

## **Response to reviewer comments**

### ***Reviewer #1:***

- Tables 3.3.1, 3.3.2 and 3.3.3 have something to do with the payload mass budget, but it is not clear what information these tables are trying to convey. A clearly identified mass budget (component mass, uncertainty in component mass, mass value identified as "measured", "calculated", or "estimated", plus total mass and uncertainty) should be provided.

**Action taken:** *New table with mass budget was created in the Table 4.5.1.1 in the Section 4.5.1*

- Power circuit diagram including connections to the HASP EDAC connector pins, voltage conversion, and voltage distribution. The major parts of the power circuit should be identified with make and model.

**Action taken:** *The power circuit diagram was added and can be found in the Figure 4.3.2.1*

- Section 3.2.3 "Usage of HASP Serial" implies that the team thinks they will be able to communicate with their Raspberry Pi in real-time over the HASP serial port during the flight. The team need to read the HASP Student Payload Interface Manual (available on the HASP website) to understand what is and is not possible for flight telemetry. In particular, there is no real-time connection to payloads during flight. Rather the payload needs to downlink its own data frame. These frames are collected and made available to the teams roughly every 5 to 10 minutes. Similarly commands can be occasionally uplinked to the payload.

**Action taken:** *Information about the usage of HASP Serial was added in the sections 6.2 Uplink using HASP Serial and 6.3 Downlink via HASP Serial*

- If a payload team wishes to exceed a resource (e.g. data or dimensions) then the application must include a special section requesting a waiver. This is fully specified in the HASP 2018 Call for Payloads. No special waiver was requested, therefore it appears that this team will not elevate or rotate their telescope outside the given dimensions of the payload envelope. If this is not the case, then the team must apply for a waiver and the request must include ALL the information specified in the CFP. The team must apply for a waiver if it wishes to move the telescope beyond the standard payload envelope. The waiver request must include ALL the information as specified in the HASP 2018 CFP. REVISED APPLICATION ADDRESSING ALL THE ISSUED RAISED BY THE REVIEWERS IS REQUIRED.

**Actions taken:** *With an updated design a waiver is now requested in the Section 7. Special Requests. It includes sub-sections 7.1 Height request, 7.2 Width request and 7.3 GPD Time and Position Data request.*

*Reviewer #4:*

- Difficult to identify procedures for integration and operation. A separate section for these would have been very helpful

***Actions taken:*** New Sections **5. Experiment Integration to HASP** and **6. Operation during Flight** were added.

- Difficult to identify level of professional mentoring.

***Actions taken:*** Section **1.5.2 External support** was added with information about details of Academic Lead and Mentor.

- Unable to find estimate of personnel present at integration and flight, as in the reviewer guidelines.

***Actions taken:*** Information about expected personnel present at integration and flight can be found in the **Section 1.5.3 Team members**.

- Some sort of chart showing interaction between team members listed in section 1.4.2 would have been helpful.

***Actions taken:*** New team organization chart was created and can be found in the **Section 1.5.4**