

Abstract Submitted
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Investigations into High Altitude Particulate Monitoring

CHARLA BOOM, SPENCER HATCH, Weber State University — The High Altitude Reconnaissance Balloon for Outreach and Research (HARBOR) is a high-altitude ballooning system that takes scientific data from ground level to heights around 100,000 feet. During the 2010 summer flight season, WSU's HARBOR team launched multiple flights from Duchesne, UT. Particle diameter measurements were taken of the troposphere and lower stratosphere using a MetOne GT-526 particle counter. Tests during the pre-flight season were conducted in low-temperature and low-pressure environments to ensure functionality and accuracy of the particle counter in conditions typical of the lower stratosphere. Data from previous flight seasons suggest formation of particle layers due to wildfires. Atmospheric data collected during the 2010 flight season on August [day], 2010 showed evidence of dust layers around 30,000 feet elevation on flight HAR100819. Investigation is under way to corroborate tentative conclusions from past flights. Post-flight tests were conducted on the performance of the particle counter to determine the effects of stratospheric conditions and impact.

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