SPACE AND COSMIC RAY PHYSICS SEMINAR

University of Maryland
Computer & Space Sciences Building, Rm 2400
4:30 PM Monday, October 20, 2003
Tea & cookies 4:00-4:30 PM

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Search for the Heliosheath: The Heliospheric Magnetic Field near 85 AU

The magnetic field measured by Voyager 1 (V1) near 85 AU from 2002.0 to 2003.17 has the expected properties for the heliospheric magnetic field at that distance and epoch of the solar cycle. The relation between the V1 magnetic field strength variations and the cosmic ray variations during that interval is consistent with previous observations in the solar wind. The observed magnetic field strength is 4 to 5 times smaller than expected if V1 had been in a region of subsonic flow < 50 km/sec from 2003, day 213 to 2003, day 48. Observations of an increase in B and a decrease in cosmic ray intensity on day 48 are qualitatively inconsistent with the suggestion that V1 moved from a subsonic region to the solar wind at approximately this time. Thus, the Voyager 1 magnetic field observations do not support the view that V1 passed from the solar wind to a subsonic region such as the heliosheath and back to the solar wind.

Sponsored by: Department of Physics, University of Maryland, and the Institute for Physical Science and Technology, University of Maryland

For information call Matthew Hill at (301) 405-6209 or go to the following website: http://space.umd.edu/seminars/Fall_2003_Seminar.html
(A PDF file of this abstract is available for download at this URL.)

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