

TEACHERS IN SPACE

A Project of the Space Frontier Foundation

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ALS to the ISS

By Amy McCormick

Teachers in Space Participant

We chose to investigate Amyotrophic Lateral Sclerosis (ALS) to better understand the disease after the students' PE and track coach, Jason Whitworth, was diagnosed in September 2011.

On January 9, 2014, our project was launched from Pad 0A from the Mid-Atlantic Regional Spaceport on Wallops Island, Virginia. Our launch vehicle was Orbital Sciences's Antares rocket and our experiment was delivered to the International Space Station by the Cygnus ferry vehicle on January 12, 2014.

Our experiment will be run by an astronaut on station within the next few weeks. The astronaut will initiate the experiment by releasing a clamp and shake the unit vigorously for 30 seconds so that the chemicals within the Fluid Mixing Enclosure (FME) mix. Three days later, the astronaut will release the second clamp, introducing a fixative, which will terminate the experiment. The exact same procedures will be performed by the student team of scientists here on Earth so that the data can be compared when the FME is returned to Earth.

One day after the experiment is complete, it will be sent to Russia via a Soyuz capsule. The experiment will then be sent to Houston and then back to us here in Florida. The students will then run the contents of both FMEs through a spectrophotometer, analyze the results, and compare the data from the experiment performed here on Earth with the experiment run in microgravity.

For more information about flying student experiments to the ISS please contact Amy McCormick at jaegerdoggy@hotmail.com



Flight Experiment Workshop

The Flight Experiment workshop offers hands-on, repeatable experience with suborbital and orbital experiment design and launch processes. Participants will build, launch, track, retrieve, and analyze captured data from weather balloon experiments which can be recreated within a typical classroom budget.

Teachers will learn about commercial spaceflight, suborbital and glider and balloon flight, meteorology, basic glider controls, basic instrumentation, control surfaces, and simple pre-made instruments that will be flying with teachers in gliders and on weather balloons. They will also learn about pressure change, accelerometers, and dosimeters. The experience will culminate with teachers practicing what was learned during the week as they launch their own weather balloons.

The workshop is offered for high school teachers of math, science and technology. This workshop will be held in Columbus GA, on July 21-25, 2014.

APPLY NOW at

<http://tis.spacefrontier.org/>

For more information on the Flight Experiment please contact Rachael Manzer at rmanzer@hotmail.com

By the Numbers...

The following information comes from the Summative Evaluation Report for the NASA-funded teacher professional development project Teachers in Space (April 2011 through August 2013)

84% Of participants felt that their experience from the workshops would assist them at least somewhat in future training of others

Of participants felt that they had increased their comfort level at least somewhat in leading training as a result of the workshop **80%**

57% Felt that "experience" were the most useful type of activities that could be provided to others in workshops

Across all workshops expressed the highest desire to maintain contact with the project staff **65%**

For more information about the evaluation report please contact Lanette Oliver at lanetteoliver@gmail.com