

SPACE LIFE SCIENCES SYMPOSIUM (A1)

Public Outreach and Education - Integral Elements of Space Life Sciences Program Development (8)

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EXTENDING OPPORTUNITIES FOR STUDENT SPACE EXPERIMENTS WITH SUBORBITAL
SPACE VEHICLES**Abstract**

Now is the final stage of the development of suborbital space vehicles. These vehicles are expected to create a new and affordable middle duration microgravity market. It also brings benefits for experimental payload flights which students would like to perform in microgravity. Young students cannot fly to space because of FAA/AST regulations, but they can have their microgravity experiments flown onboard suborbital vehicles. Because of the characteristics of suborbital space vehicles, it is possible to have late and frequent access. Whatever is safe and permitted by FAA/AST will be able to fly, and so performing a wide variety of experiments by student will become easy to realize.

The FASTRACK system now in development by NASA and Space Florida is a versatile system for integrating locker-type experiment payloads. The Space Life Science Laboratory (SLSL) at Kennedy Space Center is an appropriate facility to perform life science payload processing just before a flight. Many of the student wonders are space life science matters. Therefore FASTRACK and SLSL will enable students to easily and effectively do their life science experiments. Students have wonders about everything surrounding them with pure, innocent and straightforward curiosity. It will be the best gift to enable their questions and provide answers with suborbital spaceflights and broadcasting the experiment flights back to the classrooms live for all to see.

In this regard, HASTIC, (Hokkaido Aerospace Science and Technology Incubation Center), organized a student space experiment contest sponsored by Hokkaido Shinbun. Rocketplane Global will provide a free flight for student payloads during the flight test program for the XP spaceplane using the FASTRACK system. Almost 200 students from Kindergarten through High School applied to this contest with their unique ideas which they would like to do in space. The final selection is now underway and will be announced within a few months, with the final group of student payloads being tested in the COSMOTORE microgravity drop tower in Akabira.

This paper will describe how easy it is to access the microgravity environment - both cost and technical matters - to have suborbital experiments flown. The FASTRACK method of integrating payloads and systems into vehicles will be introduced. The SLSL will be described because life science matters are one of the more popular student experiment interests. Suborbital microgravity experiments will fire up students' curiosity, bringing a new enthusiasm about space which will surround them with wonder.