

Response to Reviewer Comments on Preliminary PSIP

Balloons over Volcanoes Team

June 22, 2014

1 MECHANICAL

We have provided separate weight budgets for the data logging system on the interface plate (Table 1) and the acoustic array on the balloon rigging (Table 2). The weight of the data logging system will not exceed the maximum allowable weight. Mechanical drawings are included in the Appendix. Figure A-1 shows a side view of the payload box mounted on the interface plate. Figure A-2 details the attachment system, which consists of threaded eyes securely bolted onto the interface plate. Figure A-3 shows the acoustic array rigging plan developed in collaboration with CSBF.

2 POWER

We have provided a power budget for the data logger, which draws off of the HASP power supply, as well as the microphones, each of which use independent power supplies. Our tests indicate that the data logger power draw will be less than a tenth of the maximum allowed power draw. We have improved the power system wiring diagram for the data logger and also provided a power system wiring diagram for the microphones.

3 DOWNLINK AND UPLINK

The DataCube data logger records acquisition status internally, allowing us to diagnose problems after T/V testing. However, seismic data acquisition systems such as the DataCube are not configured for remote uplink and downlink. Our team considers the risk to the payload implied in developing independent monitoring capability to be greater than the benefit of in-flight configuration options.

4 INTEGRATION

Successful microphone operation during T/V testing will be indicated by the simultaneous measurement of pressure transients across the array.