

The Global Imager (GLI)

Launch :	Dec.14, 2002
Initial check out :	to Apr.14, 2003 ($\sim L+4$)
First image:	Jan.25, 2003
Second image:	Feb.6 and 7, 2003
Calibration and validation :	to Dec.14, 2003($\sim L+4$) for Cal/Val/Algorithm PIs
Open to all PIs :	from Dec. 14, 2003 ($L+12\sim$)

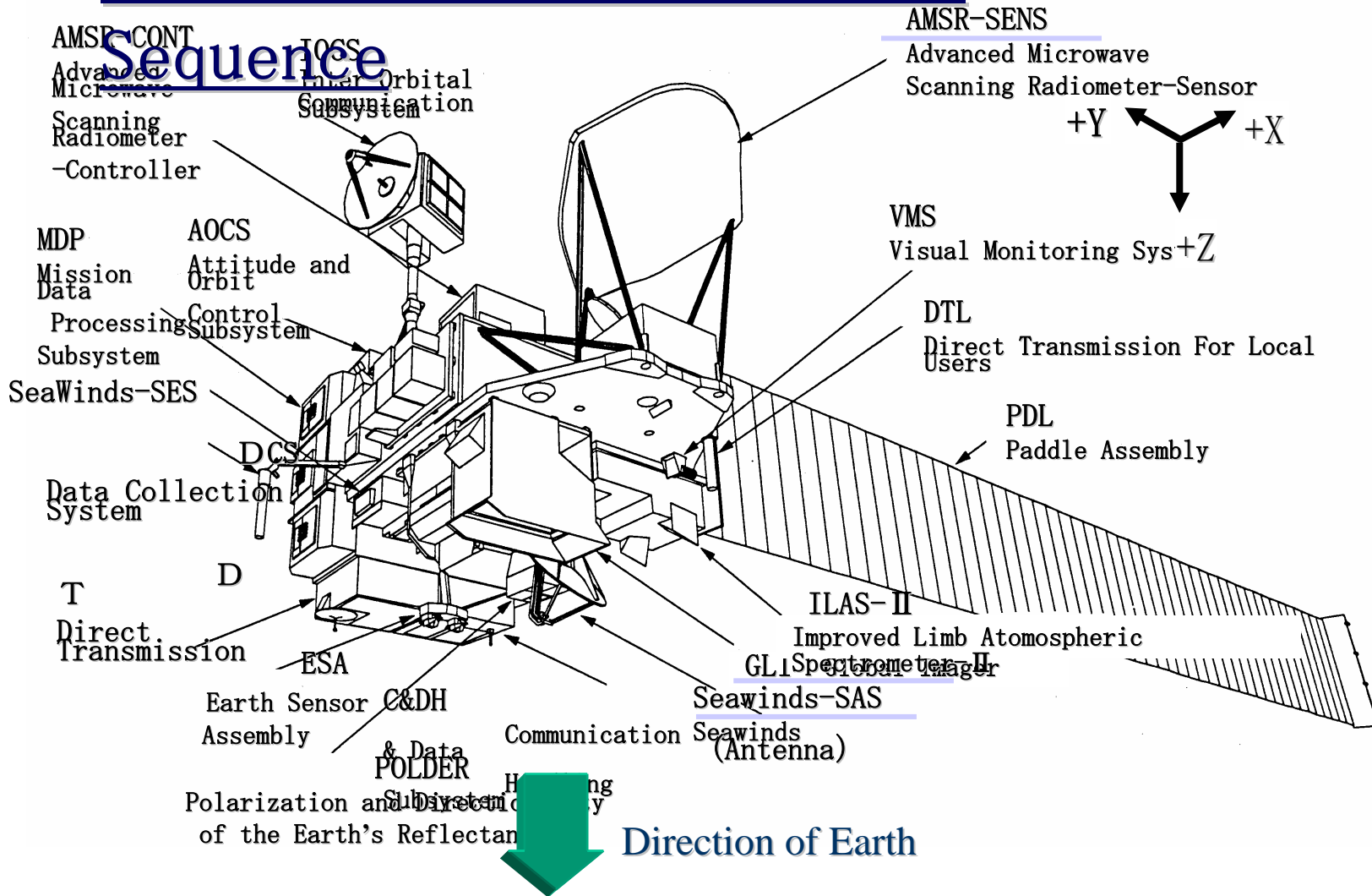


NASDA

ADEOS-II Overview ~ Configuration & Flight

Sequence ~

② Configuration & Flight



Mission instruments onboard (2/13)

