

UCSD Time-Dependent Tomographic Forecasting with White Light and Interplanetary Scintillation Observations

The University of California, San Diego (UCSD) time-dependent tomography program has been used successfully since the beginning of the year 2000 to remotely sense and forecast interplanetary scintillation (IPS) observations of coronal mass ejections. More recently this program has been adapted to provide forecasts of heliospheric density using Thomson-scattered data from the Solar Mass Ejection Imager (SMEI). Here we describe the current state of the IPS and SMEI real-time data pipelines. We describe the speed improvements for obtaining the nearly 10,000 lines of sight per SMEI orbit and the improved accuracy of the remote-sensing fit with the inclusion of space-borne in-situ density and velocity measurements.

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