

Rotor/Wing Interaction Simulations

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● Abstract

Aerodynamic interaction between a rotor and a fixed wing on a compound helicopter is numerically simulated to clarify the increase of the aerodynamic drag caused by the interaction during high speed flight.

● Reasons for using of JSS2

There is a large number of test cases and an abundance of computing sources are required.

● Achievements of the Year

As the first step, the performance of the isolated rotor and the aerodynamic characteristics of the wing models have been clarified.

● Publications

N/A

● Usage of JSS2

● Computational Information

Parallelization Methods	N/A
Thread Parallelization Methods	OpenMP
Number of Processes	1
Elapsed Time per Case	200.00 hours

● Resources Used

Fraction of Usage in Total Resources*1 (%): 0.05

Details

Computing Resources		
System Name	Amount of Core Time (core x hours)	Fraction of Usage*2 (%)
SORA-MA	150,265.58	0.02
SORA-PP	41,331.21	0.52
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	617.11	0.43
/data	16,682.95	0.31
/ltmp	2,766.93	0.21

Archiver Resources		
Archiver System 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