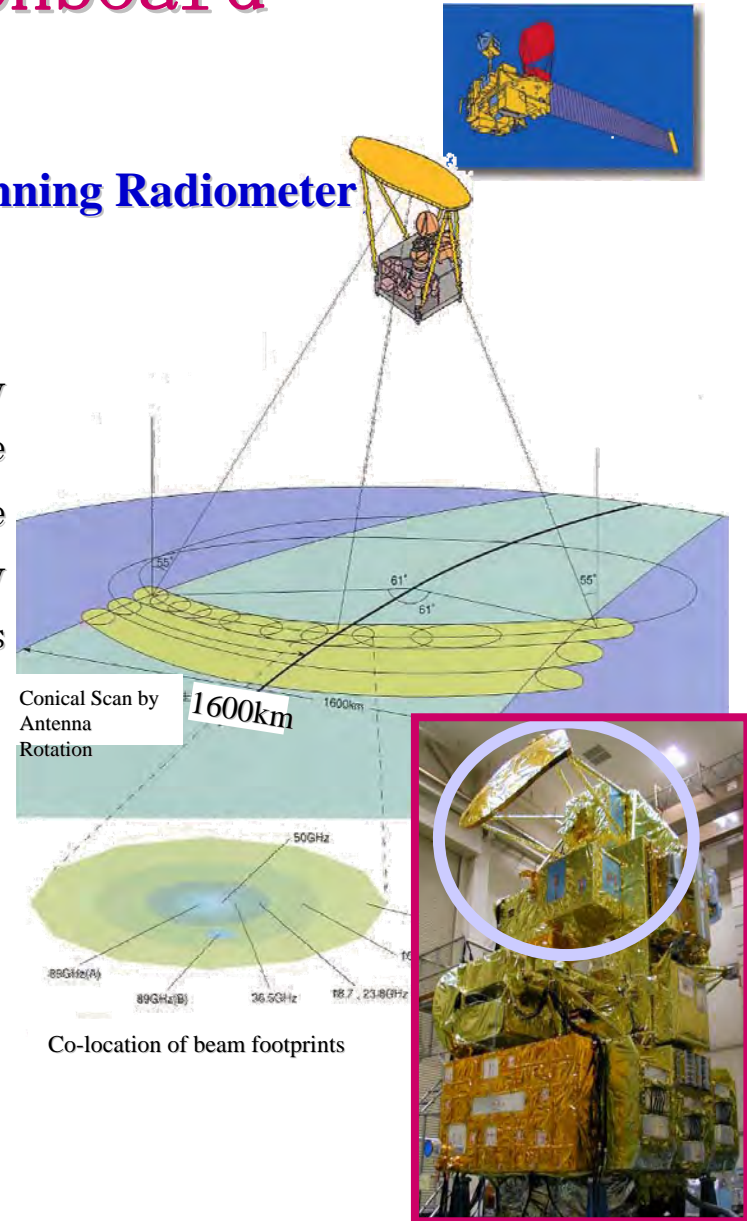
① AMSR (Advanced Microwave Scanning Radiometer)

【Overview】

● AMSR observes the microwave energy naturally radiated from the Earth's surface and atmosphere. It is to understand the global water and energy circulation by observing various geophysical parameters

r e l a t e t o w a t e r .
Water vapor content, precipitation, sea surface temperature, sea surface wind,

● *snow, ice, etc.* of day and night or weather conditions, it is capable of making high quality observation by
m i c r o w a v e .



Mission Equipment on board

(5/13)

②GLI (Global Imager)

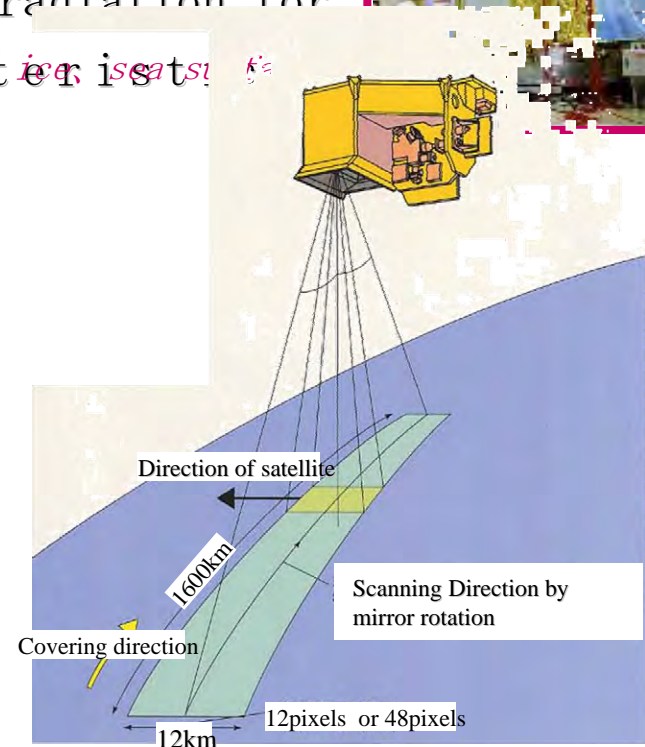
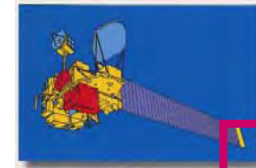
【Overview】

- An optical sensor with the purpose of making frequent and global observations by reflected solar radiation from the earth's surface including land, ocean and cloud, and by infrared radiation for

measuring physical characteristics such as chlorophyll vegetation distribution, cloud, snow and ice, sea surface temperature etc.

- Multi-spectral observation capability consists of 36 channels in the visible and near-infrared regions (375nm~12.5 μm). The ground resolution is 1 km at the nadir, part of the channels have a resolution of 250m at the nadir which will be used for observing vegetation and
- Successor to OCTS onboard ADEOS.

clouds.



