

Introduction

to the practical training on the utilization of
Himawari-8 imagery

16 Bands of AHI (Advanced Himawari Imager)

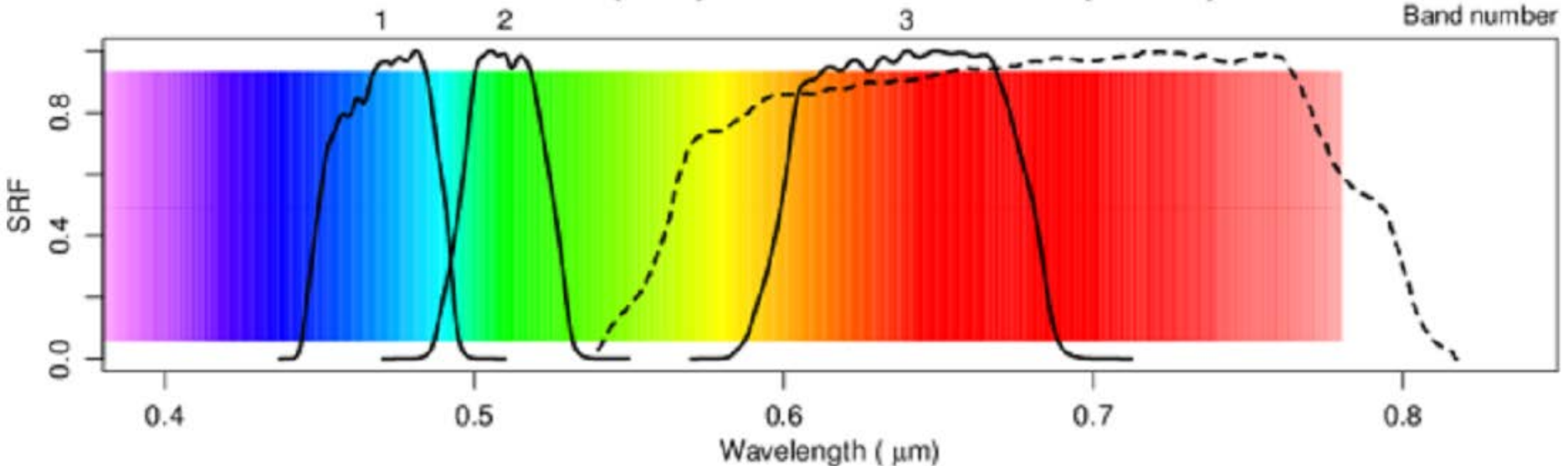
MTSAT Bands		Band	Central Wavelength (μm)	Spatial Resolution at SSP (km)	Sample use
VIS	1	V1	0.47	1	Vegetation, Aerosol, B
	2	V2	0.51		Vegetation, Aerosol, G
	3	VS	0.64		0.5
IR4	4	N1	0.86	1	Vegetation, Aerosol
	5	N2	1.6	2	Cloud Phase/particle size, snow
	6	N3	2.3		Cloud Particle size
7	I4	3.9	Low level cloud, Fog, Fire		
IR3 (WV)	8	WV	6.2	2	Upper middle level water vapor
	9	W2	6.9		middle level water vapor
	10	W3	7.3		middle level water vapor
IR1	11	MI	8.6	2	Cloud phase, SO ₂
	12	O3	9.6		Ozone
	13	IR	10.4		Cloud imagery, Cloud top
IR2	14	L2	11.2	2	Cloud imagery, SST
	15	I2	12.4		Cloud imagery, SST
	16	CO	13.3		Cloud top height

VIS Bands

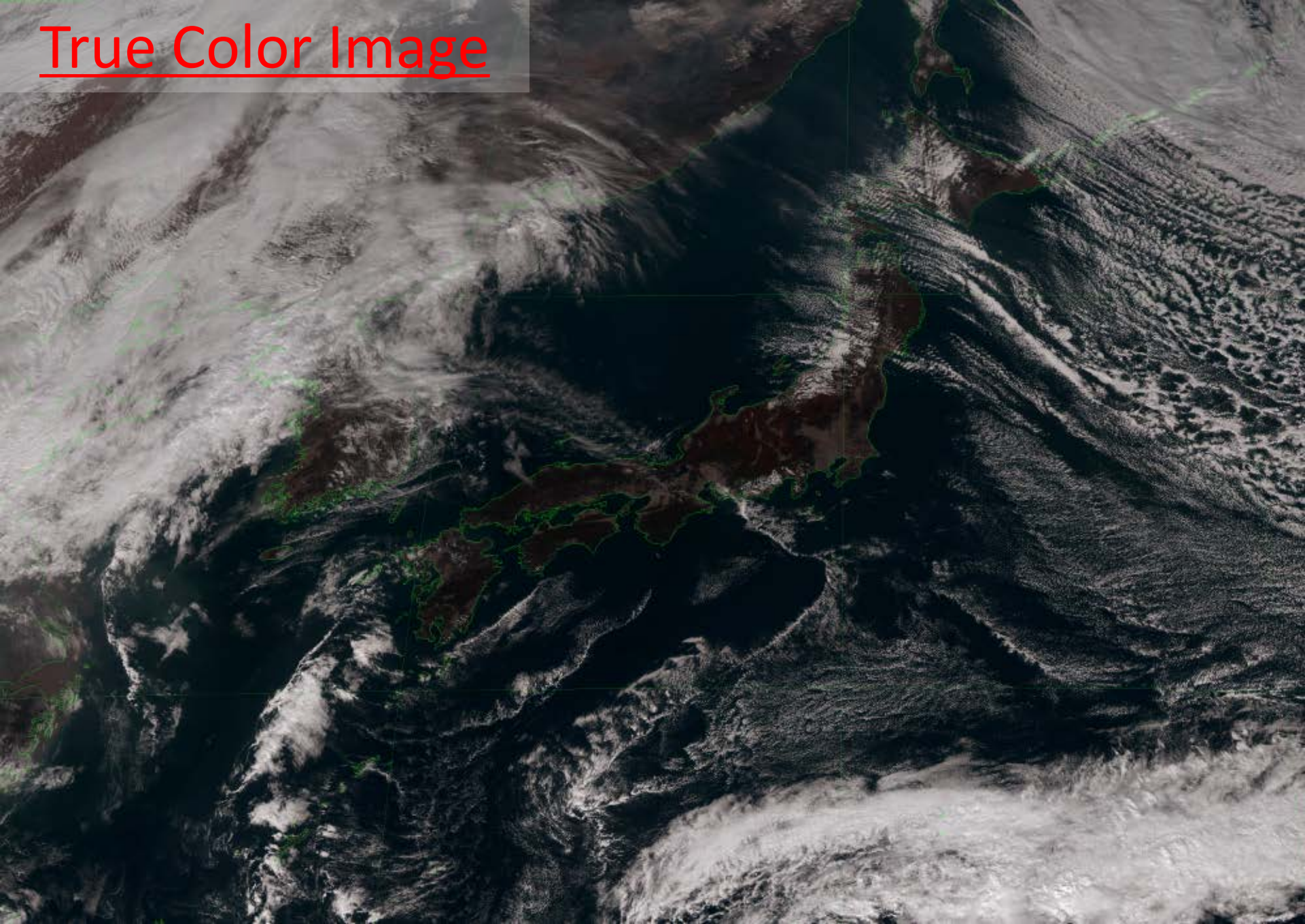
<u>Band 1</u>	<u>0.47micron</u>	<u>Blue</u>	<u>1 km</u>
<u>Band 2</u>	<u>0.51micron</u>	<u>Green</u>	<u>1 km</u>
<u>Band 3</u>	<u>0.64micron</u>	<u>Red</u>	<u>0.5km</u>

For True Color Image.

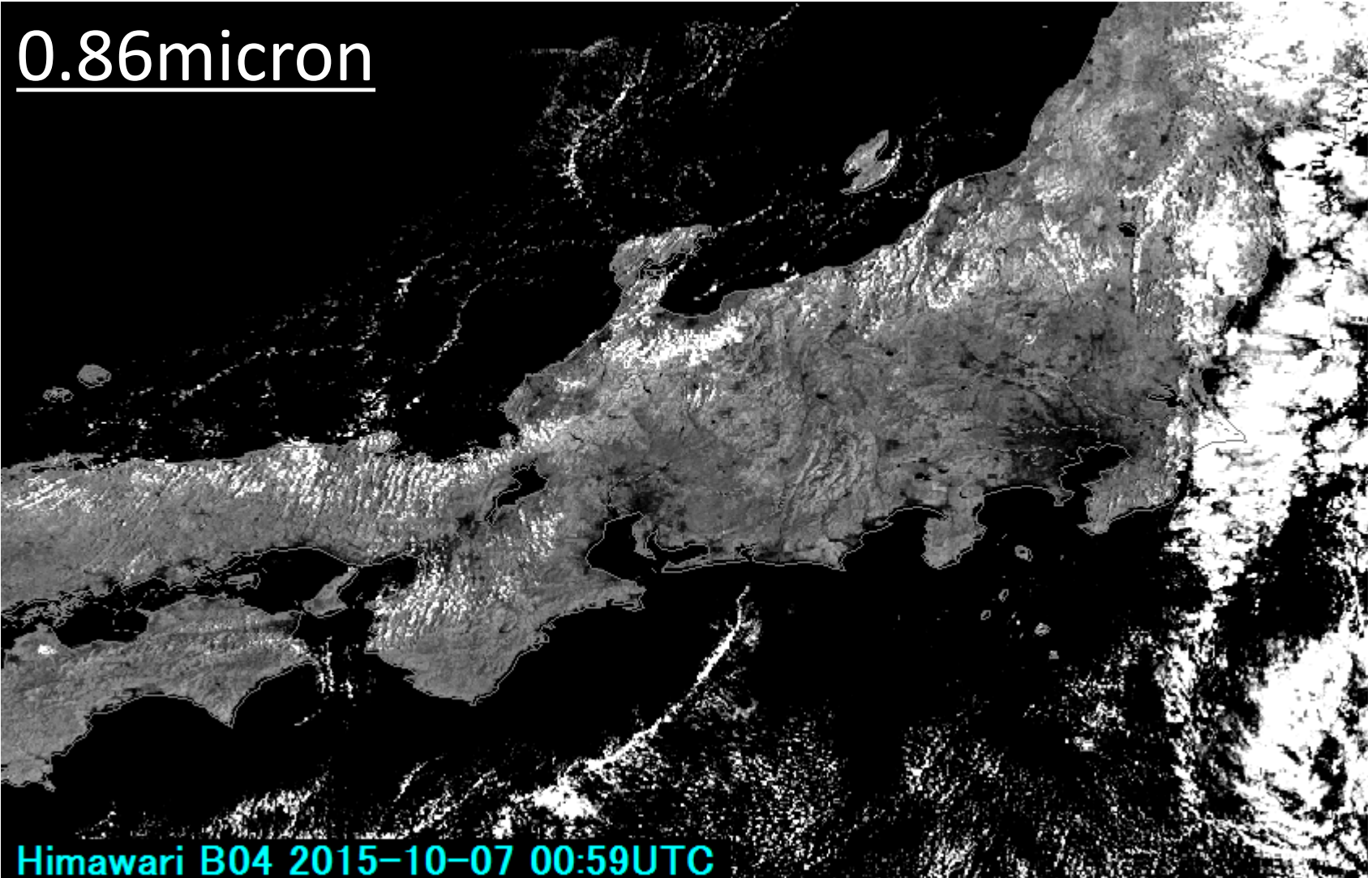
SRFs of Himawari-8/AHI (solid) and MTSAT-2/IMAGER (dashed) Visible Bands



