

57th IAA HISTORY OF ASTRONAUTICS SYMPOSIUM (E4)  
Scientific and Technical Histories (2)

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CAPTURING AND TRANSFERRING LESSONS LEARNED FOR RISK REDUCTION:  
NASA AND THE PHASE 1 (SHUTTLE-MIR) PROGRAM

**Abstract**

The National Aeronautics and Space Administration (NASA) and the Russian Space Agency (RSA) conducted the Phase 1 (Shuttle-Mir) Program from 1993 through 1998. The joint manifest of this cooperative effort consisted of Russian Soyuz (crew) flights, Progress (cargo) flights, Russian science module flights (Spektr and Priroda), U.S. space shuttle docking missions, and nine long duration missions aboard Russia's Mir space station by U.S. astronauts. The purpose of the program was to establish and create a cooperative technical and managerial experience base between Russia and the United States to reduce risk later for the assembly, operations, science and logistical support of the International Space Station (ISS). In this paper we take a retrospective look at the extensive knowledge capture of lessons learned from Phase 1 and transferred to the ISS program and how this effort served to mitigate risk.