

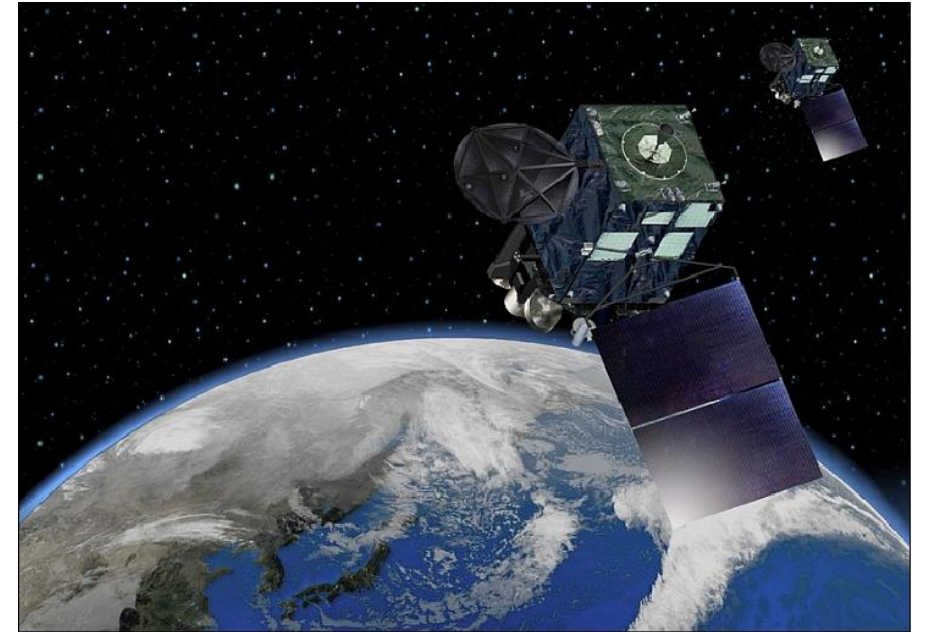
Chiba Campaign 2020

Daily Report 12.02

XUE ZIXUAN

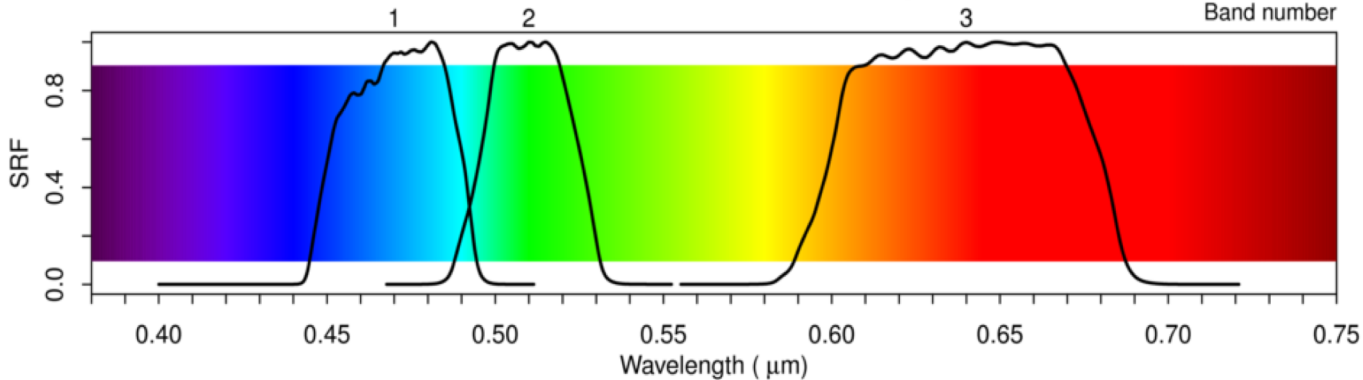
Outline

- **Himawari-8 visible bands**
- **AOT distribution over Japan Area**
- **AOT distribution over Chiba Area**



Himawari-8 Satellite Observation

SRFs of Himawari-8/AHI Visible Bands (September 2013)



RGB VALUES FOR VISIBLE WAVELENGTHS by Dan Bruton (<http://www.physics.sfasu.edu/astro/color/spectra.html>)

