreach flight for your school or institution. We partner with schools, agencies, and numerous Commercial Space organizations to bring Spaceflight into the classroom.