Studies of the solar wind-magnetosphere interaction often rely on L1 observations that are propagated toward the Earth. The propagation techniques are based on an assumption of a negligible evolution of upstream parameters along the solar wind path. The present study uses multi-point observations in the solar wind with the motivation to check this assumption and to include the influence of IMF orientation and its abrupt changes that are often observed in front of the bow shock. The data measured in the L1 point by ACE and Wind are propagated and compared with observations of near bow-shock located spacecraft with a special attention paid to the differences between the subsolar and flank regions. We have found a systematic deceleration of the solar wind with decreasing distance from the bow shock. This deceleration is attributed to the reflected and accelerated particles that not only excite the waves of large amplitudes but they can modify mean values of quantities measured in an un-perturbed solar wind. On the other hand, the influence of rotations of the interplanetary magnetic field, mainly Bz component, is discussed as a possible cause of strong transient decreases/enhancements of the solar wind speed, density and temperature.