Program-Title Reduced Gravity Student Flight Opportunities STEM II

**STEM Inventory** 

Entry# 123

Org-Type Government-based

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URL

Service-Region Nationwide

Type Student Program

Subjects Physics | Space | Engineering | Technology

Level Undergraduate

Other-Objectives

Served-per-Year Demographics

Content

The Reduced Gravity Student Flight Opportunities Program provides a unique academic experience for undergraduate students to successfully propose, design, fabricate, fly and evaluate a reduced gravity experiment of their choice over the course of six months. Th overall experience includes scientific research, hands-on experimental design, test operations and educational/public outreach activities. The reduced gravity aircraft generally flies 30 parabolic maneuvers over the Gulf of Mexico. This parabolic pattern provides about 30 seconds of hypergravity (about 1.8G-2G) as the plane climbs to the top of the parabola. Once the plane starts to "nose over" the top of the parabola to descend toward Earth, the plane experiences about 25 seconds of microgravity (0G). At the very top and bottom of the parabola, flyers experience a mix of partial G's between 0 and 1.8 (called "dirty air").

**Outcomes** 

Started Funded-Through

Length Ongoing Cost

Primary-Funding Primary-\$

Materials

Other-Funding

**How-Assessed** 

Best-Practice-Why

Promising-Practice

Sponsor Sponsor-Org

Sponsor-Phone Sponsor-Email

Other-Orgs