Utilization of JSS3 for AMSR-E higher level data processing

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● Abstract

AMSR-E[1], AMSR2[2] estimates various geophysical parameters by measuring radio waves in the weak microwave band radiated from the Earth's surface and the atmosphere with multiple frequencies and multiple polarizations.

Geophysical parameters include water vapor, cloud liquid water, precipitation, sea surface temperature, sea surface wind speed, sea ice concentration, snow water equivalent, and soil moisture.

The long-term geophysical record will play an important role in climate change monitoring and will provide valuable information for understanding the Earth's climate system, including water and energy circulation.

We will reprocess and provide AMSR-E high level product and AMSR2 high level product with the same algorithm (including improved algorithms), and provide a long-term data set useful for users.

[1] : Advanced Microwave Scanning Radiometer for EOS equipped in Earth Observation Satellite 'Aqua'

[2] : The Advanced Microwave Scanning Radiometer 2 equipped in Global Change Observation Mission - Water "SHIZUKU" (GCOM-W)

● Reasons and benefits of using JAXA Supercomputer System

By using JSS3 with a large scalability processing environment and executing processing of enormous scenes in parallel, it becomes possible to provide products to users more quickly.

● Achievements of the Year

This year, reprocessing was conducted for L3*4 products that had not been provided for sea surface temperature (SST).(AMSR2 2020/10/ - 2021/2)

AMSR2 reprocessed products has been released from the data provision system (G-Portal)

*4 : Product mapped with time and spatial average values of geophysical quantities. The product is stored the daily average and monthly average global distribution of the brightness temperature and each physical quantity.

● 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	30 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	2,895.20	0.00
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	227.56	0.23
/data and /data2	64,632.67	0.69
/ssd	1,177.33	0.30

Archiver Resources		
Archiver Name	Storage Used (TiB)	Fraction of Usage[2](%)
J-SPACE	57.83	0.39

[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.