Some science topics on the inner heliosphere: suggestions for BepiColombo observations

Nobue Shimada[1]
[1] NICT

We outline of the current understandings on the space plasma science of the inner heliosphere and report some interesting topics to be revealed in the near future by means of in situ observations by BepiColombo and so on. Here we focus on three topics: 1. CMEs (their propagation, interaction with the background solar wind), 2. Shock waves (interplanetary shocks under various plasma conditions, Mercury's bow shock properties, slow-mode shocks), 3. Pickup ions (estimation for the interstellar plasma conditions, generation mechanisms for the non-thermal component, inner-source pickup ions and dusts).

Our talk is based on the discussion at the STE scientific meeting, exploration of the physics of Mercury, held at January, 2005. The author thanks to all the participants: Dr. M. Oka, Dr. Y. Kasaba, Dr. R. Kataoka, Dr. H. Shimazu, Dr. K. Takashima, Dr. K. Tsubouchi, Dr. M. Tokumaru, Dr. M. Fujimoto, Dr. M. Hoshino, Dr. S. Matsukiyo, and Dr. Y. Matsubara.