



ICME propagation analysis using STEREO/WAVES observations

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Interplanetary coronal mass ejections (ICMEs) are the primary cause of the most severe and disruptive space weather events at Earth. Their propagation and evolution from the Sun to Earth is still poorly understood making the accurate forecasting of their arrival impossible. Type II radio bursts are generated by beams of suprathermal electrons accelerated at shock waves ahead of ICMEs. However, propagation of radio waves in the solar wind is strongly affected by random electron density fluctuations, which result in radio sources to be apparently shifted further from the Sun. Here, we present several examples of ICME propagation analysis using radio triangulation of type II radio bursts observed by STEREO/WAVES. We applied a new wave vector correction based on the Monte Carlo simulation technique of refraction and scattering of radio waves in the solar wind. We demonstrate a possible application of type II radio burst tracking in space weather forecasting.