

Estimation of three-dimensional structure of the solar wind disturbance by using IPS g-value

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In this study, we made calculations of the g-value by using the three-dimensional CME model which is the shell-shape density disturbance and is determined by six parameters (distance from the Sun, longitude, latitude, thickness, half cone angle, and enhancement factor of the density). Then, we determined suitable parameters by matching g-values obtained by model calculation to g-values obtained from observation for each line of sight. We analyzed some solar wind disturbance events observed by IPS. Then, we compared obtained parameters of density disturbance to data of observations at near the Sun or at near the Earth, and discussed the propagation speed of the disturbance, with or without of a effect to the Earth by the disturbance.