Solar cycle 23 variations in the interplanetary magnetic field at 1.0 AU

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The interplanetary magnetic field and related parameters are known to vary with solar cycle. In this study, the distributions of the magnetic field components and related parameters such as the winding angle of the field and the solar wind velocity are considered using ACE measurements for the solar cycle 23 variations at 1.0 AU. The field behaviour is believed to be a weakly stationary random function which ensures the stationarity of the average and correlation functions. We investigate the time variation of magnetic field component distributions and its implication to the variation in the solar source surface field.