Himawari-8 Spectral Response Functions

| Band | Wavelength (nm) | Resolution (km) |
|------|-----------------|-----------------|
| 1 | 470 | 1.0 |
| 2 | 510 | 1.0 |
| 3 | 640 | 0.5 |

Himawari-8/9: Specification of Observation

Channels of the Advanced Himawari Imager (AHI)

| Channel | Central Wavelength [μm] | Spatial Resolution |
|---------|-------------------------|--------------------|
| 1 | 0.43 – 0.48 | 1 km |
| 2 | 0.50 – 0.52 | 1 km |
| 3 | 0.63 – 0.66 | 0.5 km |
| 4 | 0.85 – 0.87 | 1 km |
| 5 | 1.60 – 1.62 | 2 km |
| 6 | 2.25 – 2.27 | 2 km |
| 7 | 3.74 – 3.96 | 2 km |
| 8 | 6.06 – 6.43 | 2 km |
| 9 | 6.89 – 7.01 | 2 km |
| 10 | 7.26 – 7.43 | 2 km |
| 11 | 8.44 – 8.76 | 2 km |
| 12 | 9.54 – 9.72 | 2 km |
| 13 | 10.3 – 10.6 | 2 km |
| 14 | 11.1 – 11.3 | 2 km |
| 15 | 12.2 – 12.5 | 2 km |
| 16 | 13.2 – 13.4 | 2 km |

RGB
Composite
True Color Image

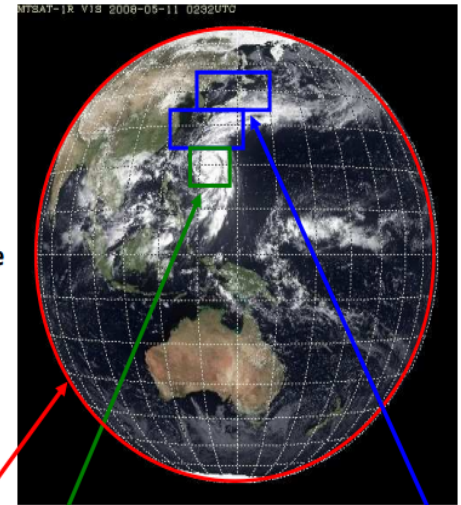
Water Vapor

SO₂

O₃

Atmospheric Windows

CO₂



Full disk
Interval: **10 minutes** (6 times per hour)

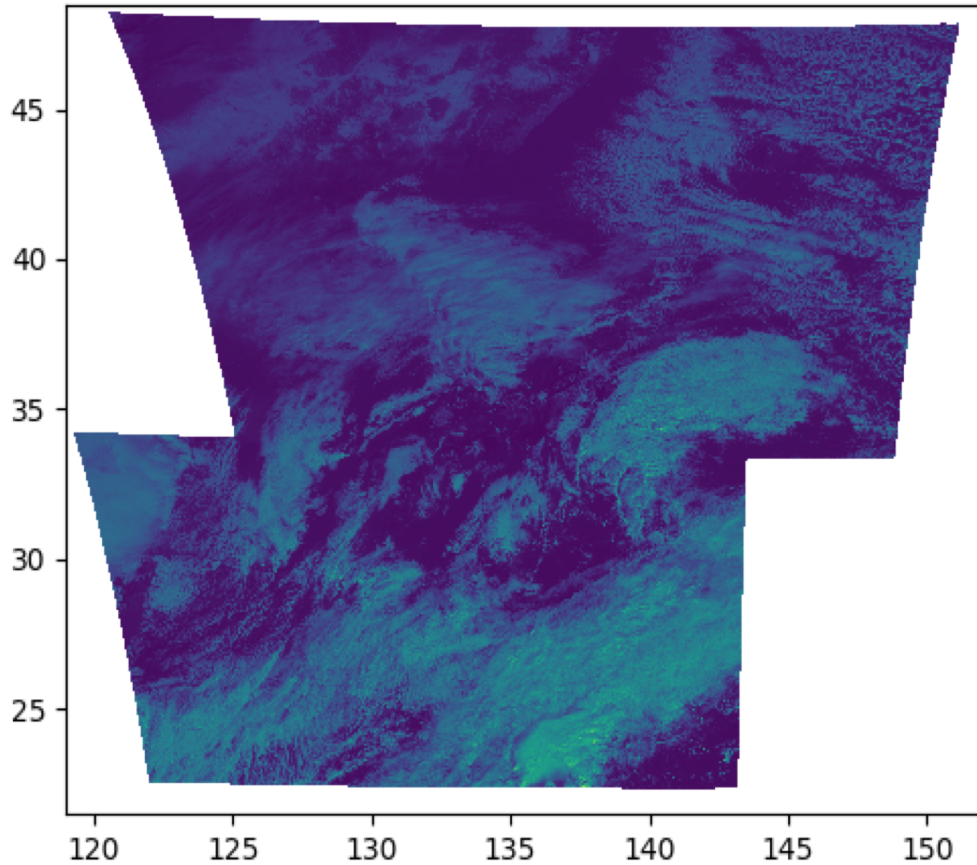
Japan area
Interval: **2.5 minutes** (4 times in 10 minutes)
Dimension: EW x NS: 2000 x 1000 km x 2

