bearing coolant flow analysis

● **Responsible Representative**

Hiromitsu Kakudo

● **Contact Information**

Hiromitsu Kakudo(kakudo.hiromitsu@jaxa.jp)

● **Members**

Hiromitsu Kakudo

● **Abstract**

The numerical simulation of bearing coolant flow is conducted to build the modeling of bearing heat generation.

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

In this reseach, the supercomputer system is not utilized.

● **Achievements of the Year**

(In this reseach, the supercomputer system is not utilized.)

The modeling of rotating bearing elements which is complicated because of maltiple rotating axises and rotational speeds was conducted. Using the model, the bearing heat generation induced by the fluid viscous heating was calculated.

● **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	12 Hour(s)

- **JSS3 Resources Used**

Fraction of Usage in Total Resources[1](%): 0.06

Details

Computational Resources		
System Name	CPU Resources Used (core x hours)	Fraction of Usage[2](%)
TOKI-SORA	0.00	0.00
TOKI-ST	0.00	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	10.00	0.01
/data and /data2	100.00	0.00
/ssd	100.00	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)	11,025.39	7.67

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

● **ISV Software Licenses Used**