

Abstract Submitted
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JOHN E. SOHL, JOHN C. ARMSTRONG, Weber State University, SHANE L. LARSON, Utah State University — HARBOR (High Altitude Reconnaissance Balloon for Outreach and Research) is a program in which scientific payloads are designed, constructed, and flown by students using weather balloons to reach the edge of space. Ten flights have been completed involving over forty high school and college students. Students work together to build sensor and flight systems and to analyze the resulting data. Measurements include temperature, wind, turbulence, humidity, particulates, gas concentrations, balloon and flight dynamics, etc. The HARBOR program provides a mission oriented structure that is based on aerospace industry standards. As a result, a positive employment track record is becoming established with program graduates. Similar results are being observed in graduate school applications. HARBOR is now being expanded to include tethered and short duration flights. Tethered flights at elementary schools will allow us to do air quality measurements and involve primary students in science. A new collaboration will study atmospheric inversion layers using short flights with smaller payloads that will be jettisoned at lower altitudes and quickly recovered.

John C. Armstrong
Weber State University

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