Target area
Interval: **2.5 minutes** (4 times in 10 minutes)
Dimension: EW x NS: 1000 x 1000 km

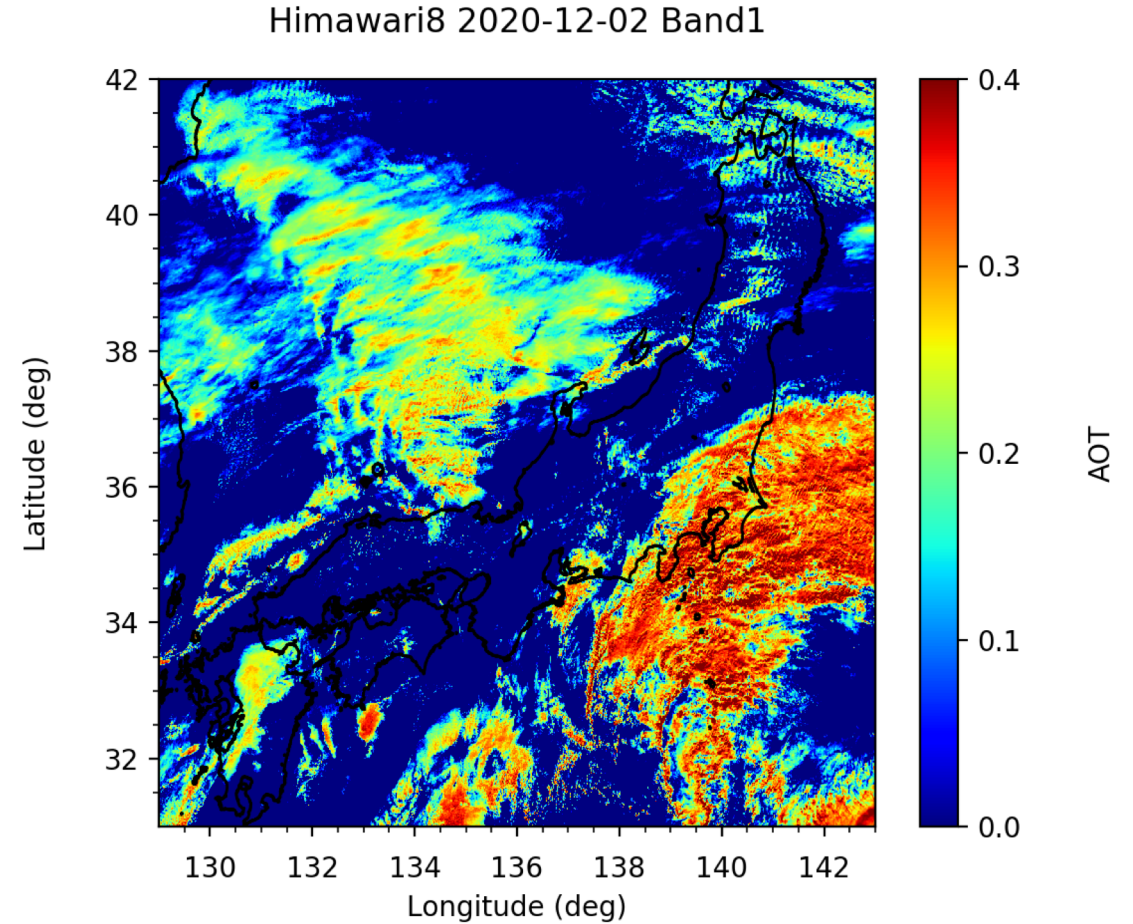
Number of Channels: 5 → 16

Interval: 30/60 min. → 10min.

