

Abstract Submitted
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High Altitude Balloon Flight Path Prediction and Site Selection Based On Computer Simulations JOEL LINFORD, Weber State University, HARBOR TEAM — Interested in the upper atmosphere, Weber State University Physics department has developed a High Altitude Reconnaissance Balloon for Outreach and Research team, also known as HARBOR. HARBOR enables Weber State University to take a variety of measurements from ground level to altitudes as high as 100,000 feet. The flight paths of these balloons can extend as long as 100 miles from the launch zone, making the choice of where and when to fly critical. To ensure the ability to recover the packages in a reasonable amount of time, days and times are carefully selected using computer simulations limiting flight tracks to approximately 40 miles from the launch zone. The computer simulations take atmospheric data collected by National Oceanic and Atmospheric Administration (NOAA) to plot what flights might have looked like in the past, and to predict future flights. Using these simulations a launch zone has been selected in Duchesne Utah, which has hosted eight successful flights over the course of the last three years, all of which have been recovered. Several secondary launch zones in western Wyoming, Southern Idaho, and Northern Utah are also being considered.

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