

Detection of origination for 3D unsteady aerodynamic phenomena

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● **Abstract**

Unsteady CFD analysis will be performed in order to detect the starting point of buffet phenomena utilizing data mining techniques.

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

A large-scale parallel computer such as JSS2 is indispensable for large-scale analysis to acquire unsteady numerical simulations.

● **Achievements of the Year**

Zonal DES (ZDES) analysis around OAT15A wing have been additionally performed for preparing a journal paper.

● **Publications**

N/A

● **Usage of JSS2**

● **Computational Information**

Process Parallelization Methods	MPI
Thread Parallelization Methods	N/A
Number of Processes	512
Elapsed Time per Case	120 Hour(s)

- **Resources Used**

Fraction of Usage in Total Resources*1(%): 0.01

Details

Computational Resources		
System Name	Amount of Core Time (core x hours)	Fraction of Usage*2(%)
SORA-MA	57,184.28	0.01
SORA-PP	2,950.60	0.02
SORA-LM	0.00	0.00
SORA-TPP	0.00	0.00

File System Resources		
File System Name	Storage Assigned (GiB)	Fraction of Usage*2(%)
/home	205.71	0.17
/data	4,898.30	0.08
/ltmp	1,946.69	0.17

Archiver Resources		
Archiver Name	Storage Used (TiB)	Fraction of Usage*2(%)
J-SPACE	0.07	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.