

## **Three-dimensional electromagnetic cascade shower in the atmosphere taking into account of the multiple scattering theory constructed by partial wave calculation**

**S. Kawaguchi<sup>1</sup>, E. Konishi<sup>1</sup>, N. Takahashi<sup>1</sup>, N. Inoue<sup>2</sup>, T. Yamamoto<sup>3</sup>, and A. Misaki<sup>4</sup>**

<sup>1</sup>Faculty of Science and Technology, Hirosaki University

<sup>2</sup>Faculty of Science, Saitama University

<sup>3</sup>Institute for Cosmic Ray Research, University of Tokyo

<sup>4</sup>Advanced Research Institute for Science and Engineering, Waseda University

**Abstract.** Recently, Fernandez-Vaera et.al. have reviewed the multiple scattering theory based on the partial wave calculation. We calculate the three-dimensional developments of the electromagnetic cascade shower by using this theory in the atmosphere, comparing it with corresponding ones based

on the Moliere theory for primary energy of  $10^{15}$  eV to  $10^{18}$  eV.

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*Correspondence to:* S. Kawaguchi  
(kawaguti@cc.hirosaki-u.ac.jp)