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**REPORT ON MEETINGS WITH HIPPARCOS INPUT CATALOGUE TEAM ON
AAVSO DATA SUPPORT OF HIPPARCOS OBSERVATIONS OF
LONG PERIOD VARIABLE STARS**

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Abstract

A report is given on two meetings attended with members of the HIPPARCOS Input Catalogue (INCA) Team to review what has been done with the AAVSO long period variable star data supplied to the Team to date, and to discuss remaining prelaunch tasks in preparation for the observation of long period variable stars with the HIPPARCOS satellite, for which the AAVSO is providing ongoing data to be used in scheduling these observations.

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Variable star observers worldwide are providing data to the AAVSO for use in scheduling the observation of about 250 long period variable stars with the HIPPARCOS satellite, scheduled to be launched in mid-summer 1989 (Mattei 1988). The author had two meetings at Meudon Observatory in Paris, France, with several members of the HIPPARCOS INCA Team to review what has been done with the 20-year computer-readable AAVSO data (totalling approximately 1 million observations) sent to the Variable Star Coordinator, Dr. Marie-Odile Mennessier, and to discuss with the Team the remaining prelaunch tasks pertaining to variable stars and the interfacing necessary between the Team and the AAVSO during the mission.

During the first meeting, in December 1988, the following subjects were discussed and reviewed: a) AAVSO coverage of HIPPARCOS program stars; b) elimination from the HIPPARCOS program of stars with insufficient observational data resulting in the inability to predict their behavior; c) comparison star sequences on AAVSO preliminary charts; d) specification of stars in need of new photoelectric comparison star sequences or revision of existing sequences; e) results of a photographic survey on HIPPARCOS variables not yet in the AAVSO observing program; f) specification of stars in need of further investigation using the Harvard photographic plate collection; g) preliminary results of Fourier transforms using the 20-year digitized AAVSO data, including strong and weak points of this method, and alternative methods; and h) establishment of procedures for most effectively providing monthly AAVSO data to Dr. Mennessier.

Between the first meeting and the second one in March 1989, the following tasks were accomplished: a) the AAVSO data processing procedures were revised and new computer programs written to meet the needs of providing observations to the Variable Star Coordinator; b) the behavior of each long period variable in the program was evaluated in detail by the author; c) a significant number of AAVSO finder charts were revised by Charles Scovill using the photoelectric sequences provided to the AAVSO by Dr. Michel Grenon and his colleagues at Geneva Observatory, Switzerland; and d) variable star observers worldwide were informed of the HIPPARCOS Observing Program and were invited to participate in providing data to the AAVSO for the program.

During the second meeting, the following subjects were discussed

and reviewed: a) the author's evaluation of the data on, and behavior of, each of the program stars; b) recently obtained photoelectric comparison star sequences; c) specification of stars still in need of comparison star revision; d) further results of the photographic survey of non-AAVSO program stars; e) revised processing procedures for AAVSO monthly data; and f) preparation of ephemerides for the satellite.

These meetings were vital to preparing to provide AAVSO data support to the INCA Team for the scheduling of long period variable observations with HIPPARCOS, and to making this support as efficient as possible.

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