

Fundamental Studies of Methane RCS

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● Responsible Representative

Daiki Terakado, Researcher, Research and Development Directorate, Research Unit IV

● Contact Information

Daiki Terakado, Research and Development Directorate, Research Unit IV (terakado.daiki@jaxa.jp)

● Members

Daiki Terakado, Kazuhiro Higashi, Koichi Okita

● Abstract

The present RCS of hydrazine used for controlling rockets has a weak point on its toxicity. The present project focuses on the non-toxic property of methane and develops safer RCS system for the future rockets.

● Reasons for using JSS2

The present computation needs more than 10 species reactive computation, so that the computational cost is very large. In addition, a massive parametric study will be conducted to find the optimal way of injection. Thus, using supercomputer is necessary.

● Achievements of the Year

N/A

● Publications

N/A

● Usage of JSS2

● Computational Information

Process Parallelization Methods	N/A
Thread Parallelization Methods	N/A
Number of Processes	1
Elapsed Time per Case	24 Hour (s)

- **Resources Used**

Fraction of Usage in Total Resources^{*1} (%): 0.00

Details

Computational Resources		
System Name	Amount of Core Time (core x hours)	Fraction of Usage ^{*2} (%)
SORA-MA	0.00	0.00
SORA-PP	1,288.05	0.01
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	163.71	0.17
/data	3,302.89	0.06
/tmp	1,627.60	0.14

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.