Pitch-angle scattering of inner magnetospheric electrons caused by ECH waves obtained with the Arase satellite

M. Fukizawa[1*], T. Sakanoi[1], Y. Miyoshi[2], Y. Kazama[3], Y. Katoh[1], Y. Kasahara[4], S. Matsuda[5], A. Matsuoka[5], S. Kurita[6], M. Shoji[2], M. Teramoto[7], S. Imajo[2], I. Sinohara[5], S-Y. Wang[3], S. W-Y. Tam[8], T.-F. Chang[8], B.-J. Wang[3], C.-W. Jun[2]

[1] Graduate School of Science, Tohoku University, Sendai, Japan

[2] Institute for Space-Earth Environmental Research, Nagoya University, Nagoya, Japan

[3] Academia Sinica, Institute of Astronomy and Astrophysics, Taipei, Taiwan

[4] Graduate School of Natural Science and Technology, Kanazawa University, Kanazawa, Japan

[5] Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency, Sagamihara, Japan

[6] Research Institute for Sustainable Humanosphere, Kyoto University, Uji, Japan

[7] Department of Space Systems Engineering, Faculty of Engineering, Kyushu Institute of Technology, Kitakyushu, Japan

[8] Institute of Space and Plasma Sciences, National Cheng Kung University, Tainan, Taiwan

Additional Supporting Information (Files uploaded separately)

Caption for Dataset S1

Introduction

Datasets S1 is temporarily uploaded for the purpose of review. The data are pitch-angle distributions (PAD) of the Low Energy Particle instrument – Electron analyzer (LEPe) on the Arase satellite. The netcdf file format is used to store LEPe PAD data.

Data Set S1. LEPe PAD data in the netcdf format. The coordinates named as "time", "energy", "pa", "pa_binedges" are time of the beginning of each spin, electron energy in eV, center of pitch angles of each pitcth angle bin, and boundaries of pitch angle bins, respectively. The data variable named as "eflux" is electron differential energy flux in eV/s/cm^2/sr/eV and is used in Figure 1c-e and Figure 2a-b.