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Calibration of the solar wind velocity fitting model for MEXART observations.

The Mexican Array Radio Telescope (MEXART) is a transit station to perform IPS observations at 140 MHz. The antenna is a matricial array of dipoles covering a collecting area of about 10,000 square meters. Previously, we reported the first MEXART IPS observations (Mejia, et al. 2010) employing a quarter of the total array. At this moment we are performing observations with an half of the total area. The technique to perform the power spectral analysis of the intensity fluctuations of IPS radio sources is based on the one developed at ORT (Rao, Bhandari, and Ananthakrishnan, 1974; Manoharan, 1991; Oberoi, 2000). We report power spectra analysis for some IPS radio sources observed in the actual ascending phase of solar activity. We discuss the determination of solar wind velocities applying a fitting model (Manoharan and Ananthakrishnan, 1990) to the power spectra adapted to MEXART observations. We show the scintillation index variation for some radio sources during the solar minimum period of 2009-2010.

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