APPENDIX B

Requesting Personnel/Author Dan Patnaude Date:09/18/2020 Request Number:

**Special Activity Request Information**

Title**:HRC-I manual voltage ramp-up and ar Lac observation**

Activity Description:

The HRC team would like to manually ramp-up the HRC-I plate voltages. The manual commanding will allow us to evaluate the voltage steps in real time. Additionally, when set to operating voltage, we will collect data on the calibration source AR Lac in order to evaluate the detector back end electronics, including the preamps and veto processing. We will also observe at voltage steps beyond the current operating values, in order to assess possible differences between the FEA-A and FEA-B electronics.

Rationale:

As part of the HRC return to science activities, the HRC team needs to evaluate the state of the detectors, their power supplies, and the processing electronics.

Precedent:

A similar activity, i.e., manual voltage ramp up, occurred during orbital activation. Additionally, changes in the voltage steps were evaluated as part of an activity to raise them to address the HRC gain drop.

Applicable CARD Items and Mission Planning Guidelines:

HRC-R-004 – this CARD item relates to HRC dither. The HRC must be dithering when the HV is up

Interactions with Other Subsystems:

New Products Required:

There are no new products required for this activity

Reviewers:

HRC

Prerequisites:

The HRC-I must be the selected detector (HRC-I tied to side B preamps). Commands to select HRC-I and set it up for observation were included in the execution of CAP 1543.

Scheduling Directions:

1: schedule HRC-I observation of AR Lac (obsid 24644)

a: involves slew to target

b: set dither for HRC

c: translate and focus SIM positions for HRC-I

d: command FMT1

2: 10 minutes prior to the end of comm, activate SCS87 using RADENTRY.ATS

Duration of Activity and Priority:

Preferred Start Time:

Earliest Start Time:

Latest End Time:

Duration: 2.75 hours

Priority (1-Highest to 3-Lowest): 1