

Section I Summary

41-C MISSION REPORT

SUMMARY

Shuttle Flight 41-C, the Solar Max Repair mission, took off on April 6, 1984 from Kennedy Space Center in Florida. As with 41-B, the dress rehearsal for this flight, launch was early in the morning. It occurred at 7:58 CST. The landing also took place at KSC the following Friday, April 13, 1984. This was Challenger's fifth flight.

There were two prime EMU's and one back-up short EMU stowed for this flight in the Airlock. The two MMU's were again mounted in their Flight Support Stations in the payload bay. Figure 1 shows the EMU functional schematic while Figure 2 shows the hardware which makes up the EMU. The payload bay configuration for the MMU's appears in Figure 3.

Astronaut A and *Astronaut B* checked out their EMU's as well as the back-up on Saturday. As the first EVA was scheduled for the next day, they also drained and filled the water tanks and topped off the batteries for the flight units.

Preparation for the first EVA began early Sunday morning, April 8, 1984. Suit donning and prebreathe (denitrogenation) went well. *Astronaut A* and *Astronaut B*, EV1 and EV2, stayed on SCU power until after the hatch was cracked at GMT 99:14:10. They did not go to battery power until 8 minutes later at GMT 99:14:18.

This first EVA was shorter than planned since *Astronaut A* did not capture the Solar Max satellite. Still it lasted 2 hours 59 minutes and was successful from the standpoint of the EV equipment.

To ready the EMU's for the second EVA, the crew recharged the batteries on April 9, 1984. They recharged the water tanks the next day.

Wednesday, April 11, 1984 became the day for the second EVA when the RMS successfully grappled with the Solar Max on Tuesday. This EVA continued for 7 hours 7 minutes. The greater amount of time was required to complete the satellite repair in one EVA, since work did not begin during the first EVA as originally scheduled. Also part of this EVA was a short MMU checkout flight by *Astronaut B*. The Solar Max was successfully redeployed at the end of the EVA.

41-C was the first satellite repair mission. As such it was an unqualified success. It showed the versatility of the EMU/MMU/Orbiter combination.