

HIRES Dewar Upgrade

Project Monthly Report – June 20/3

Progress

Detectors

Engineering grade detectors are mounted on backplane and are awaiting attachment of the flex circuits.

Mechanical

Micro DSUB connectors with their flex circuits attached have been fit tested in the Lid and Spider Assembly.

It was discovered that the hermetic SMA connectors are not constructed so that the electrical connector is concentric and square to the hermetically sealed housing. A fixture was fabricated to aid in the assembly of these parts onto the rear dewar lid so that placement and alignment is insured

Heat exchanger was ordered from Lytron, Inc. The unit will be an ES0714 (with fanplate) and will include two 115-volt Tarzan fans. Delivery is 2 weeks from when the order is officially placed by purchasing.

The dewar and vacuum parts were gold plated. All the aluminum electronics box sheet metal was given a gold alodine surface treatment.

Amco Engineering will be the supplier for the components that make up the footlocker frame. A preliminary quote was obtained from the local distributor. The preliminary design of the footlocker was sent out to selected people on the project team and to Keck. Detailed design is currently in progress.

Electronics

Two weeks were lost in debugging a problem with the ± 16 -volt supplies in the CCD controller. The supplies would oscillate as the current load increased. Much time was spent debugging, reviewing, and/or replacing sections of the power supply wiring as well as investigating other components and reactive loads associated with the CCD controller's power. No definitive cause of the supply oscillations were found, but it was noted that when the supplies remained sensing their voltages at the terminal strip as opposed to sensing the directly at the controller's backplane, the supplies behaved properly. Because of this non-direct sensing to the backplane, the supplies were adjusted to accommodate the voltage drop in the wires from the terminal strip to the backplane. The cause of the supplies' oscillations remain a mystery as the supplies' sensing circuitry allows

switching to remote points - which is exactly how the supplies are handled in the DEIMOS CCD controller.

Final wiring was completed within the electronics box and the dewar and we are now continuity testing of all signal paths from the CCD controller cables to the CCD will commence.

Software

No report this month

Issues and Concerns

No particular issues or concerns at this time.

Schedule

The updated schedule is attached.

Budget and Spending Profile

To the end of May the project has spent \$547,641 or 72% of the project funds not including contingency. A summary of the budget is attached as is a chart and the spending profile.