

ABSTRACT for SYMPOSIUM ON QUANTUM FLUIDS AND SOLIDS  
To be held in Paris, 7/21-26, 1997

**The NASA/JPL Program in Microgravity Fundamental Physics**

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The NASA Sponsored Program in Microgravity Fundamental Physics is managed by the Jet Propulsion Laboratory. This program supports research in Low Temperature and Condensed Matter Physics, in Laser Cooling and Atomic Physics, and in Gravitational and Relativistic Physics. Research is primarily being performed by investigators at Universities. A brief program overview will be presented, with special emphasis on the Low Temperature Physics aspects. Currently, flight experimentation is performed using a cryogenic facility attached to the cargo bay of the Space Shuttle. The microgravity experimentation time is limited by the cryogenic facility to about 10 days. By 2004, NASA is planning to develop a 6 month lifetime cryogenic facility that can take advantage of the extended microgravity duration offered by the international Space Station. The plan, including how it address the microgravity needs of the international scientific community will be discussed in detail. An overview of science content in the current flight and ground based programs will also be presented along with a description of the current use of advanced technology.