

Description of Research Project

The purpose of the research project is to design and launch a functioning miniature satellite with a payload into low Earth orbit. The 1U CubeSat will carry the Highly Miniaturized Radiation Monitor payload, which is a miniature monitor that will measure radiation in outer space. The flight will serve as a technology demonstration of the payload, which could be used on larger missions if initial tests are successful.

Necessity of communication facilities to research project success

In order to achieve mission success, the applicant must have access to adequate and functioning communication facilities. The transmission of commands and data to and from our satellite depends on reliable communications equipment. Without an adequate ground station, the research project will not be successful.

Evidence that existing communications facilities are inadequate for research project success

The applicant, the Spacecraft Development Club of Embry-Riddle Aeronautical University, does not have access to communication facilities. The construction of a ground station near the club laboratory will allow for future missions to access the station as well. No communication facilities exist, so it is imperative that the ground station is approved in order for a successful mission.