

Hello Leon,

Its always good to virtually meet another ISU alum! My name is Sam Harrison I am a 23-year-old British MSc student about to graduate from ISU's MSS program. I was previously the Director and Co-Founder of Nebula Sciences Ltd / LLC which was a British/American High altitude balloon launch company (Est Jan 2015 - July 2017). During my time running the business, we had a range of paying clients including the University of Oxford, Newcastle University, Institute for Interstellar studies and Space VR. Through running the business over a two year period, I gained extensive experience in the commercialization of high altitude balloon platforms as well as systems engineering for a variety of scientific and technical high altitude balloon payloads.

Projects I led included pressurized capsules to keep insects alive featuring a range of pressure, temperature and Co2 sensors which was run in partnership with Southampton University, advanced liquid heating systems to keep protocell fluid experiments operating at temperatures as low as -65c. I also led the development of a custom thermal control system (TCS) for GoPro 4 cameras to prevent overheating in the absence of effective convection, biological space frame to test the effects of extreme low pressure and temperature on plant cell membranes. I also developed a platform to allow SpaceVR to test their VR optical camera prototype in near space, their completed system is booked to be launched in LEO Q4 2017.

I was also part of Stanford Universities high altitude balloon launch team where I helped to develop the mechanic cut down system for the "Val Bal" high altitude balloon platform. A later version of this went onto break the latex balloon world record for flight duration with a flight time of 70 hours and 10 minutes. In total I have been a team member of 16 launches, 10 of which I led which was spread across 3 continents in a variety of weather conditions and legal frameworks.

In addition to this I have a strong technical and commercial background in Earth Observation (EO) data which may apply to your Stratollite program. I previously worked at UrtheCast in San Francisco in their customer experience department, through my studies + team project at ISU I looked at major commercial applications of EO data for the insurance market. As part of my MSS program at ISU, I did a research placement at NASA Ames as an Instruments and systems engineer in the astrophysics department.

I was part of a team of 4 that won ESA's App camp for 2016 with a 2,500 Euro prize for my work in creating an MVP to combine EO data with Meteorological data for the wine commodity investment market. I hold certifications in both amateur radio (RSGB) and amateur rockets (NRA) as well as BA HONS degree in Business studies focusing on finance, international law and trade as well as economics. I also have direct experience of FAA + CAA weather balloon legal frameworks and led the development of 3 generations of weather balloon payload that met both FAA + CAA requirements. As part of this my weather balloon work was featured at TEDx CERN <http://www.youtube.com/watch?v=LX8aT-Hb5FE&t=8m55s>) as well as NASA Ames.

I am about to graduate and am currently looking for a full-time/contract position that allows me to effectively leverage my previous experience to help advance the commercialization of near space. I was wondering if you might be available for a short Skype call so I could better introduce myself?

Warm wishes,

Sam