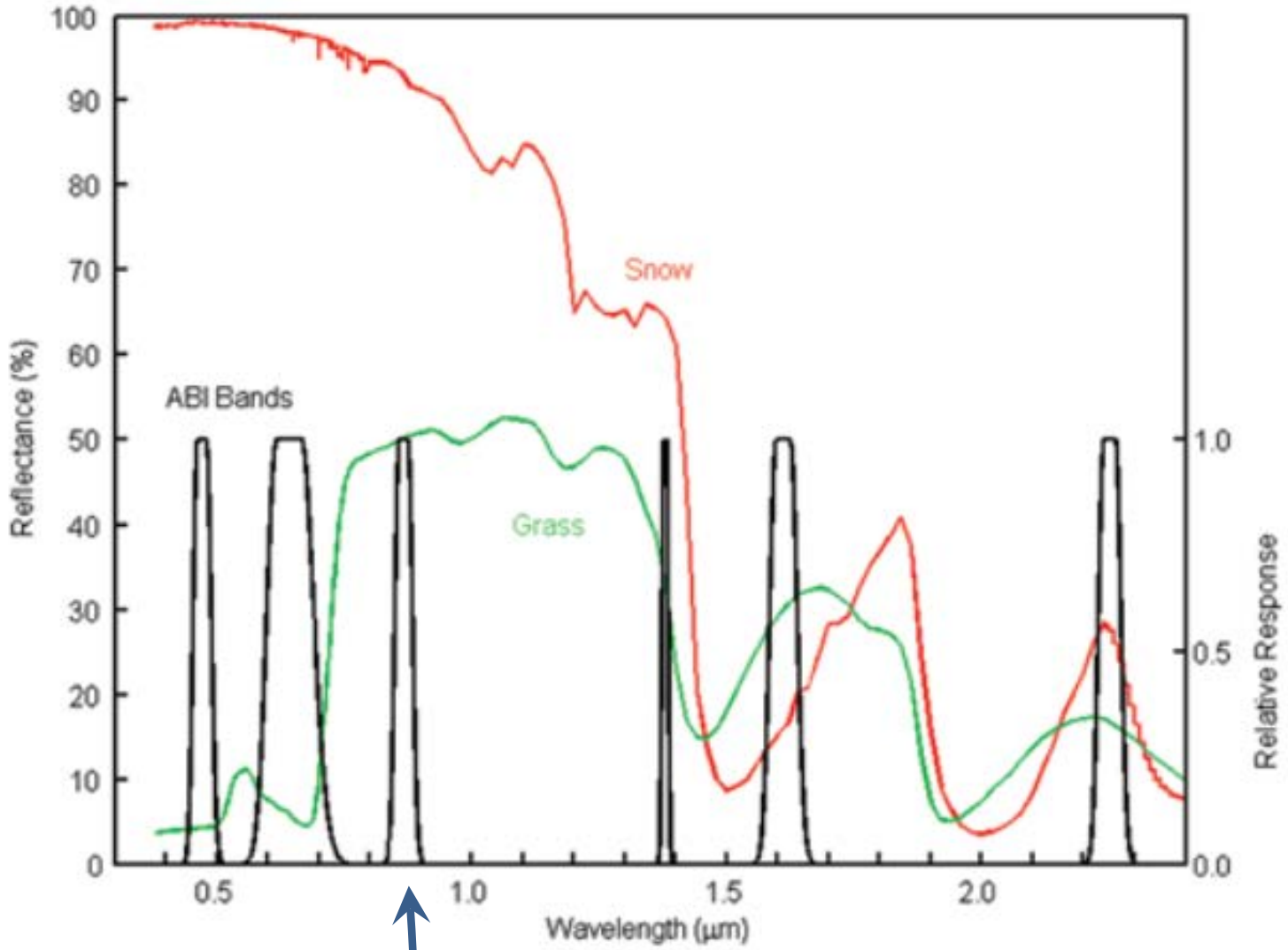
True Color Image



0.86micron band (B04)



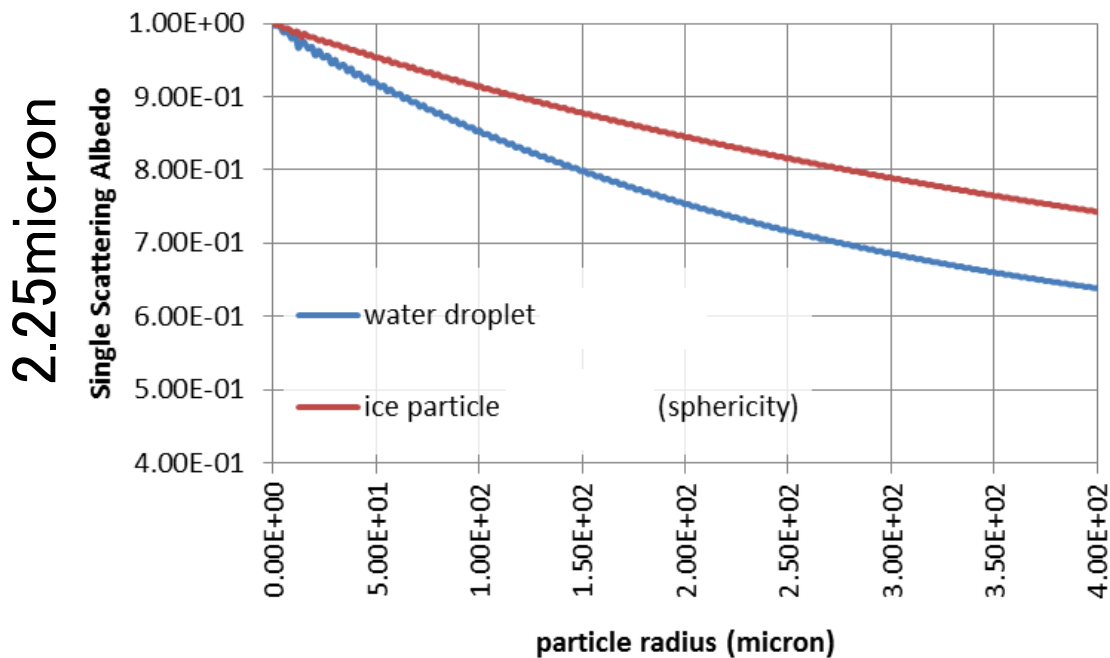
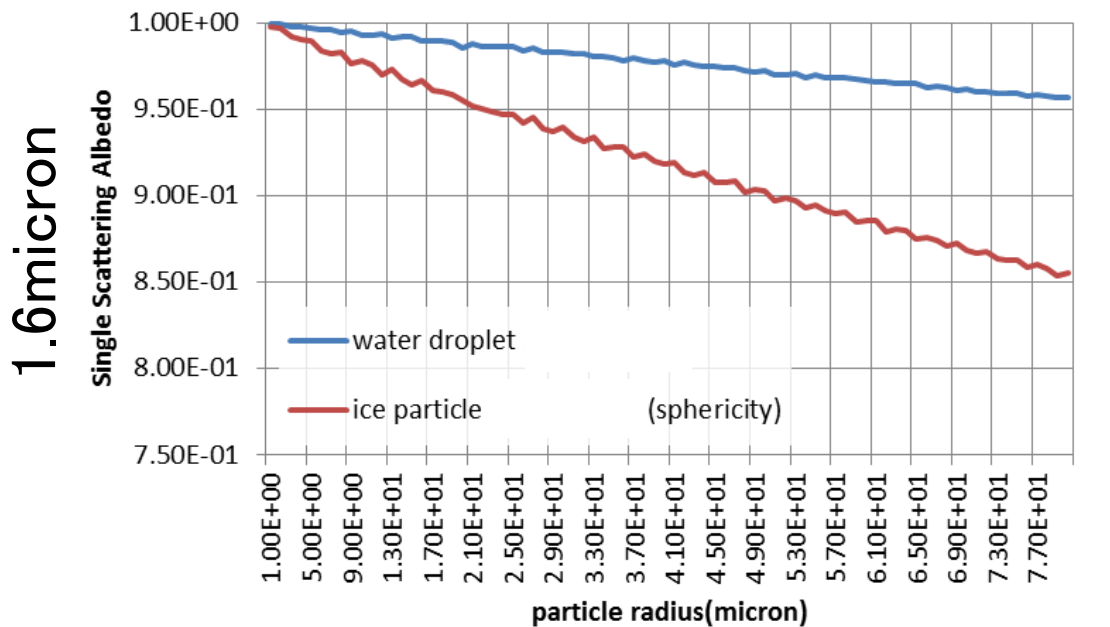
0.86micron band (B04)



