

## Development of Superconducting Tunnel Junction detection system for a rocket observation

# Yoshiyuki Takizawa[1], Masato Nakamura[2], Ichiro Yoshikawa[2], Atsushi Yamazaki[3], Wataru Miyake[3], Chiko Otani[1], Hiromi Sato[1], Shigetomo Shiki[1], Hirohiko M. Shimizu[1]

[1] RIKEN, [2] ISAS, [3] CRL

<http://stj.riken.go.jp>

In astronomy and solar-terrestrial physics, interesting results are obtained by the observation coupled with visible, UV and X-ray. It is clear that the comprehensive wide energy range observation is very important.

Superconducting tunnel junction (STJ) has the high energy resolution and the high photon counting rate. The spectrum capability of STJ is the wide energy range, from visible to X-ray. STJ is good advantageous to observation of the faint objects with which the photon number is limited like astronomical objects.

We evaluated the performance of the detector for EUV photons using the Synchrotron Facility UVSOR in Okazaki, Japan. We present details of the junction design and our experimental results. And furthermore, we discuss the STJ measurement system for rocket observation.