ALOS / PALSAR data processing for the entire observation period

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● **Abstract**

Processing the synthetic aperture radar (PALSAR / PALSAR-2) data acquired by the terrestrial observation technology satellites `` DAICHI '' and `` DAICHI-2 '' to generate user-friendly image

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

JAXA is developing data disclosure to expand the use and spread of earth observation satellite data.

As part of this, the previous system JSS2 processes the data for the entire ALOS / PALSAR observation period and archives a large amount of data in J-SPACE.

We used the JSS system to quickly provide this data to external users. (Provided via medium (NAS) or transmission server.)

● **Achievements of the Year**

ALOS PRISM(L1B1/L1B2), AVNIR-2(L1B1/L1B2), PALSAR(L1.1/L2.2) are processed in parallel on JSS3.

Use TOKI-RURI, TOKI-FS, J-SPACE, TOKI-LI.

This fiscal year, we implemented PRISM and AVNIR-2 processing.

Processing 100 PRISMs in parallel:

PRISM L1B1 processing time about 2.7~3.9 years

PRISM L1B2 processing time about 1.2~1.9 years

Total about 3.9~5.8 years

Processing AVNIR-2 with 40-50 parallels:

L1B1 processing time about 23.5 days to 26.8 days

L1B2 processing time about 38.6 days to 53.4 days

Total about 62.1 days to 80.2 days

*AVNIR-2 has a short processing time, and the test processing is finished before 100 parallels are reached.

Therefore, the parallel number is not "100".

● **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	16 Minute(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	5,774.71	0.01
TOKI-GP	0.00	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	288.33	0.26
/data and /data2	107,116.49	0.83
/ssd	1,453.33	0.20

Archiver Resources		
Archiver Name	Storage Used (TiB)	Fraction of Usage[2] (%)
J-SPACE	2,178.63	9.66

[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.