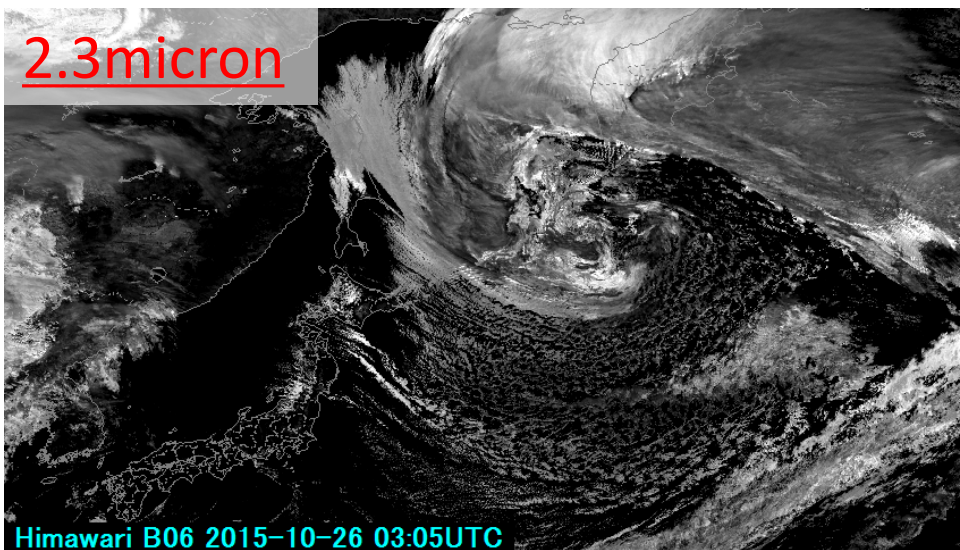
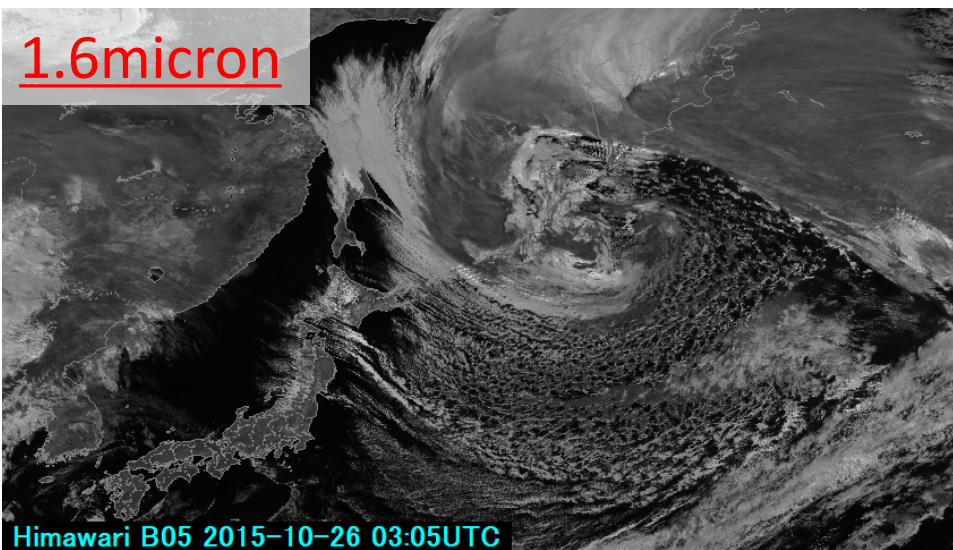
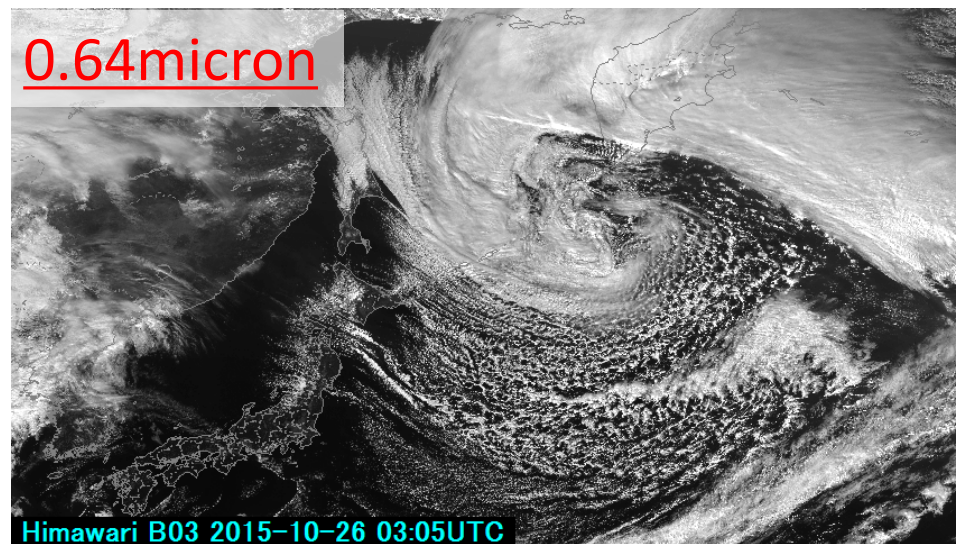
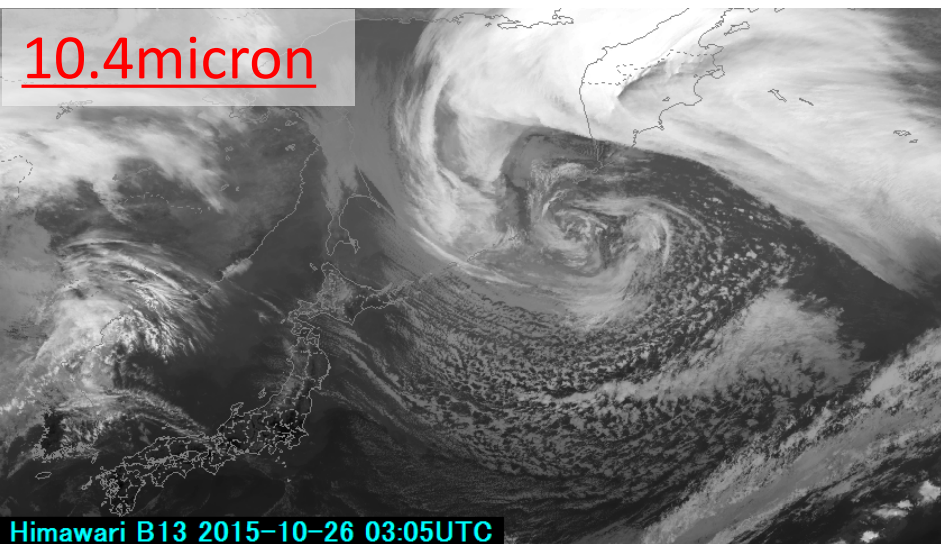
0.86micron band

Tim schmit et al, Introducing the next generation advanced baseline imager on GOES-R

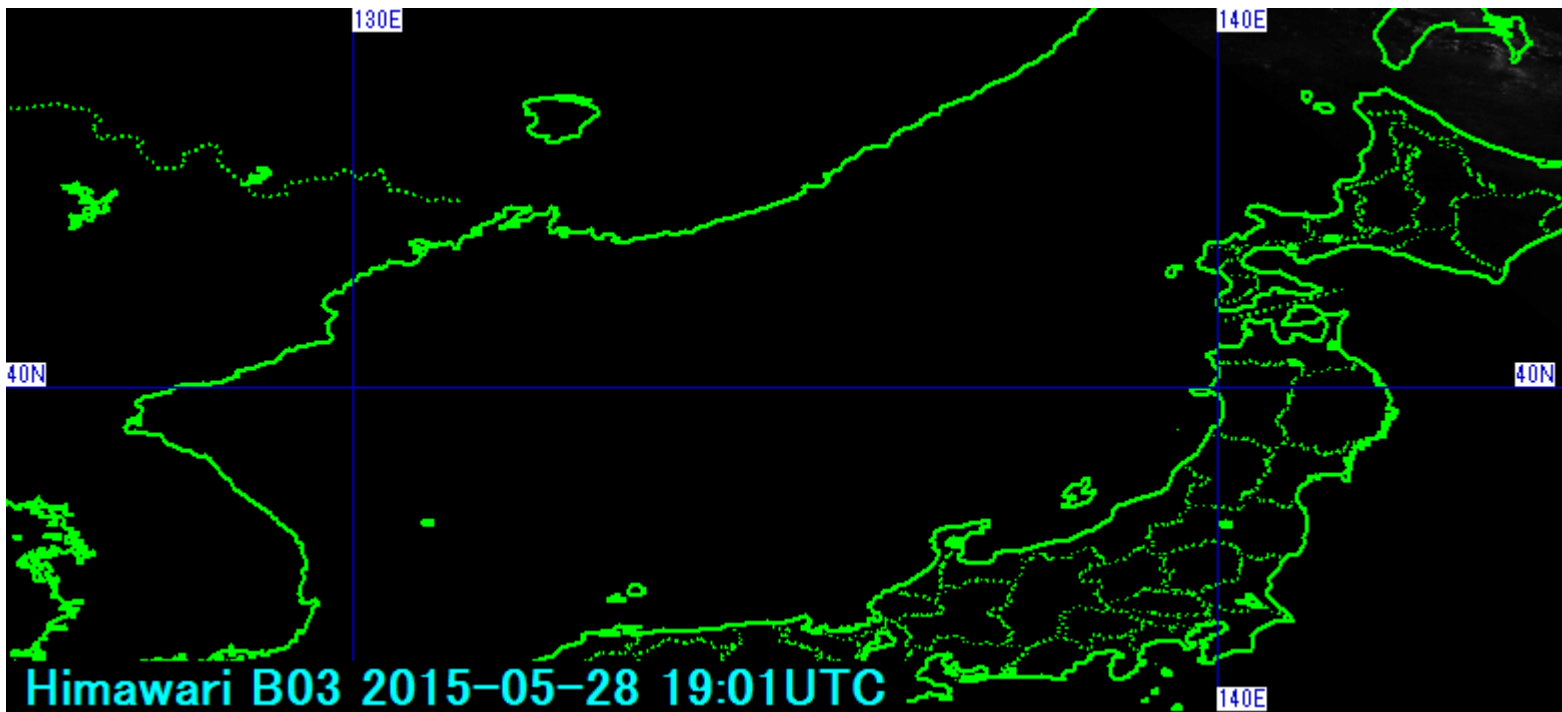
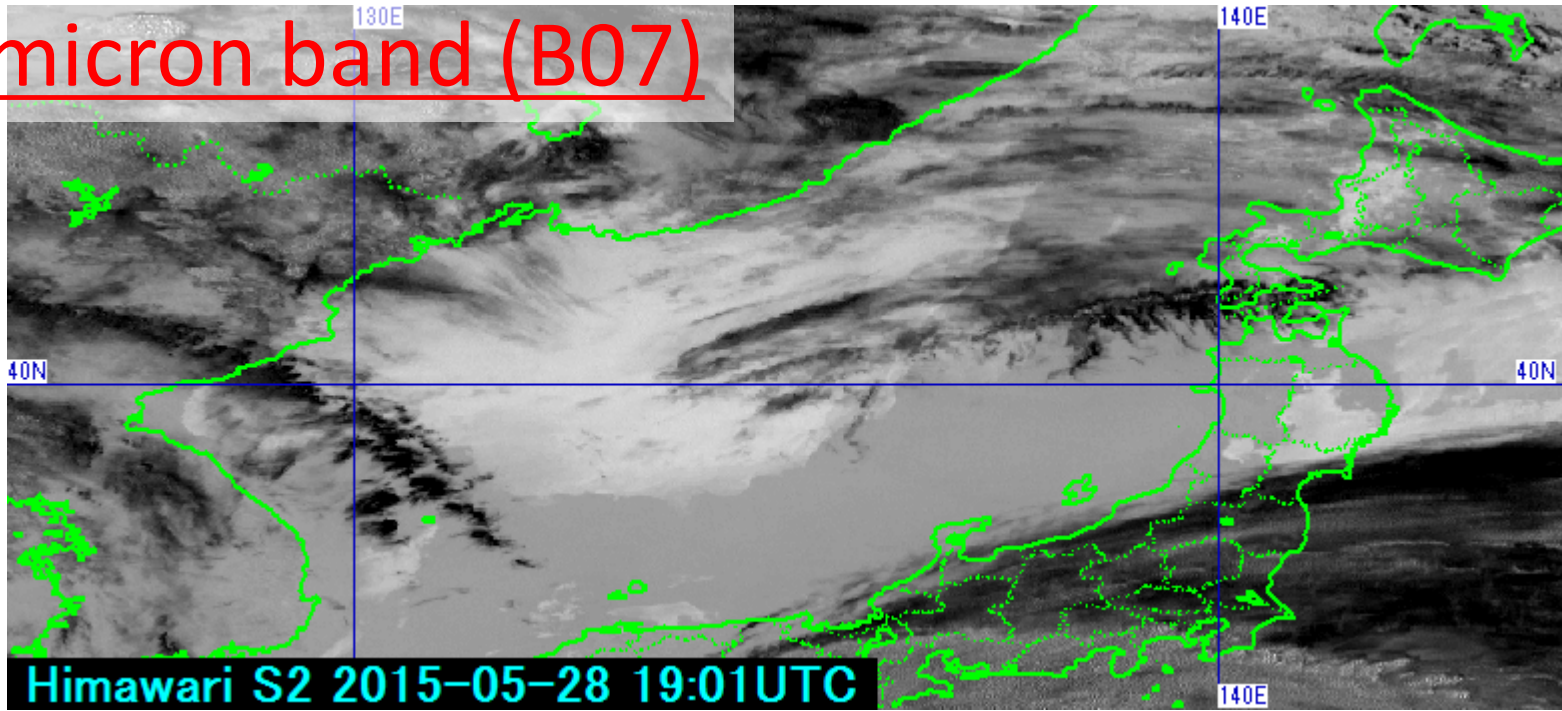
1.6micron band (B05) and 2.3micron band (B06)



