

## ALOS / PALSAR data processing for the entire observation period

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### ● Abstract

Processing the synthetic aperture radar (PALSAR / PALSAR-2) data acquired by the terrestrial observation technology satellites `` DAICHI `` and `` DAICHI-2 `` to generate user-friendly image products (Analysis Ready Data), Make an offer.

Ref. URL: <https://global.jaxa.jp/projects/sat/alos/>

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

JAXA is developing data disclosure to expand the use of earth observation satellite data.

As part of this, JAXA needs to process a large amount of data for the entire observation period of ALOS / PALSAR and ALOS-2 / PALSAR-2, and quickly release user-friendly image data. To achieve this, JSS2 processing was optimal, so we used it.(Up to 350 parallel processing)

### ● Achievements of the Year

This year's processing results.

L2.2 processing of PALSAR in Japan

FBD: 37,711 scenes

FBS: 49,023 scenes

PLR: 7,364 scenes

WB1: 1,662 scenes

WB2: 5 scenes

Processing of PALSAR outside Japan

FBD (L1.1: 568,670, L2.2: 638,759 scenes)

FBS (L1.1: 684,362, L2.2: 389,318 scenes)

PLR (L1.1: 218,529, L2.2: 3,606 scenes)

DSN (L1.1: 4,135, L2.2: 1,085 scenes)

WB1 (L2.2: 116,055 scenes)

WB2 (L2.2: 762 scenes)



Fig. 1: PALSAR-2/SCANSAR L2.2@Netherlands(2010/8/12 observation, scene ID: ALPSRS242342550)

● **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           | 10 Minute(s) |

- **Resources Used(JSS2)**

Fraction of Usage in Total Resources\*1(%): 1.55

Details

| Computational Resources |                                       |                        |
|-------------------------|---------------------------------------|------------------------|
| System Name             | Amount of Core Time<br>(core x hours) | Fraction of Usage*2(%) |
| SORA-MA                 | 0.00                                  | 0.00                   |
| SORA-PP                 | 2,604,450.21                          | 20.41                  |
| 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                 | 235.24                 | 0.22                   |
| /data                 | 105,422.39             | 2.04                   |
| /ltmp                 | 29,036.47              | 2.47                   |

| Archiver Resources |                    |                        |
|--------------------|--------------------|------------------------|
| Archiver Name      | Storage Used (TiB) | Fraction of Usage*2(%) |
| J-SPACE            | 73.79              | 2.44                   |

\*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.

- **Resources Used(JSS3)**

Fraction of Usage in Total Resources\*1(%): 0.08

Details

| Computational Resources |                                       |                        |
|-------------------------|---------------------------------------|------------------------|
| System Name             | Amount of Core Time<br>(core x hours) | Fraction of Usage*2(%) |
| TOKI-SORA               | 0.00                                  | 0.00                   |
| TOKI-RURI               | 2.00                                  | 0.00                   |
| TOKI-TRURI              | 0.00                                  | 0.00                   |

| File System Resources |                        |                        |
|-----------------------|------------------------|------------------------|
| File System Name      | Storage Assigned (GiB) | Fraction of Usage*2(%) |
| /home                 | 272.59                 | 0.19                   |
| /data                 | 103,619.77             | 1.74                   |
| /ssd                  | 1,128.52               | 0.59                   |

| Archiver Resources |                    |                        |
|--------------------|--------------------|------------------------|
| Archiver Name      | Storage Used (TiB) | Fraction of Usage*2(%) |
| J-SPACE            | 73.79              | 2.44                   |

\*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.