Space weather research from interplanetary scintillation measurements

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Interplanetary scintillation (IPS) observations at 327 MHz have been carried out regularly at Solar-Terrestrial Environment Laboratory (STEL), Nagoya University to study the solar wind. Recently, the accuracy of the IPS observations has been greatly improved by employing the computer-assisted tomography (CAT) technique, and data obtained from the IPS CAT analysis are found to be as accurate as in situ data for the large-scale stable (i.e. corotating) structure. As for the transient solar wind, its 3-dimensional structure can be also studied by analyzing daily IPS data. These progress lead to increased importance of IPS observations for the space weather research. Here, we report on recent results from STEL IPS observations and our future plan.