Mission Equipment on board

(9/13)

④ SeaWinds

【Overview】

- SeaWinds Scatterometer was developed by National Aeronautics and Space Administration (NASA).
- The SeaWinds Ku-band (13GHz) radar measures high accuracy wind speed and direction by measuring backscattered power from short (centimeter) wave on the sea surface which is over 90% of the ice-free global ocean every day.
- SeaWinds is a follow-on to the NASA Scatterometer launched on ADEOS, and to the SeaWinds instrument flying aboard the QuikSCAT spacecraft.



GLI Specification

VNIR

(1km resolution)

ch1	380(10)	O A C
ch2	400(10)	O
ch3	412(10)	O
ch4p	443(10)	OLA C
ch5p	460(10)	OLA C
ch6	490(10)	O
ch7p	520(10)	O A C
ch8p	545(10)	O A C
ch9	565(10)	OL
ch10	625(10)	O
ch11	666(10)	O
ch12	680(10)	O
ch13	678(10)	LA C
ch14	710(10)	O
ch15	710(10)	LA C
ch16	749(10)	O
ch17	763(8)	LA
ch18	865(20)	O
ch19	865(10)	LA C

(p:piecewise linear)

(250m resolution)

ch20	460(70)	LA C
ch21	545(50)	LA C
ch22	660(60)	LA C
ch23	825(110)	LA C

unit [nm]

SWIR

(1km resolution)

ch24	1050(20)	L A C
ch25	1135(70)	A
ch26	1240(20)	L A C
ch27	1380(40)	A

(250m resolution)

ch28	1640(200)	L A C
ch29	2210(220)	L A C

unit [nm]



MTIR

(1km resolution)

ch30	3.715(0.33)	O A C
ch31	6.700(0.5)	A
ch32	7.300(0.5)	A
ch33	7.500(0.5)	A
ch34	8.600(0.5)	OLA C
ch35	10.80(1.0)	OLA C
ch36	12.00(1.0)	OLA C

unit [μm]

APPLICATION CODE

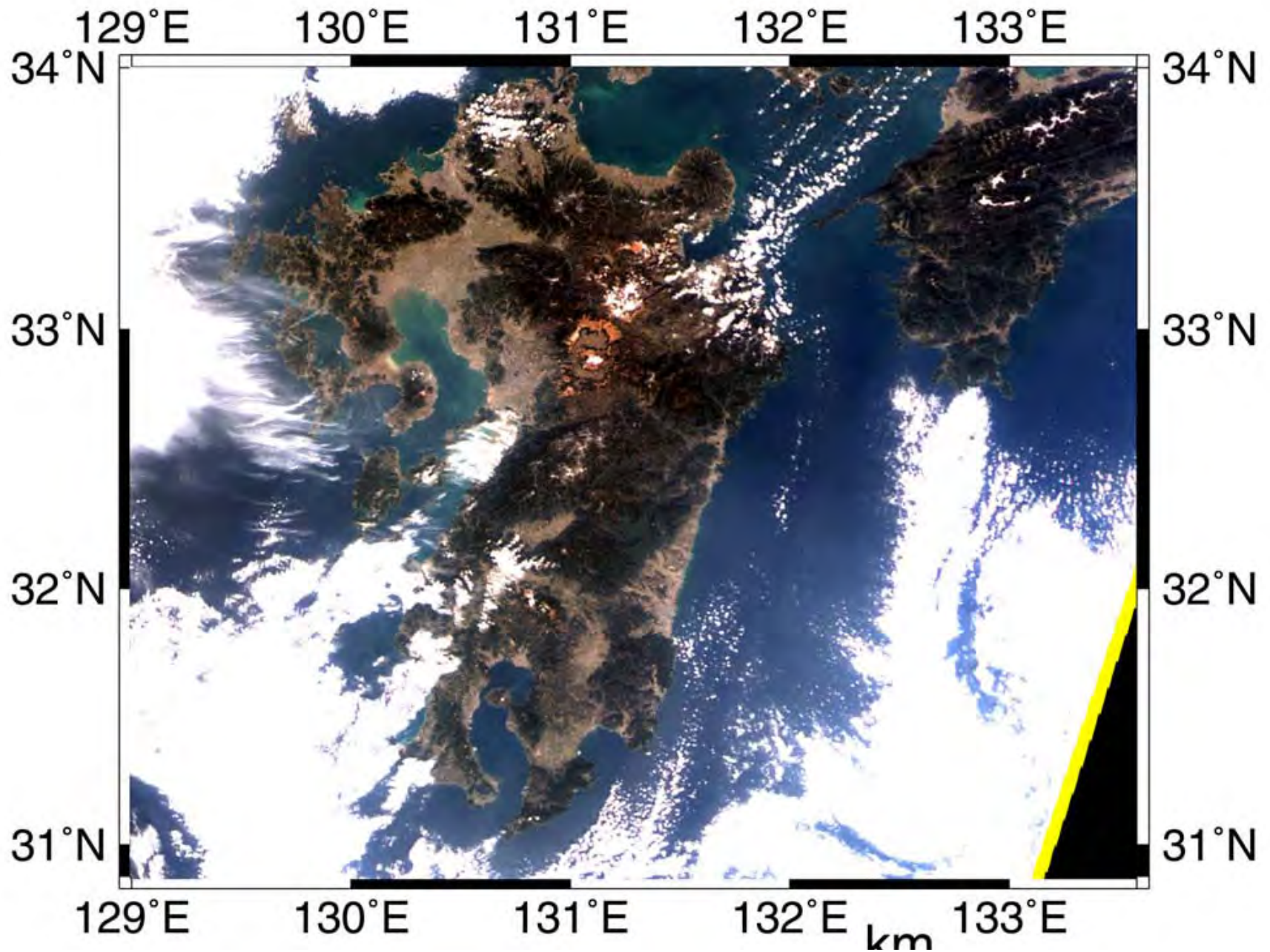
O : OCEAN
L : LAND
A : ATMOSPHERE
C : CRYOSPHERE

