

# Sample Abstract

**1" Margins if abstract fills page  
Center abstract if it does not fill page**

**USE WHITE PAPER!**

**Title is upper & lower case,  
centered, and bold**

**Author or Authors Underlined  
Colon  
Two spaces  
Dr./Mr./Ms., Name, Institution, Dept.**

**The Vortex Ring Transit Experiment (VORTEX) Get Away Special Project**

**Double space between title and author line(s)**

**Authors:** Dr. Luis P. Bernal, University of Michigan, Department of Aerospace Engineering  
Dr. Sven G. Bilén, University of Michigan Students for the Exploration  
and Development of Space

→ A group of students at the University of Michigan is developing a small payload to fly on the Shuttle. Although the project can be daunting at times, these students are united by their common interest in space exploration and in developing future space-based technologies. Begun by the UM Students for the Exploration and Development of Space (UMSEDS), the Vortex Ring Transit Experiment (VORTEX) will attempt to answer some basic questions about liquid atomization- the process whereby a liquid is converted to small droplets. Without the presence of gravity, the physics of this process can be examined as never before. The data returned will hopefully lead to better methods for atomizing fuel (important in the operation of internal combustion engines), producing metal powders of desired characteristics (powder metallurgy), and manufacturing microdroplets for drug delivery.

**Double space between paragraphs**

→ Aside from the important physics questions to be answered, the students are learning how to work with industry, academia, and government. These students, who range from first year to graduate students in fields ranging from engineering to liberal arts, are gaining valuable hands-on experience with a real-world engineering project. The project is challenging, and with the challenge comes immense potential to learn. The students work in teams to design and build the many different subsystems needed to run the self-contained payload. All power, control, and data handling must be contained within the 5 cu. ft., 200 lbs. Get Away Special (GAS) experiment carrier which will eventually be placed in the payload bay of the Shuttle. The students also handle all management, fundraising, and technical aspects under the guidance of a Faculty Advisor who acts as the payload customer and NASA contact person. This paper will summarize the technical, educational, and programmatic aspects of the VORTEX project.

**Single space text.**

**Remember to intend each new paragraph.**

**Remember to be consistent:**

**Use two spaces after the period between sentences or use one space – same throughout.  
Double-space between title and author info and between author info and text.**