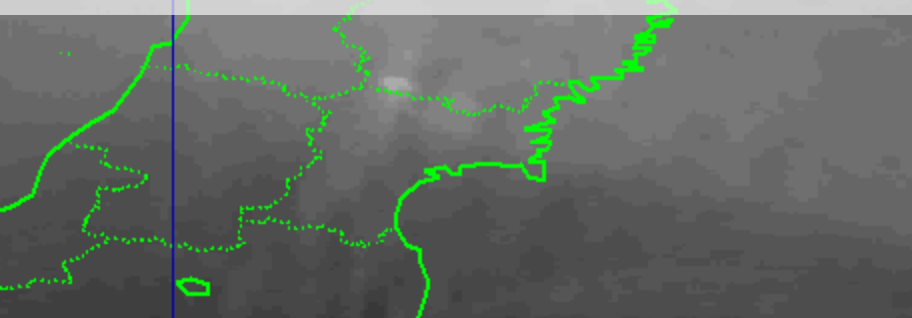
1.6micron band (B05) and 2.3micron band (B06)



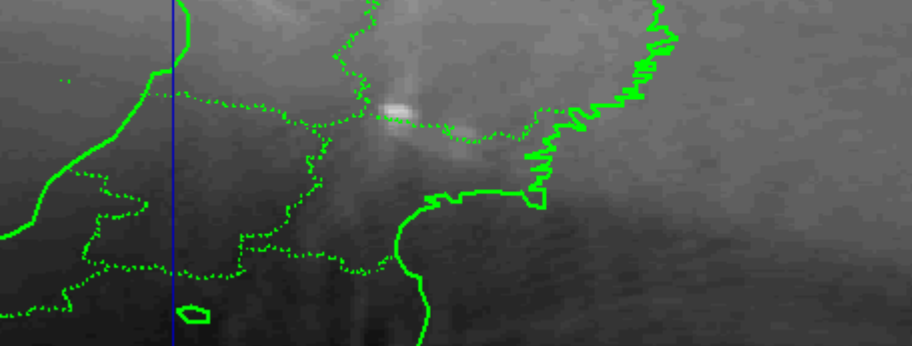
3.9micron band (B07)



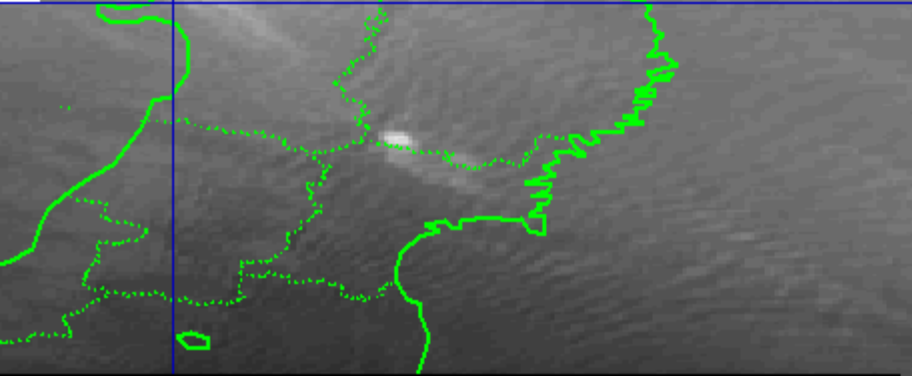
6.2micron band (B08), 6.9micron band (B09) and 7.3micron band (B10)



