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Electron pitch-angle distribution in the Earth magnetail

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Presentation is devoted to observations and simple analytical estimates of electron anisotropic energization in the Earth magnetotail. We utilize 9 years of Cluster observations in the Earth's magnetotail to investigate electron pitch angle/energy distributions. We mainly concentrate on the population of anisotropic electrons with a dominance of the parallel phase space density and energies larger than 100 eV. We investigate the dependence of the energy distribution of the anisotropic electron population on the system parameters for the midnight-tail where the main statistics is collected. The increase of the Bz GSM component of the magnetic field corresponds to an increasing energy range filled by anisotropic electrons. The strong electron temperature anisotropy corresponds to large magnitudes of By GSM magnetic field. The contribution of electron curvature currents can reach almost 100% of the total cross tail current.