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The Voyager Interstellar Mission

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The Voyager Interstellar Mission, which began in 1990, is a continuation of the Voyager prime mission that was completed in 1989 with the Voyager 2 flyby of Neptune. The primary scientific objective of the Voyager Interstellar Mission is to investigate the outer heliospheric and interstellar media, and to characterize the interaction between the two. Flight system consumables usage and telecommunications capability is expected to support science data return until approximately 2020. At that time Voyager 1 will be at a distance of 148 Astronomical Units from the Sun, and Voyager 2 at a distance of 123 Astronomical Units.

The history of the Voyager Project will be summarized including discussion of the Project's ability to respond to both engineering and programmatic changes throughout its nineteen years of flight. The Voyager Interstellar Mission, status and future plans will be described including:

- science objectives and data acquisition strategy;
- spacecraft and payload subsystem descriptions, operational status including subsystem redundancy, consumables usage, automated spacecraft fault protection capabilities, and expected telecommunications capability;
- ground data system evolution from a project dedicated system to a multi-mission based system;
- spacecraft sequencing strategy which includes both a continuously executing "baseline sequence" and short duration augmentation sequences providing mission adaptively;
- command and control with long round-trip- light times (currently 18 hours for Voyager 1 and 14 I101I1"S for Voyager 2);
- automation of mission operations capabilities, ambling the continuation of high reliability operations with a reduced flight team staffing, level}.