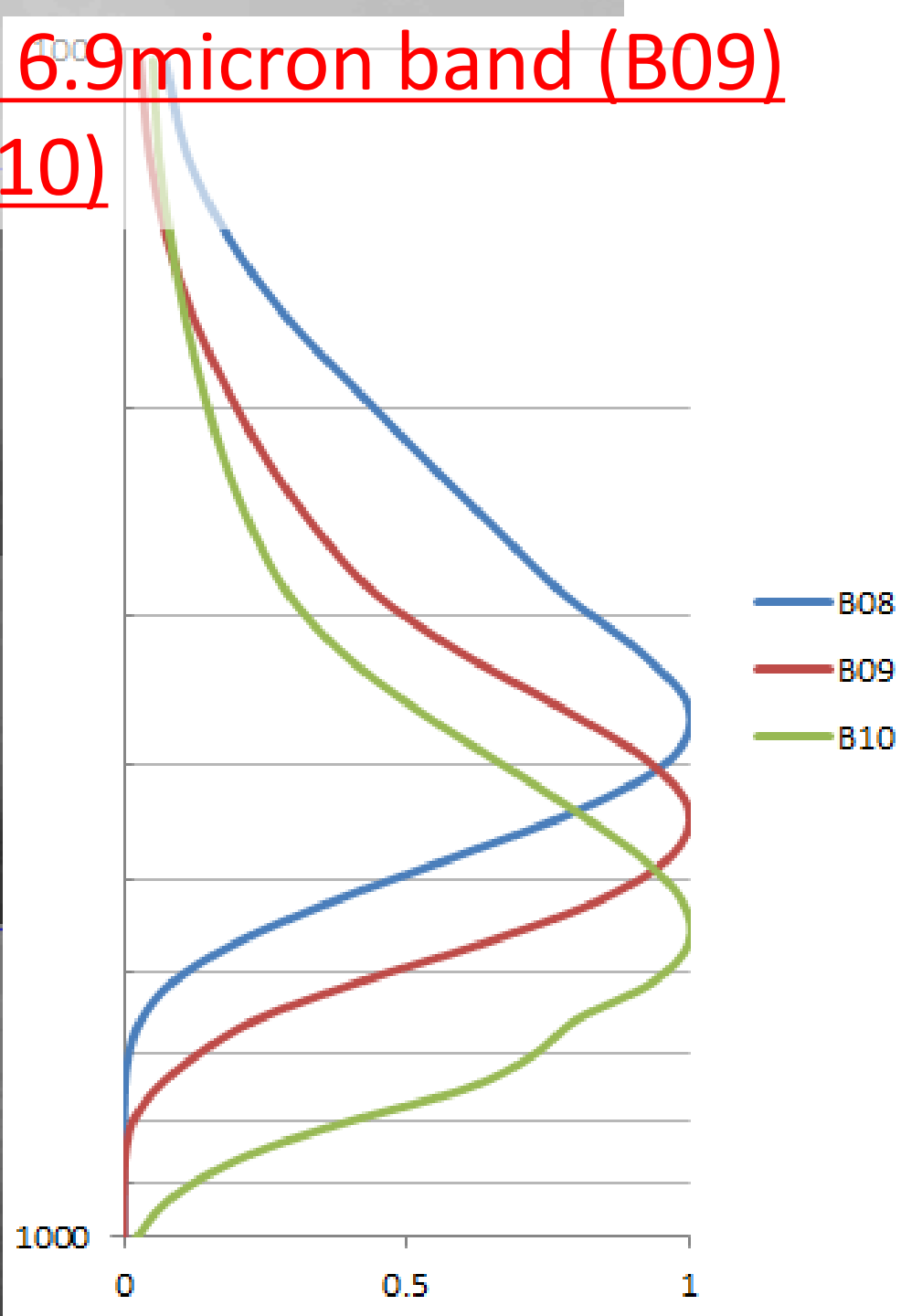
Himawari B08 2015-10-26 03:05UTC



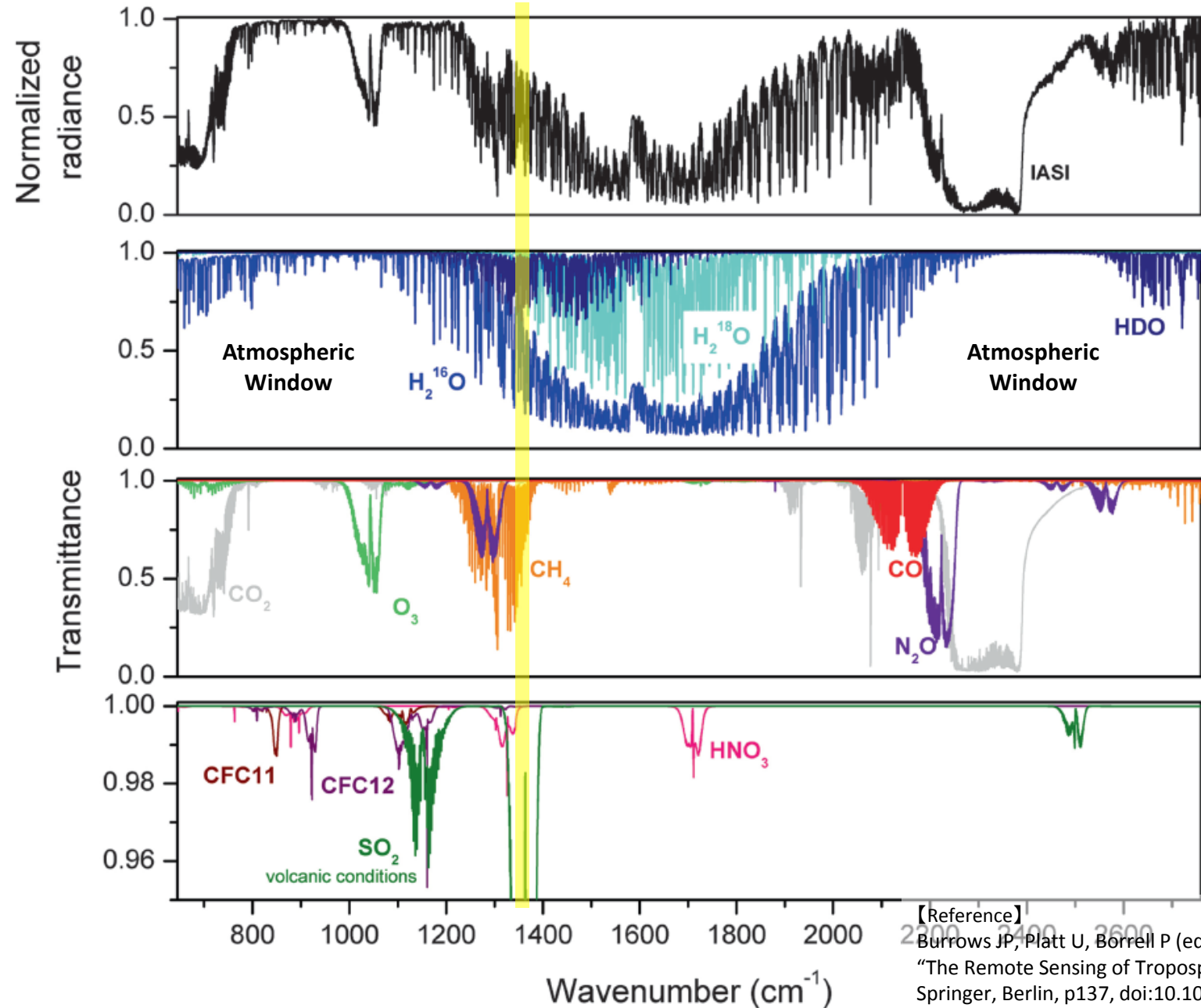
Himawari B09 2015-10-26 03:05UTC



Himawari B10 2015-10-26 03:05UTC



7.3micron band (B10)



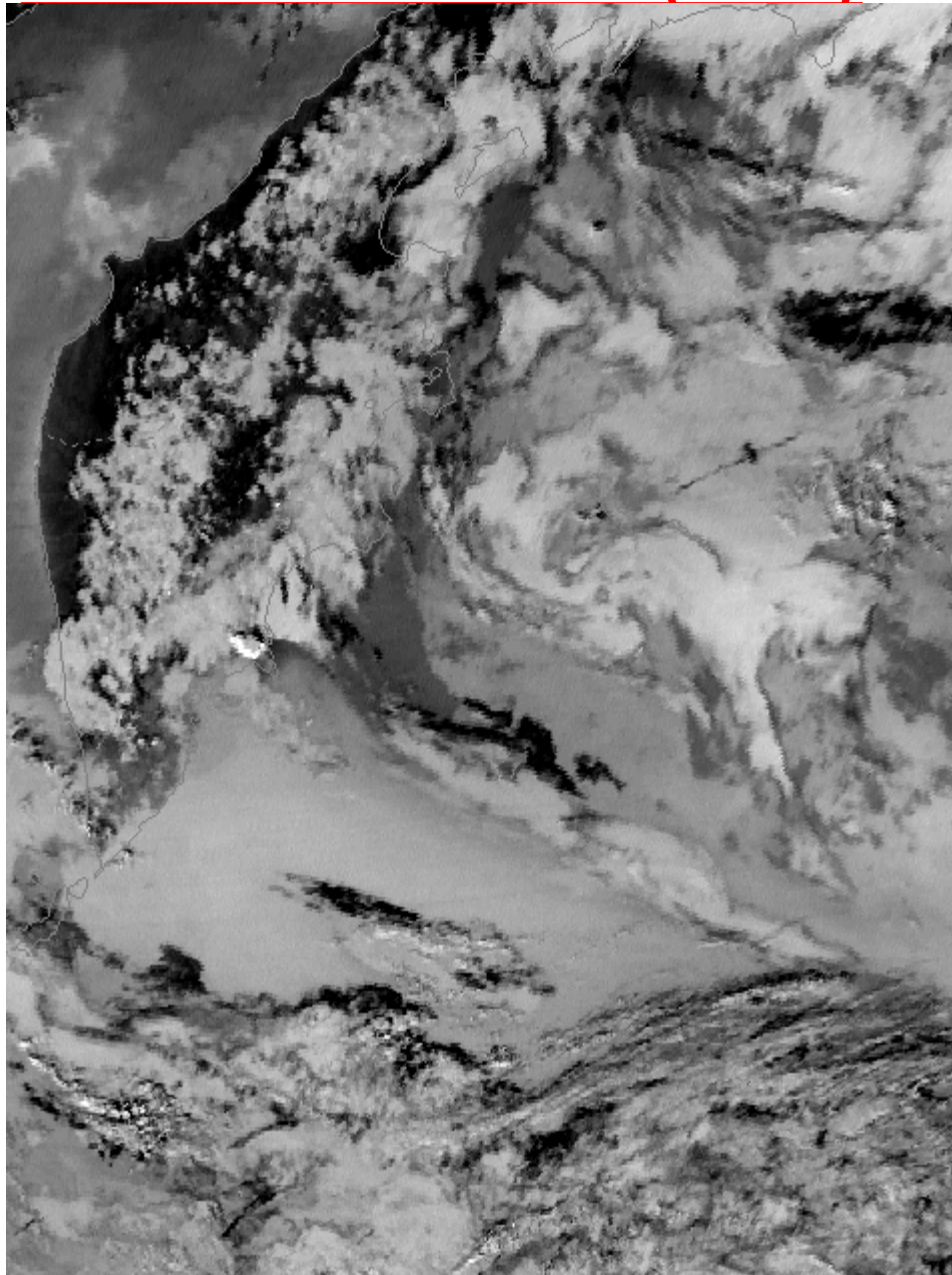
【Reference】

Burrows JP, Platt U, Borrell P (eds)

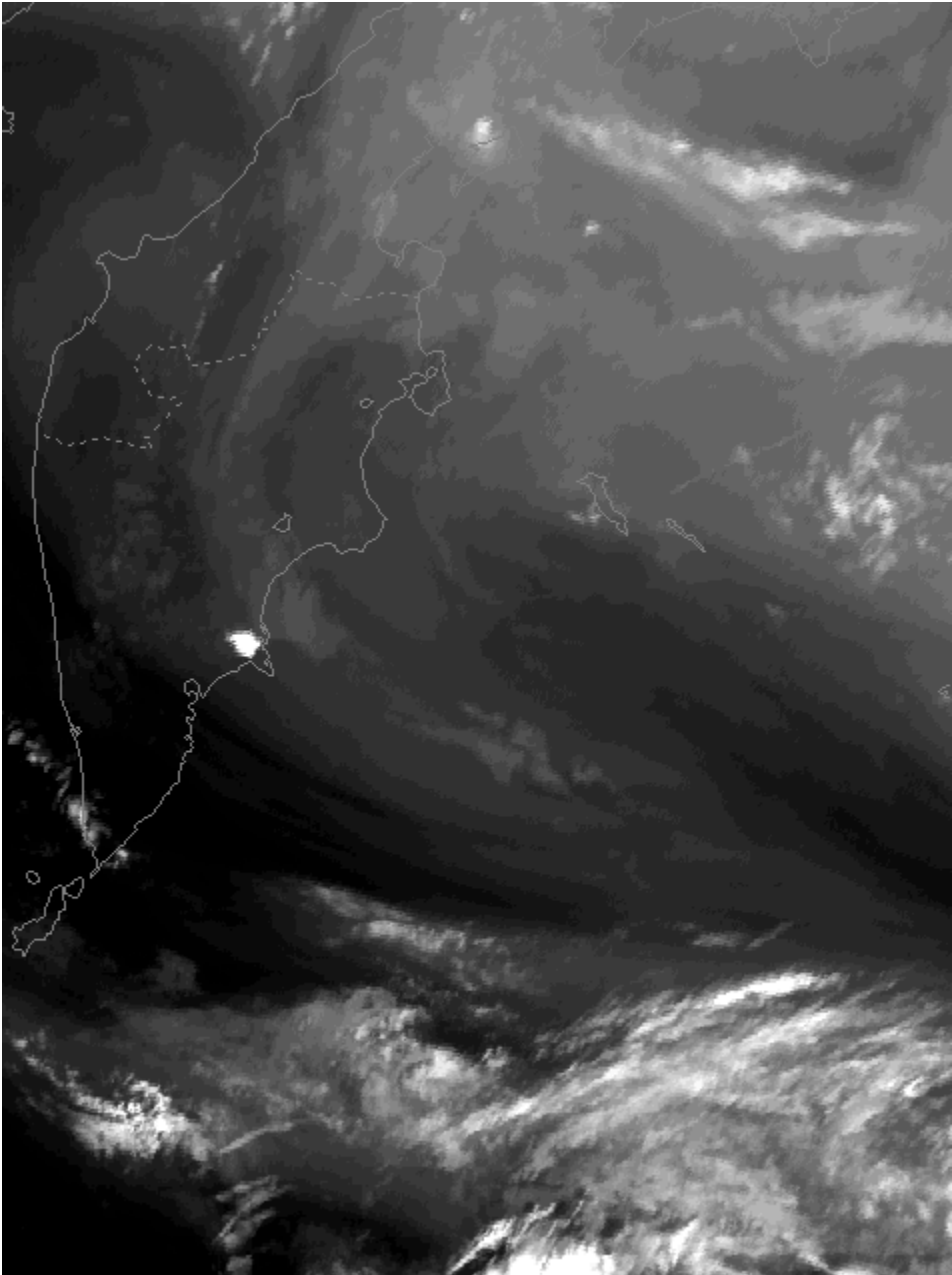
“The Remote Sensing of Tropospheric Composition from Space”