Cross tracking scan

Altitude	: 803 km
Inclination	: 98.6 deg.
Swath width	: 1600 km
Resolution	: 1 km
(subpoint)	: 250 m
Tilt angle	: 20 deg.
Period	: 101 min.
Recurrent Period	: 4 days
Local time	: 10:30AM
Data rate	: 4.1Mbps

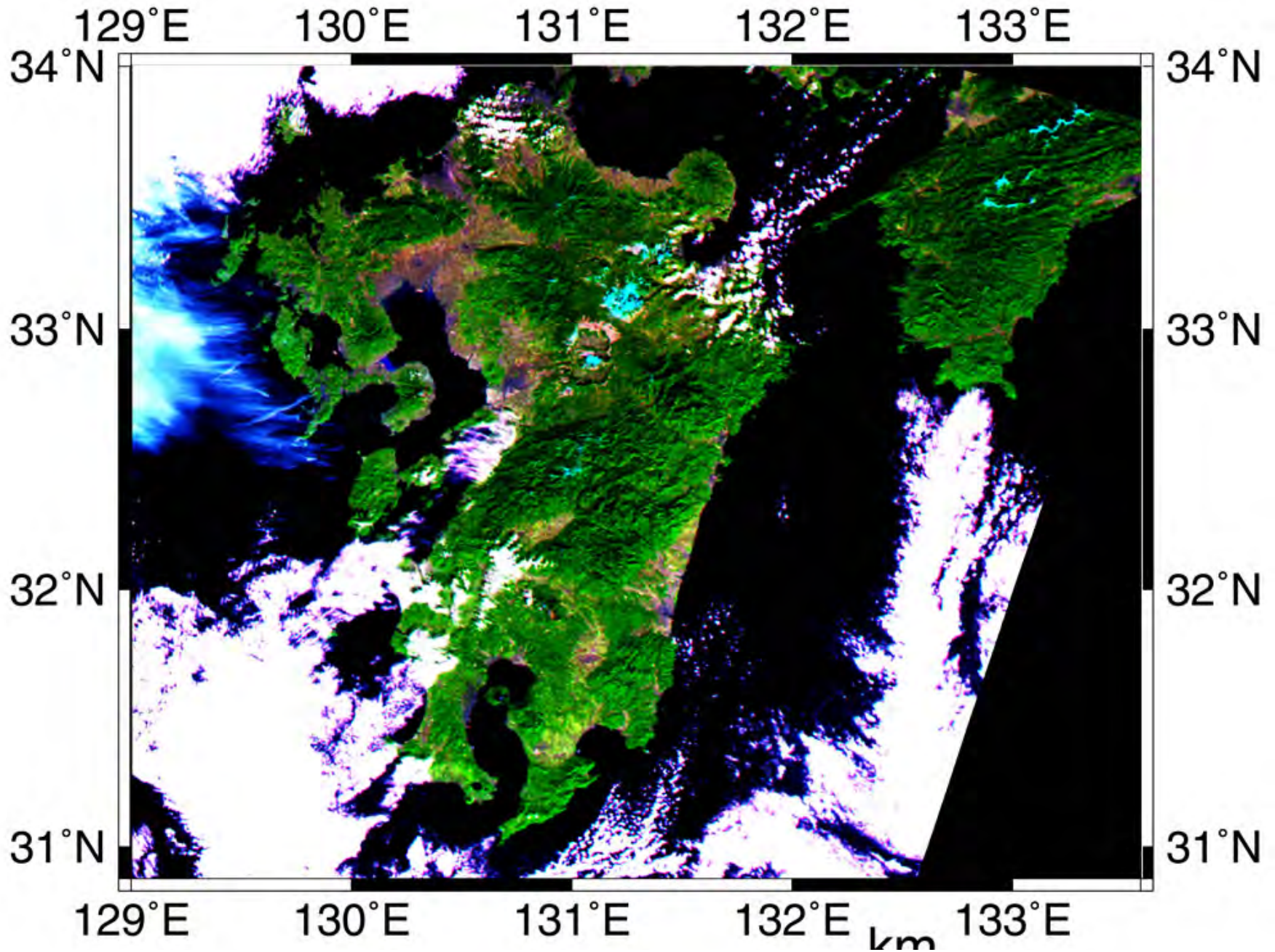
Opened at WWW

11:30 a.m. on January 25, 2003 (JST) 250m spatial resolution
R:660 nm (Channel 22) G:545 nm (Channel 21) B:460 nm (Channel 20)



