

Abstract Submitted
for the 4CF10 Meeting of
The American Physical Society

Use of Cameras in High Altitude Ballooning as a Data Integration Tool SHARON GATRELL, MURIELLE PARKINSON, JOHN ARMSTRONG, Weber State University, HARBOR TEAM — Integrating data from multiple sensor systems can be a challenge, especially in high altitude ballooning, where violent motion, high humidity and low temperatures can cause system failures. Camera intervalometers can be used to correlate and corroborate data from multiple systems, and relate data on board to real time. Cameras are good candidates because they are more compact than other sensor arrays, can be insulated without interfering with their operation, and can be used to independently verify multiple sensor reading simultaneously (atmosphere quality, altitude, acceleration, orientation, etc.) while providing a record of elapsed time. Inexpensive, off-the-shelf cameras can be easily modified to work unattended in hostile environments. We will present information on changing the camera's metafile (data header) to include 3-D location and other details not normally included. We will also show image correlation with other sensors such as aerosols, real time clocks and motion.

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Date submitted: 13 Sep 2010

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