Springer, Berlin, p137, doi:10.1007/978-3-642-14791-3

7.3micron band (B10)

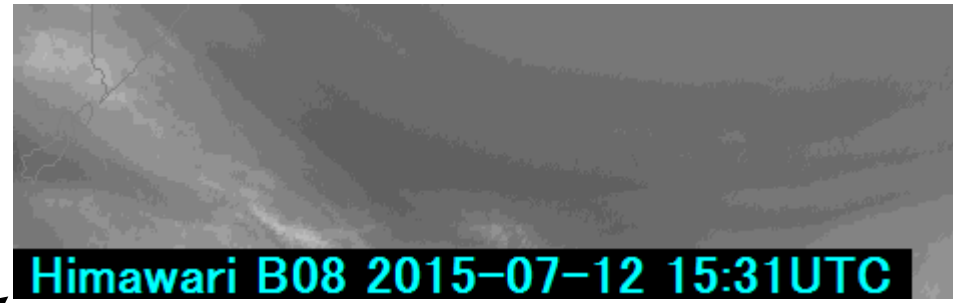
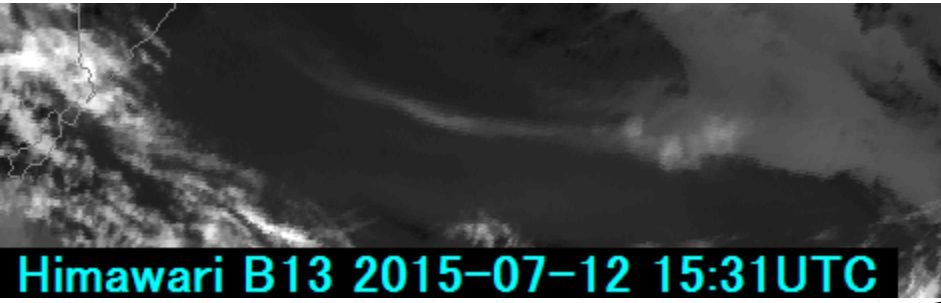


Himawari S1 2015-07-12 07:01UTC



Himawari B10 2015-07-12 07:01UTC

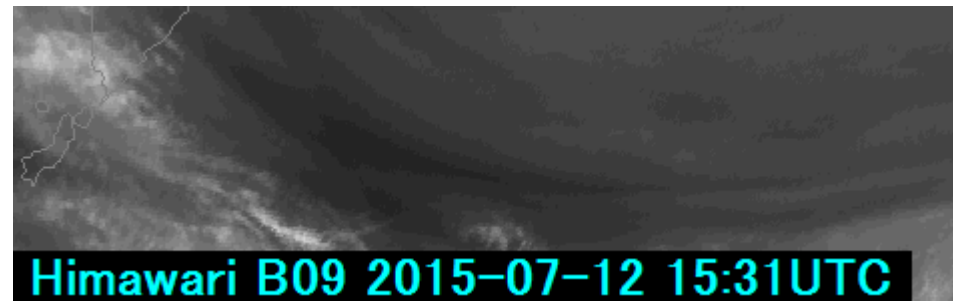
7.3micron band (B10)



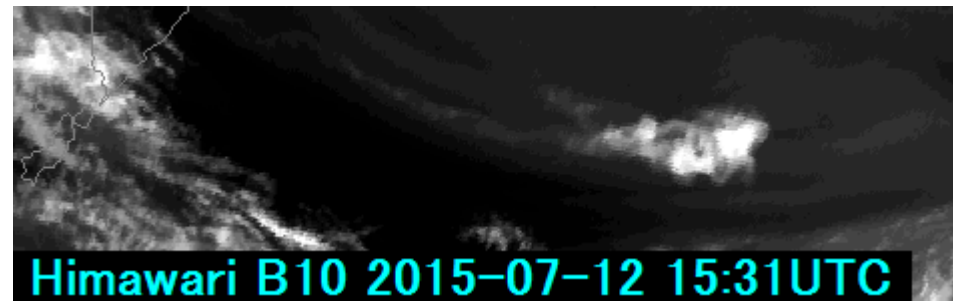
10.4micron band

6.3micron band

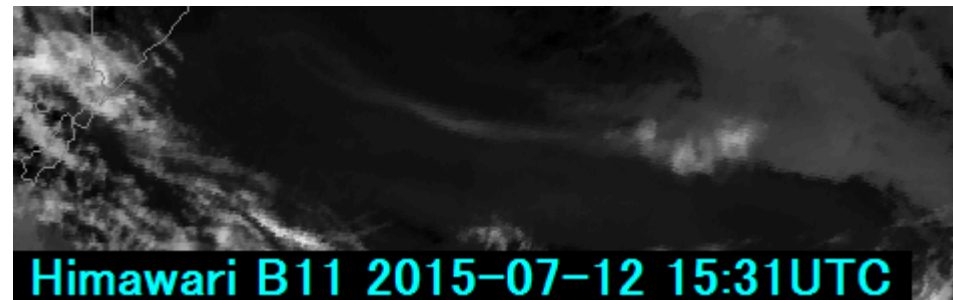
6.9micron band



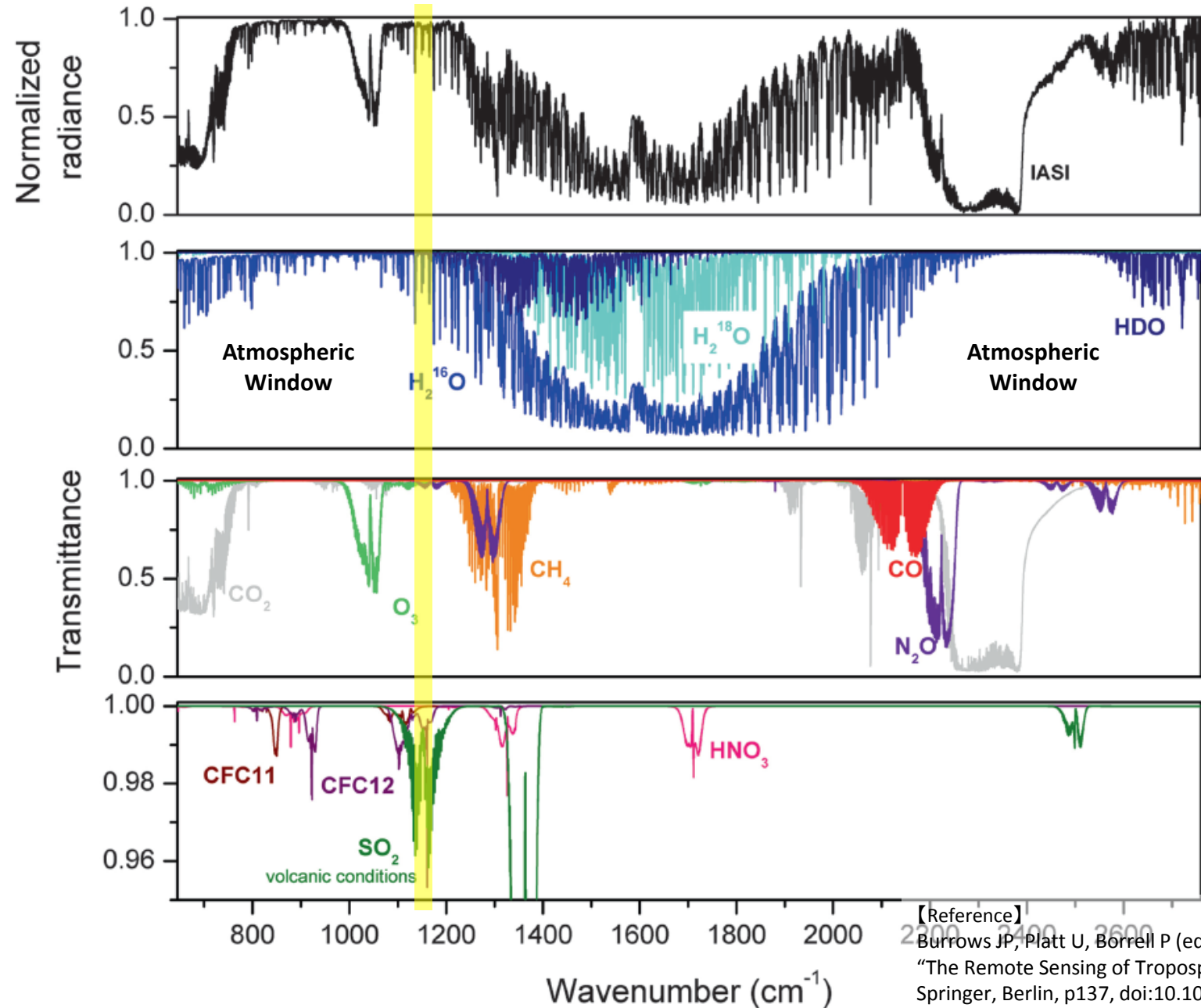
7.3micron band



8.6micron band



8.6micron band (B11)



