Research on computational analysis methods for ice accretion

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● **Abstract**

research on anlysis methods for ice accretion

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

In general, ice accretes through multi-physical process and its spatio-temporal scales are broad. Thus a use of JSS is nsessary.

● **Achievements of the Year**

a single-shot-based ice-accretion code, whose aerodynamics part is based on well-developed in-house code, FASTAR, was developed.

● **Publications**

N/A

● **Usage of JSS**

● **Computational Information**

Process Parallelization Methods	MPI
Thread Parallelization Methods	OpenMP
Number of Processes	N/A
Elapsed Time per Case	10 Hour(s)

● **JSS3 Resources Used**

Fraction of Usage in Total Resources[*1](%): 0.02

Details

Computational Resources		
System Name	CPU Resources Used (core x hours)	Fraction of Usage[*2](%)
TOKI-SORA	470,159.95	0.02
TOKI-ST	28,048.07	0.03
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	9.64	0.01
/data and /data2	7,572.57	0.06
/ssd	39.29	0.01

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)	54.63	0.04

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