

Scientific Products from the Instrument to Measure Thermal Energy Distribution of Electron (TED) onboard AKEBONO

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An instrument to measure thermal electron energy distribution function is onboard AKEBONO satellite, which was launched in 1989. The satellite is still in orbit and a large amount of TED data have been accumulated. TED keeps measuring energy distribution of thermal electrons (0.1-1 eV) up to 8000 km in the low and midlatitude region. The data, which have been acquired since 1989 were analyzed and systematic study has been done first time in the world. The works, which have been done so far are; 1. To draw the thermal structure of the inner plasmasphere regarding local time, height, latitude and solar activities. 2. To understand the physics of these profiles with collaboration with computer simulation. 3. To study more detail profile on the thermal conductivity. 4. To construct the model of T_e . All these works have been already published in refereed journals. We summarize here our TED studies, as the most out puts have never been open in Japan.