

## Numerical analysis of deicing and anti-icing in jet engine

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Subject Category: Aeronautical Technology

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### ● Responsible Representative

Atsushi Kanda, Aviation Technology Directorate, Aviation Safety Innovation Hub

### ● Contact Information

Junichi Kazawa, Aviation Technology Directorate, Aviation Safety Innovation Hub  
(kazawa.junichi@jaxa.jp)

### ● Members

Junichi Kazawa, Masaya Suzuki, Hirotaka Yoshikura

### ● Abstract

Technology development is conducted to solve the icing problem in jet engines.

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

Used for visualization of numerical results.

### ● Achievements of the Year

The icing of the designed fan by JAXA was examined in advance by numerical analysis.

### ● 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 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	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	18.12	0.02
/data and /data2	10,727.01	0.11
/ssd	357.73	0.09

Archiver Resources		
Archiver Name	Storage Used (TiB)	Fraction of Usage*2(%)
J-SPACE	0.24	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 <sup>*2</sup> (%)
ISV Software Licenses (Total)	478.10	0.33

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