Opened at WWW

11:30 a.m. on January 25, 2003 (JST) 250m spatial resolution
R:1640nm(channels 28) G:825nm(Channel 23) B: 660nm(Channel 22)



Internal Use ONLY



桜島(1km)



桜島(250m)

Internal Use ONLY



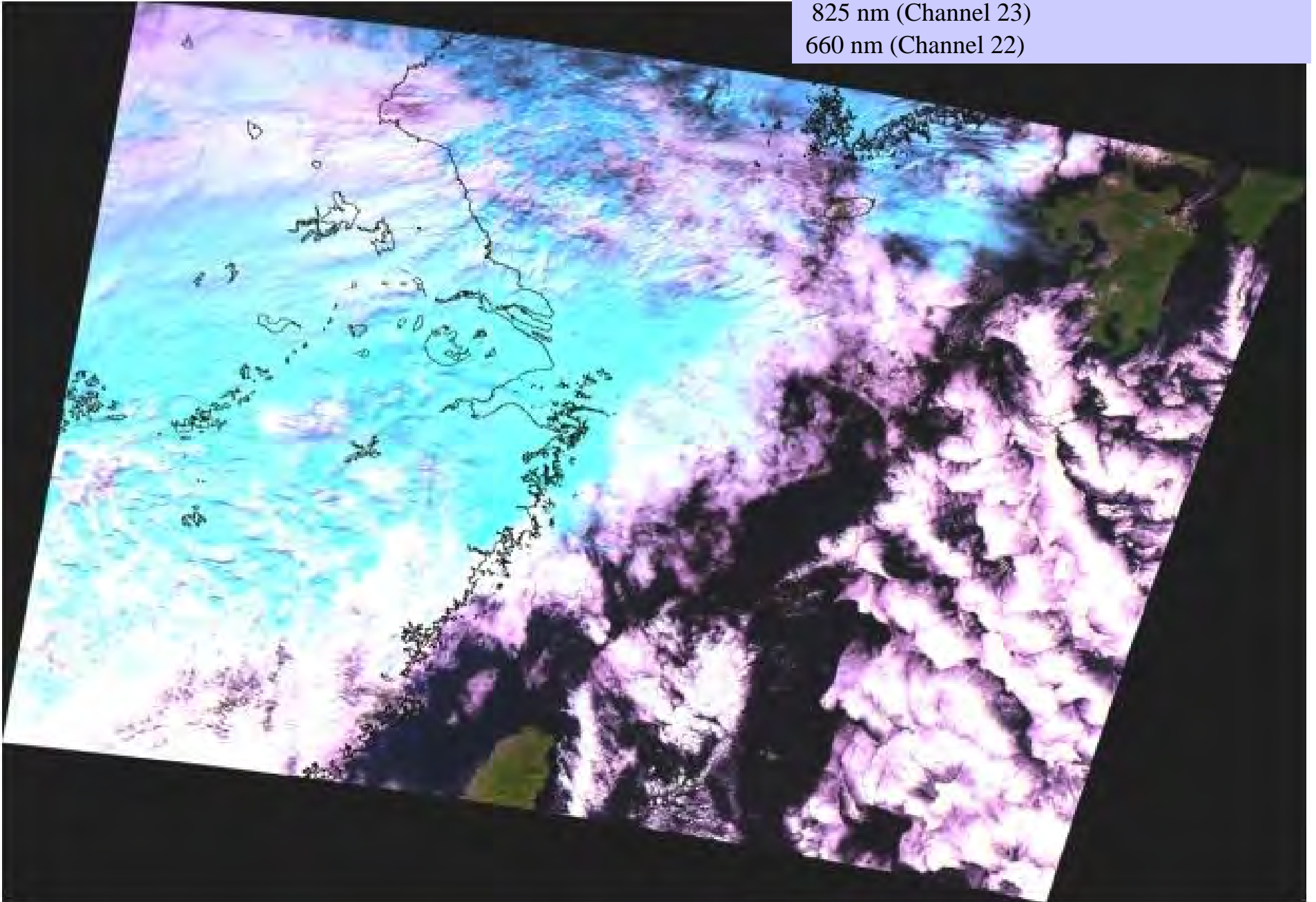
唐津湾(250m)



