

## high-level data processing of science satellite data

Report Number: R21EDU10503

Subject Category: Space and Astronautical Science

URL: <https://www.jss.jaxa.jp/en/ar/e2021/18403/>

### ● **Responsible Representative**

Ken Ebisawa, Professor, Institute of Space and Astronautical Science

### ● **Contact Information**

Ken Ebisawa (ISAS)([ebisawa.ken@jaxa.jp](mailto:ebisawa.ken@jaxa.jp))

### ● **Members**

Ken Ebisawa, Miki Kurihara, Satoshi Nakahira

### ● **Abstract**

Carrying out high-level data processing of a large amount of science satellite data, and promote research in high energy astrophysics

### ● **Reasons and benefits of using JAXA Supercomputer System**

In high-energy astronomy research using large amounts of scientific satellite data, the computational time required for routine data processing is often the rate-limiting factor in research. If the computation time can be reduced by using a supercomputer, more time can be spent on scientific considerations and research progress can be made.

### ● **Achievements of the Year**

Wide-field image synthesis (deconvolution) was performed for each pointing on about 10 years of data acquired by the BAT instrument on NASA's Swift satellite, and computed light-curves for about 100 objects.

### ● **Publications**

N/A

● Usage of JSS

● Computational Information

Process Parallelization Methods	N/A
Thread Parallelization Methods	N/A
Number of Processes	1
Elapsed Time per Case	60 Second(s)

● JSS3 Resources Used

Fraction of Usage in Total Resources\*1(%): 0.00

Details

Computational Resources		
System Name	CPU Resources Used (core x hours)	Fraction of Usage*2(%)
TOKI-SORA	0.00	0.00
TOKI-ST	27,227.00	0.03
TOKI-GP	0.50	0.00
TOKI-XM	0.00	0.00
TOKI-LM	0.00	0.00
TOKI-TST	0.00	0.00
TOKI-TGP	0.00	0.00
TOKI-TLM	0.00	0.00

File System Resources		
File System Name	Storage Assigned (GiB)	Fraction of Usage*2(%)
/home	26.67	0.03
/data and /data2	17,433.33	0.19
/ssd	816.00	0.21

Archiver Resources		
Archiver Name	Storage Used (TiB)	Fraction of Usage*2(%)
J-SPACE	0.00	0.00

\*1: Fraction of Usage in Total Resources: Weighted average of three resource types (Computing, File System, and Archiver).

\*2: Fraction of Usage : Percentage of usage relative to each resource used in one year.

● **ISV Software Licenses Used**

ISV Software Licenses Resources		
	ISV Software Licenses Used (Hours)	Fraction of Usage*2(%)
ISV Software Licenses (Total)	0.00	0.00

\*2: Fraction of Usage : Percentage of usage relative to each resource used in one year.