

## あけぼの衛星太陽電池劣化から推測する放射線帯プロトンの2次元分布

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## A two-dimensional modeling of spatial distribution of trapped protons from solar cell degradation of the Akebono satellite

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We have been studying on L-shell distribution of energetic ( $>10$  MeV) protons from solar cell degradation of Akebono satellite orbiting in the inner magnetosphere. We obtained more compact distribution of the trapped protons than given by the AP8 and AP9 models, which we already reported in the previous SGEPS meeting. In our previous study, we assumed that proton flux varies along the field line in the same rate as in the AP8 model. If the flux is more confined around the equator, the L-shell distribution may be possibly widen and the difference from the previous models can be smaller. Thus, we introduce some different variation along the field line and seek the best-fit to observed degradation of solar cells. In our preliminary calculation, we have obtained a better agreement with the actual degradation by employing a model with more confined distributions near the equator only for larger L values. We will further discuss our result by comparing with pitch angle measurement on the Van Allen probe.