

PEM029-14

Room:203

Time:May 24 17:45-18:00

## Simulations of Diffusive Shock Accerelation with Adaptive Mesh Refinement Scheme and Stochastic Differential Eq. Method

Mitsue Den1\*, Yamashita Kazuyuki<sup>2</sup>, Ogawa Tomoya<sup>3</sup>, Yoshida Tatsuo<sup>4</sup>

<sup>1</sup>NICT, <sup>2</sup>University of Yamanashi, <sup>3</sup>Kitasato University, <sup>4</sup>Ibaraki University

It is beleieved that coronal mass ejection driven shock waves can produce energetic particles by diffusive shock acceleration. We model this mechanism by the following 2 steps: a study of the shock propagation and a study of acceleration at the shock. We show the spectra of particles obtained by using the results for the simulation in which the simulation box covers the orbit of 2.3AU and discuss contribution of the shock wave which has passed.

Keywords: high energy particles, shock acceleration, coronal mass ejections