

2007 Ohio Student Research Forum

Wright State University
Dayton, OH

RESEARCH ABSTRACT FORM

TITLE: Design and Implementation of Mechanical Components for Smart Balloon

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The undergraduate summer research project entailed the design and implementation of mechanical components for an aerial platform which atmospheric studies, remote sensing, and image capturing were performed at altitudes of 100,000 feet. The components included the payload which was composed of three different pods, a parachute, a variety of measuring devices, and a cutter. Atmospheric conditions such as barometric pressure, temperature and wind speed were measured, graphed and compared against calculated meteorological established models. Images were captured to analyze correlation with changes in the studied atmospheric parameters.

The multidisciplinary Smart Balloon as the project was titled emphasized teamwork as all team members from different disciplines worked together in making the project a success.