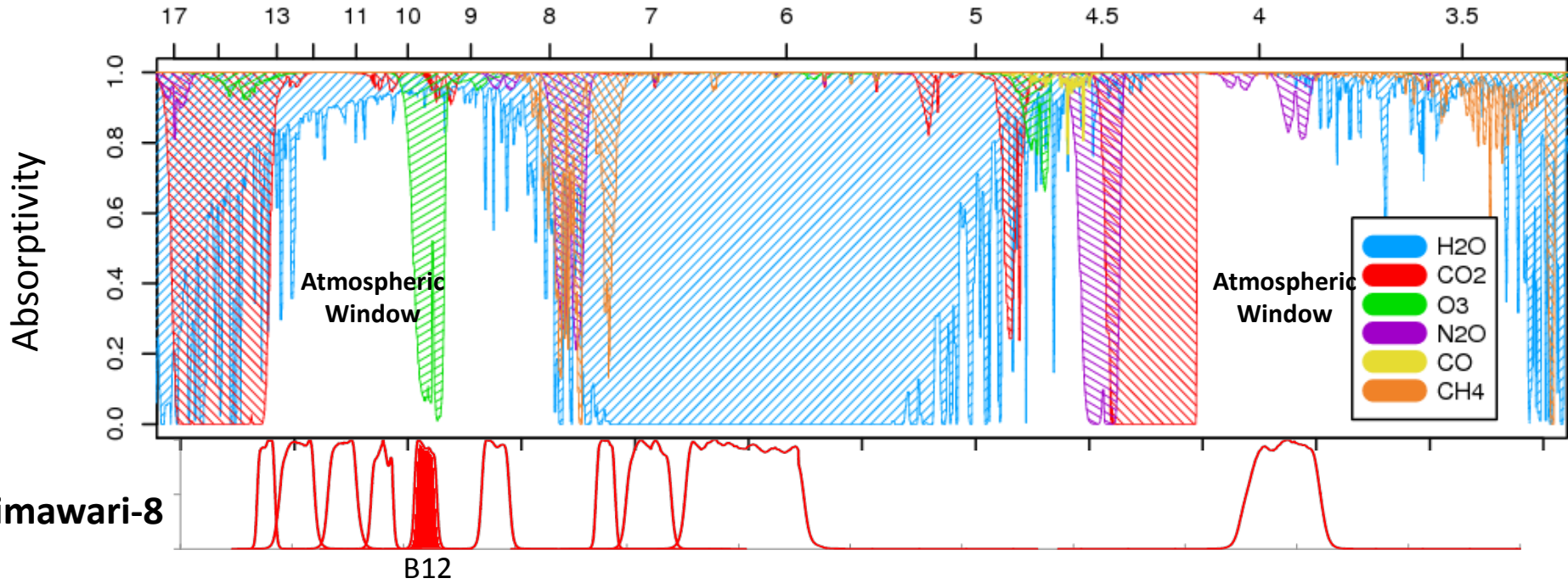
【Reference】

Burrows JP, Platt U, Borrell P (eds)

"The Remote Sensing of Tropospheric Composition from Space"

Springer, Berlin, p137, doi:10.1007/978-3-642-14791-3

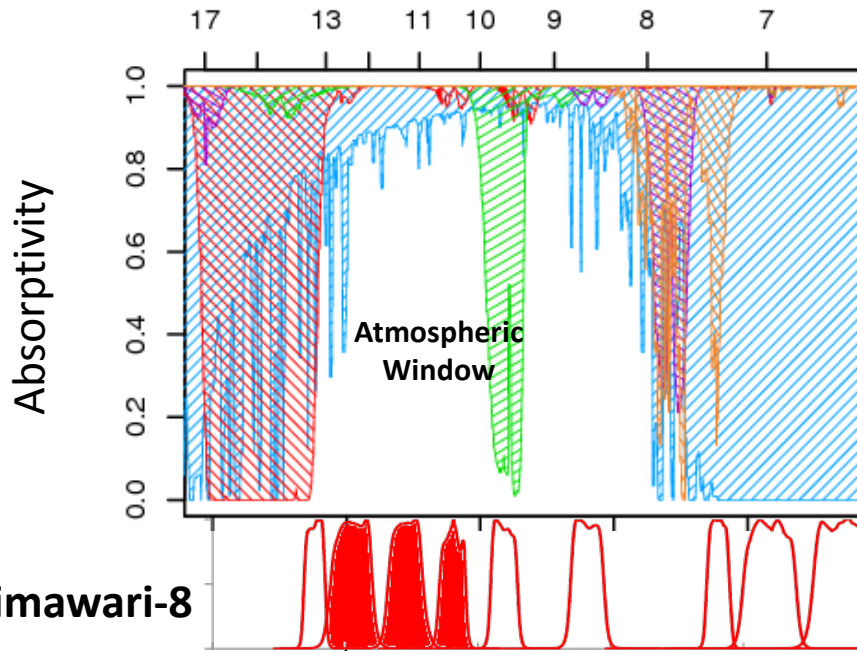
9.6micron band (B12)



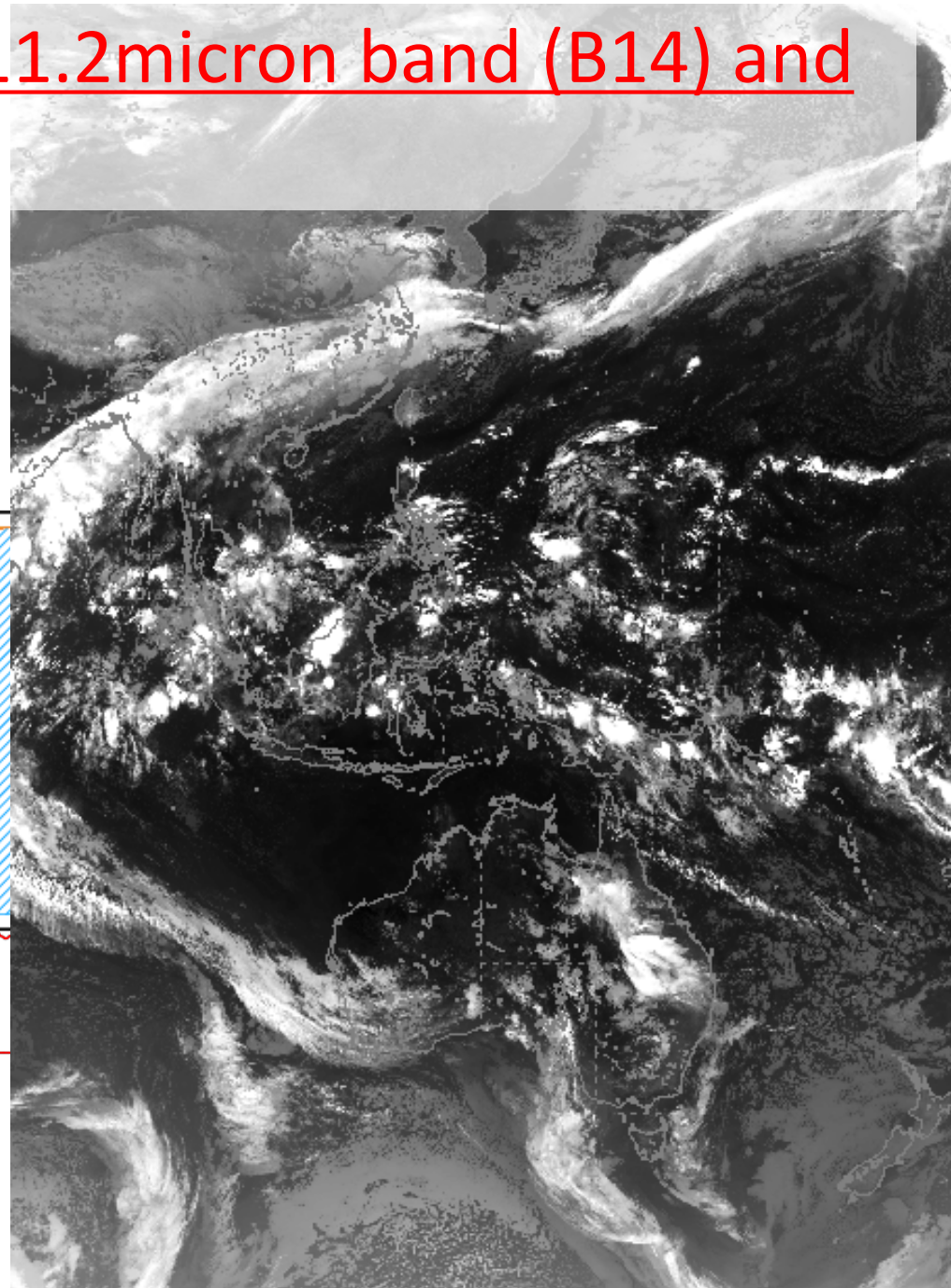
Ozone absorption band.

10.4micron band (B13), 11.2micron band (B14) and 12.4micron band (B15)