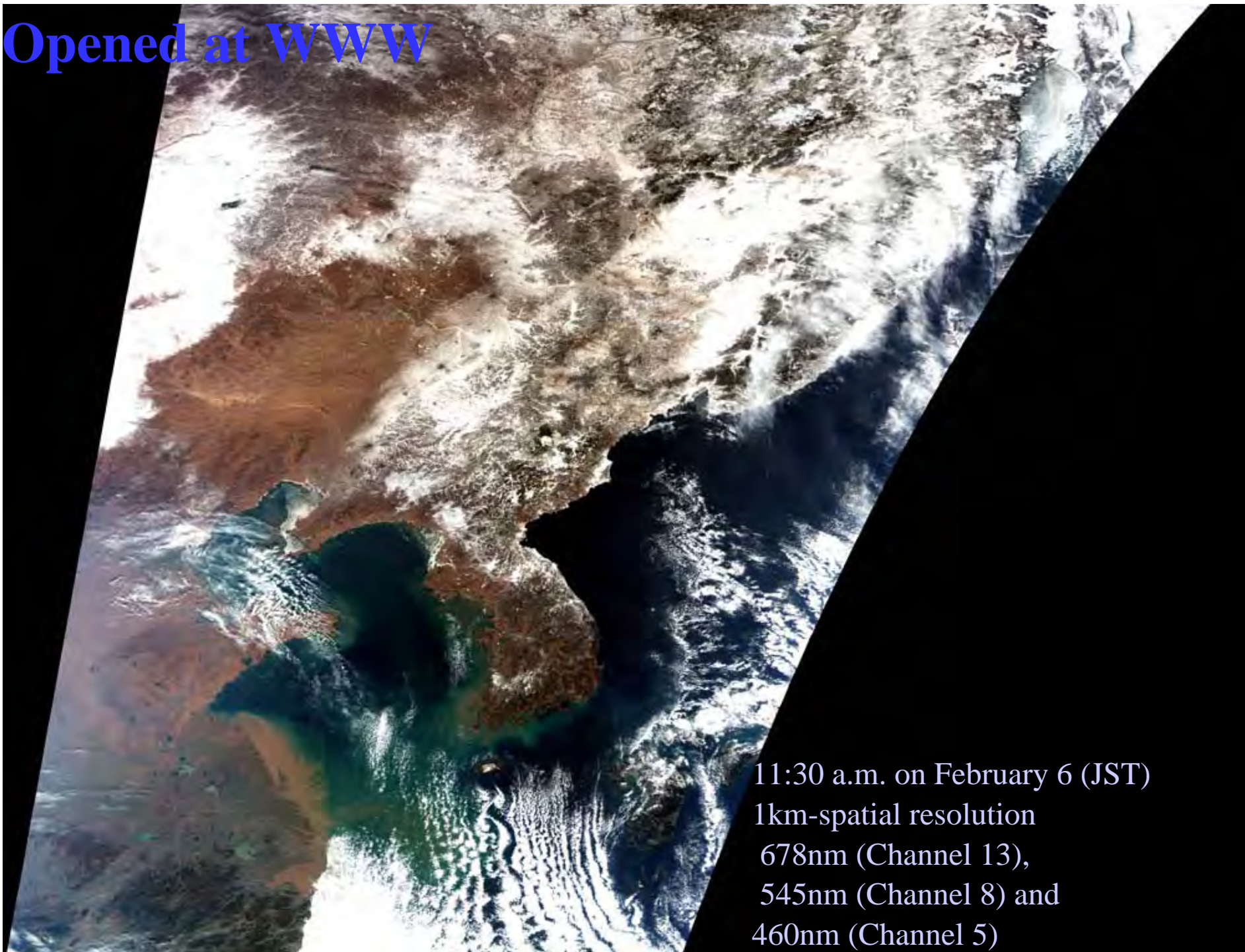
諫早湾(250m)

Opened at WWW

250m spatial resolution
1640 nm (Channel 28),
825 nm (Channel 23)
660 nm (Channel 22)