Himawari-8 (12/02) – Japan Area



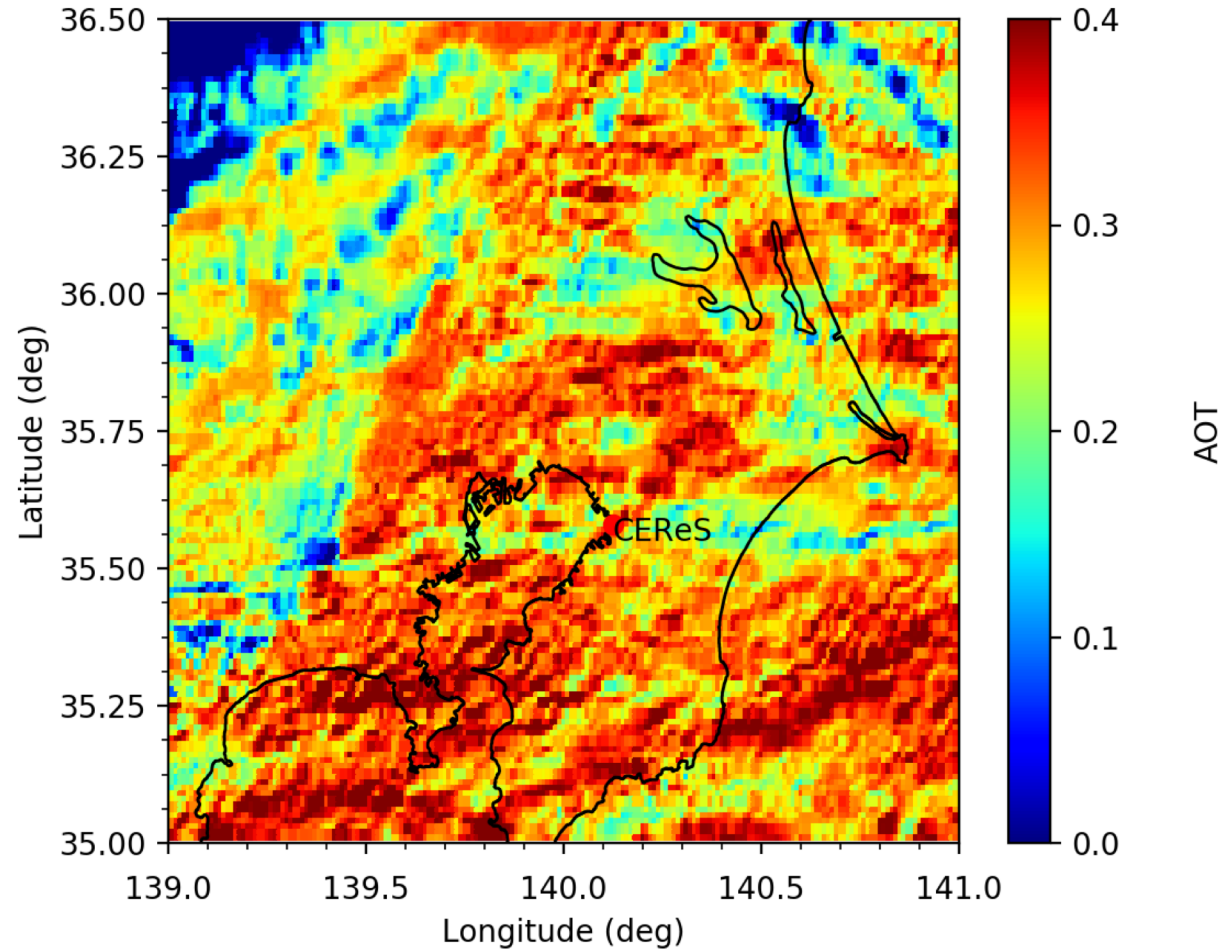
Coverage of the Japan Area



AOT Distribution over Japan Area

Himawari-8 (12/02) – Chiba Area

Himawari8 2020-12-02 Band1



**AOT Distribution over Chiba Area
(Cloudy & Rainy Day)**