For cloud, surface, cirrus detection and cloud top phase

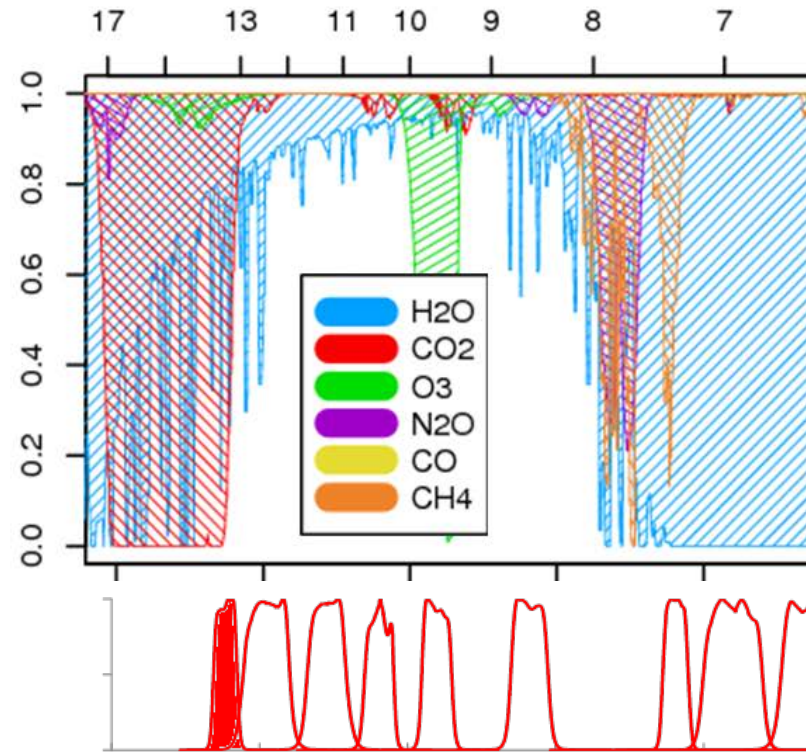


12.4
11.2
10.4

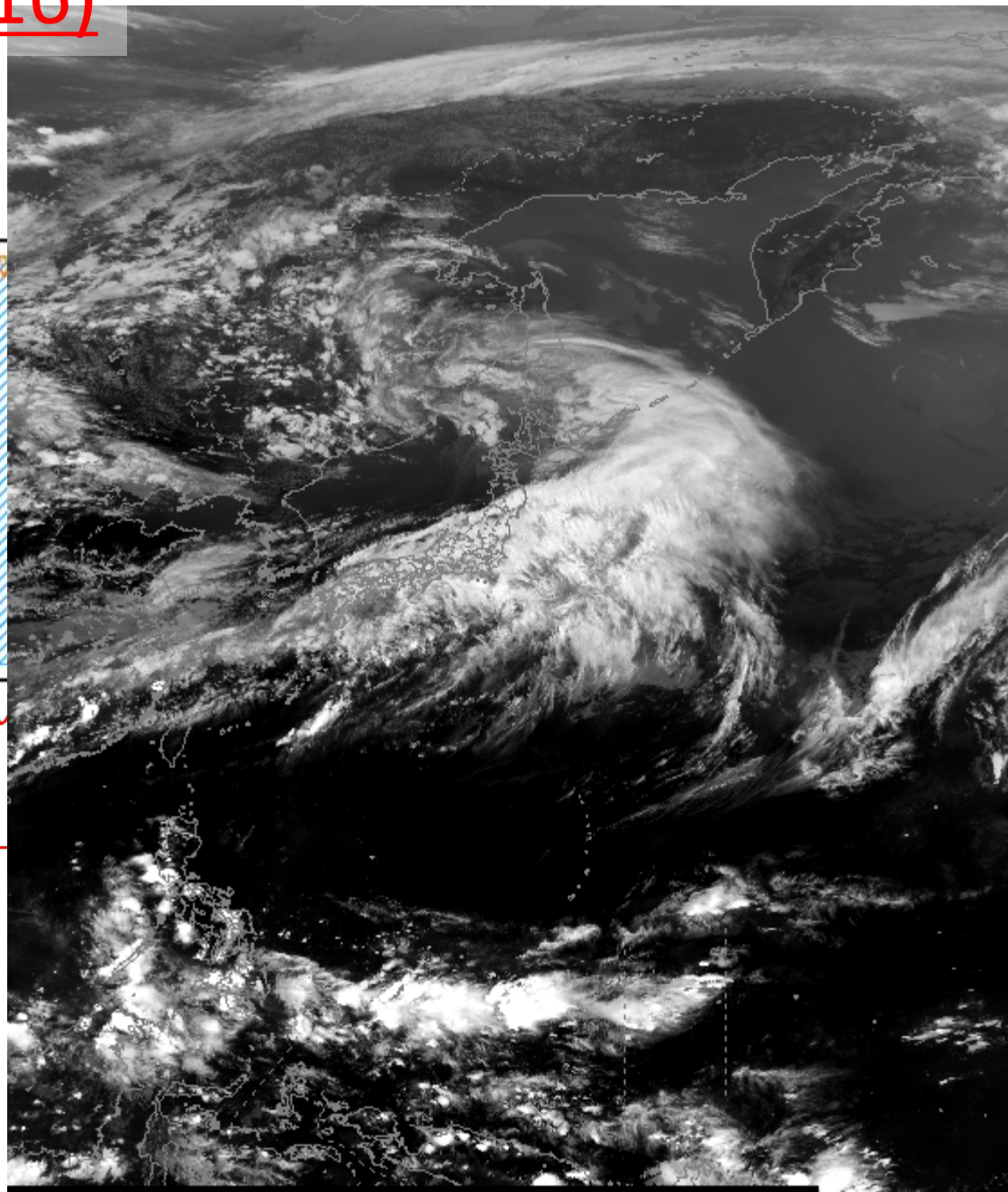


Himawari B13 2015-10-31 17:09UTC

13.3micron band (B16)



CO₂
absorption band.



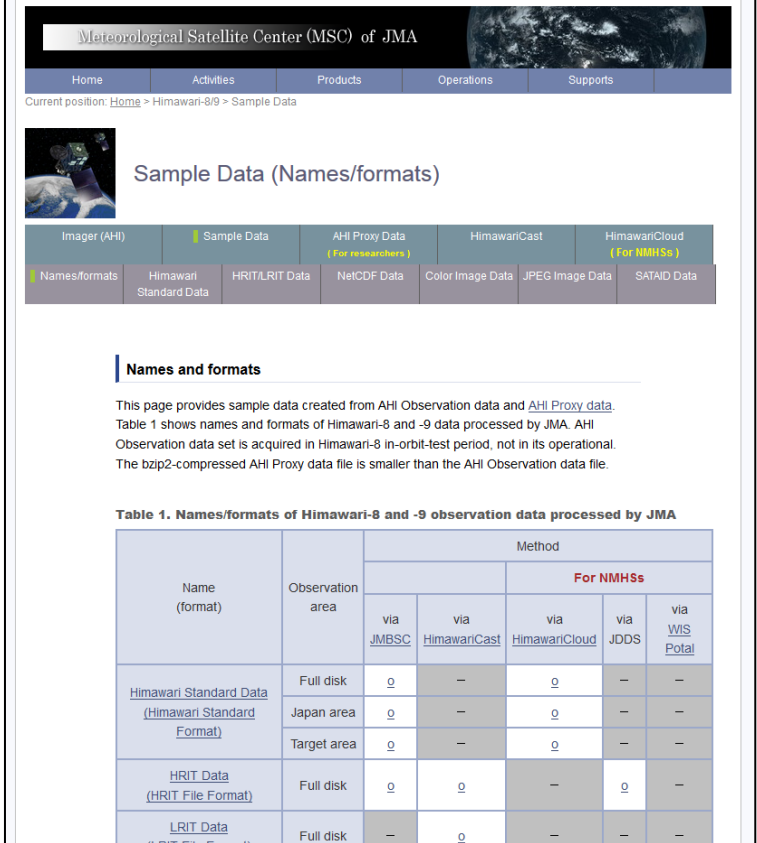
Himawari B16 2015-06-09 07:09UTC

Himawari-8/9 Users Support Information

<http://www.jma-net.go.jp/msc/en/support/>

Contents:

- Overview of satellite observation
- Overview of data dissemination
- Imager (AHI) specifications
- Operational status
- [Sample data](#)
- [Sample source code](#) to read Himawari-8 data and convert into other formats



Meteorological Satellite Center (MSC) of JMA

Home Activities Products Operations Supports

Current position: Home > Himawari-8/9 > Sample Data

Sample Data (Names/formats)

Imager (AHI)	Sample Data	AHI Proxy Data (For researchers)	HimawariCast	HimawariCloud (For NMHSs)		
Names/formats	Himawari Standard Data	HRIT/LRIT Data	NetCDF Data	Color Image Data	JPEG Image Data	SATAID Data

Names and formats

This page provides sample data created from AHI Observation data and [AHI Proxy data](#). Table 1 shows names and formats of Himawari-8 and -9 data processed by JMA. AHI Observation data set is acquired in Himawari-8 in-orbit-test period, not in its operational. The bzip2-compressed AHI Proxy data file is smaller than the AHI Observation data file.

Table 1. Names/formats of Himawari-8 and -9 observation data processed by JMA

Name (format)	Observation area	Method				
		For NMHSs				
		via JMBSC	via HimawariCast	via HimawariCloud	via JDDS	via WIS Portal
Himawari Standard Data (Himawari Standard Format)	Full disk	○	—	○	—	—
	Japan area	○	—	○	—	—
	Target area	○	—	○	—	—
HRIT Data (HRIT File Format)	Full disk	○	○	—	○	—
LRIT Data (LRIT File Format)	Full disk	—	○	—	—	—

Feel free to contact:

Satellite Program Division, Japan Meteorological Agency

metsat@met.kishou.go.jp

Himawari Operation Status and Imagery Calibration/Navigation Monitoring from MSC Web

Himawari-8 Operation Status

ATTENTION

- This website renewed with Himawari-8 operation starting on 7 July, 2015.

Information

- The Sixth Asia/Oceania Meteorological Satellite Users' Conference (AOMSUC-6) Venue decided (8 June 2015)
- Himawari-8 is scheduled to start operation at 02 UTC on 7 July 2015 (27 May 2015)
- Collection of images captured by Himawari-8 (1 May 2015)
- The Sixth Asia/Oceania Meteorological Satellite Users' Conference (AOMSUC-6) First Announcement (12 March 2015)
- Test dissemination of Himawari-8 imagery via the HimawariCast service. (12 March 2015)
- Detailed information on utilization of HimawariCloud service (11 March 2015)

Imagery Calibration

HIMAWARI-8 Infrared Band

- Band07 (3.9 μm)
- Band08 (6.2 μm)
- Band09 (6.9 μm)
- Band10 (7.3 μm)
- Band11 (8.6 μm)
- Band12 (9.6 μm)
- Band13 (10.4 μm)
- Band14 (11.2 μm)
- Band15 (12.4 μm)
- Band16 (13.3 μm)

LEO Data

- AIRS (all)
- IASI-A (all)
- IASI-B (all)
- CRIS (all)
- AIRS (asc, 1:30pm)
- AIRS (des, 1:30am)
- IASI-A (des, 9:30am)
- IASI-A (asc, 9:30pm)
- IASI-B (des, 9:30am)
- IASI-B (asc, 9:30pm)
- CRIS (asc, 1:30pm)
- CRIS (des, 1:30am)

Time Sequence

- TB difference
- Regression coef.

Statistics for GSICS Correction

- Scatter plot (DN)
- Scatter plot (Rad)

Imagery Navigation

Now Selected: 0040, 14 Aug. 2015

BAND: B07 B13

Image:

0000	1200
0010	1210
0020	1220
0030	1230
0040	1240
0050	1250
0100	1300
0110	1310
0120	1320
0130	1330
0140	1340
0150	1350
0200	1400
0210	1410
0220	1420
0230	1430
0240	1440
0250	1450
0300	1500

2016:Aug.

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

2016:Aug.

Su	Mo	Tu	We	Th	Fr	Sa
						1
3	4	5	6	7	8	
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

MEAN OF VECTOR MAGNITUDES (pix): 0.21(+0.4 ka)
MEAN VECTOR (pix): PIX 40, 11; LIN 40, 11; MAG 0, 20(+0.4 ka), # OF SAMPLES: 733

This landmark analysis image is posted about 10 minutes after the end of its observation. [In Image]

Yellow point: Landmark point

Cyan line: B13 vs. landmark

Green line: B07 vs. landmark

Purple line: B03 vs. landmark

Orange line: The others band vs. landmark

[At left bottom outside image]

Purple line: Reference vector showing one pixel length at that band.

Cyan line: Averaged misplacement vector, whose component values are printed at the left bottom.

<http://www.jma-net.go.jp/msc/en/index.html>

Thank you.