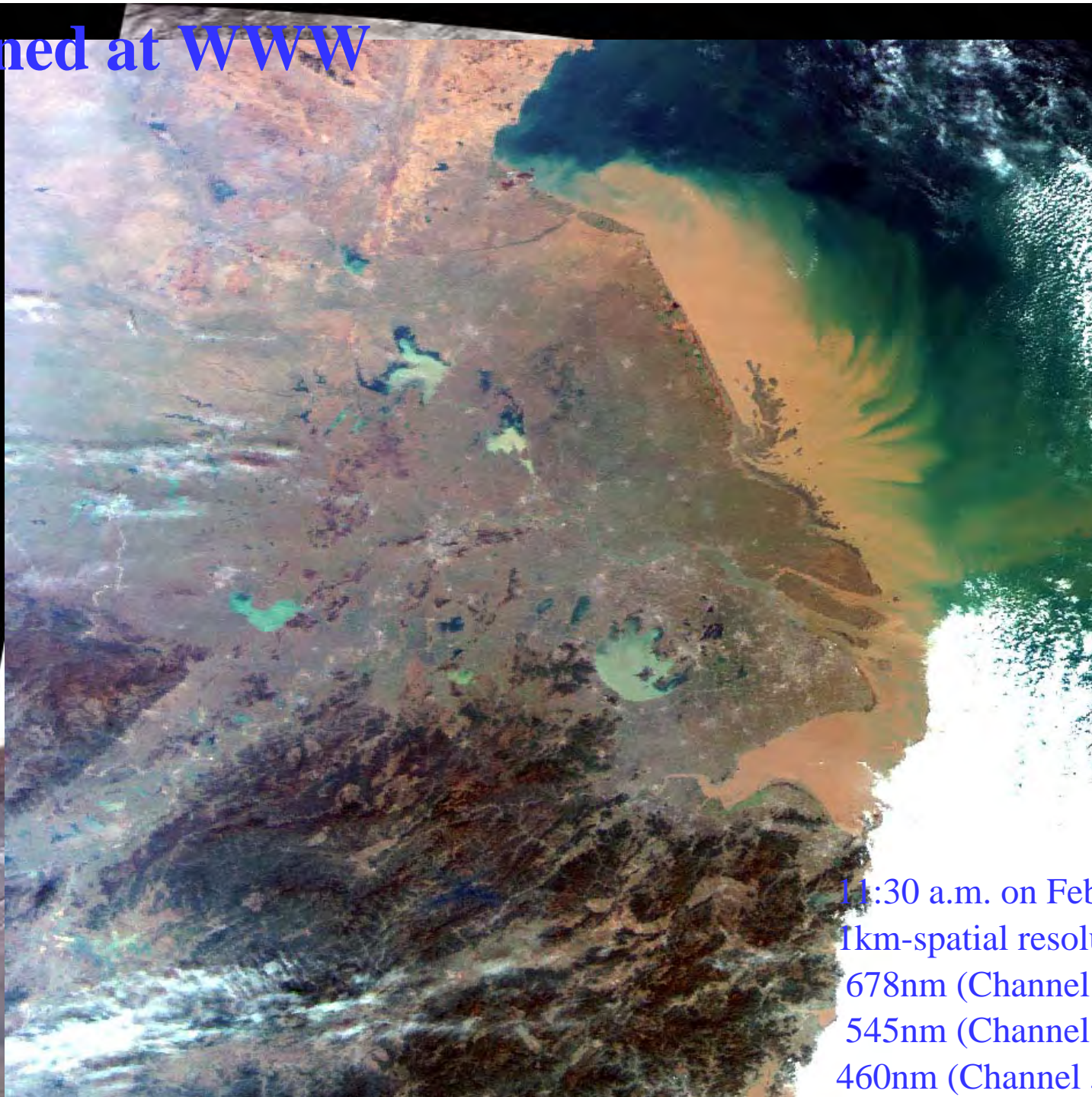


Opened at WWW



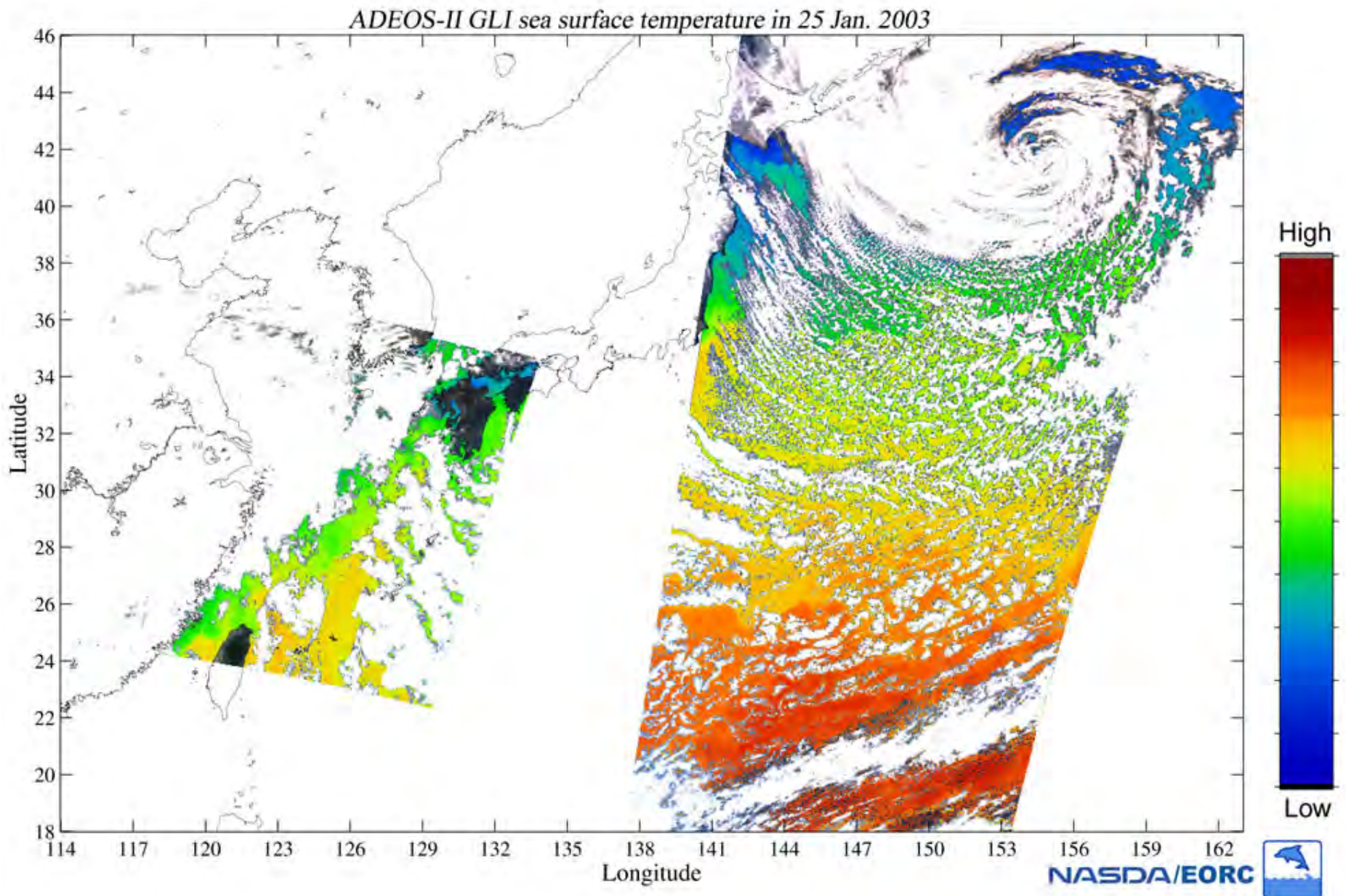
11:30 a.m. on February 6 (JST)
1km-spatial resolution
678nm (Channel 13),
545nm (Channel 8) and
460nm (Channel 5)

