

High Energy Electron and Proton Observations in  
the South Atlantic Geomagnetic Anomaly

Y. Nakamura<sup>1</sup>, H. Takahashi<sup>2</sup>, K. Nagata<sup>3</sup>, T. Kohno<sup>4</sup>, and H. Murakami<sup>5</sup>

1. Institute of Space and Astronautical Science, Komaba, Meguro-ku, Tokyo 153. 2. Instituto de Pesquisas Espaciais, São José dos Campos, SP 12201. 3. Faculty of Engineering, Tamagawa University, Machida, Tokyo 194. 4. Institute of Physical and Chemical Research, Hirose, Wako, Saitama 351.

Collaboration between Japan and Brazil to observe high energy electrons and protons by a scientific satellite is proposed. The main objectives are: (1) Observations of electrons in wide intensity range and measurement of energy spectra of protons. (2) Observations of pitch angle distributions of electrons and protons to study the trapped and precipitating particles. (3) Electrons and protons of the edge regions of the South Atlantic Geomagnetic Anomaly are important since the geomagnetic field lines of the edge regions pass the interacting regions of particles and the atmosphere. (4) Study of correlations between airglows, plasma waves, plasmas and particles.

Specifications of the spectrometers are:

1. Spectrometers Silicon E x E telescopes 2 units
2. Energy Ranges Electron 0.05 - 1.0MeV, Proton 0.4 - 15MeV
3. Intensity Range  $10^0 - 10^7$  particles/cm<sup>2</sup>·str·sec
4. Energy Channels Electron 8 channels, Proton 8 channels
5. Geometrical Factor 0.1 cm<sup>2</sup>·str and 0.001cm<sup>2</sup>·str
6. Look Direction 0° and 90° to the spin axis
7. Weight 2 kg
8. Power 2.5 W