Opened at WWW

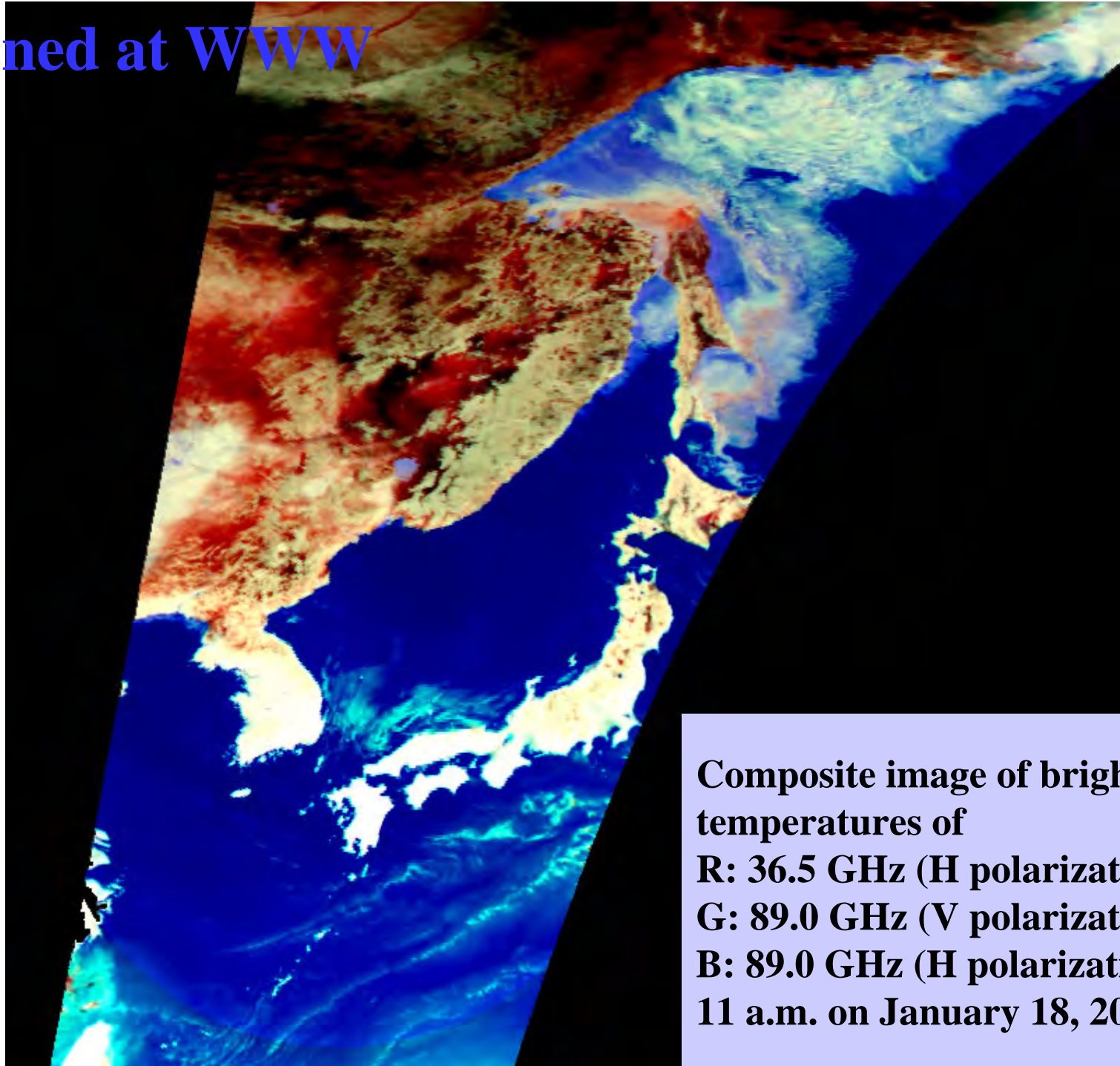


11:30 a.m. on February 6 (JST)
1km-spatial resolution
678nm (Channel 13),
545nm (Channel 8) and
460nm (Channel 5)

Opened at WWW



Opened at WWW



**Composite image of brightness
temperatures of
R: 36.5 GHz (H polarization)
G: 89.0 GHz (V polarization)
B: 89.0 GHz (H polarization)
11 a.m. on January 18, 2003 JST**

Opened at WWW

One of the first POLDER data acquired (before being processed): Spain and the north of Afri on Feb.7, 2003.

