

Mosaicking Status

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Processing problem 8% of the received image

1) SCANSAR : burst number changed once

2) Geo-referencing projection

most of the error

3) -> Finished today.

Products for the mosaicking

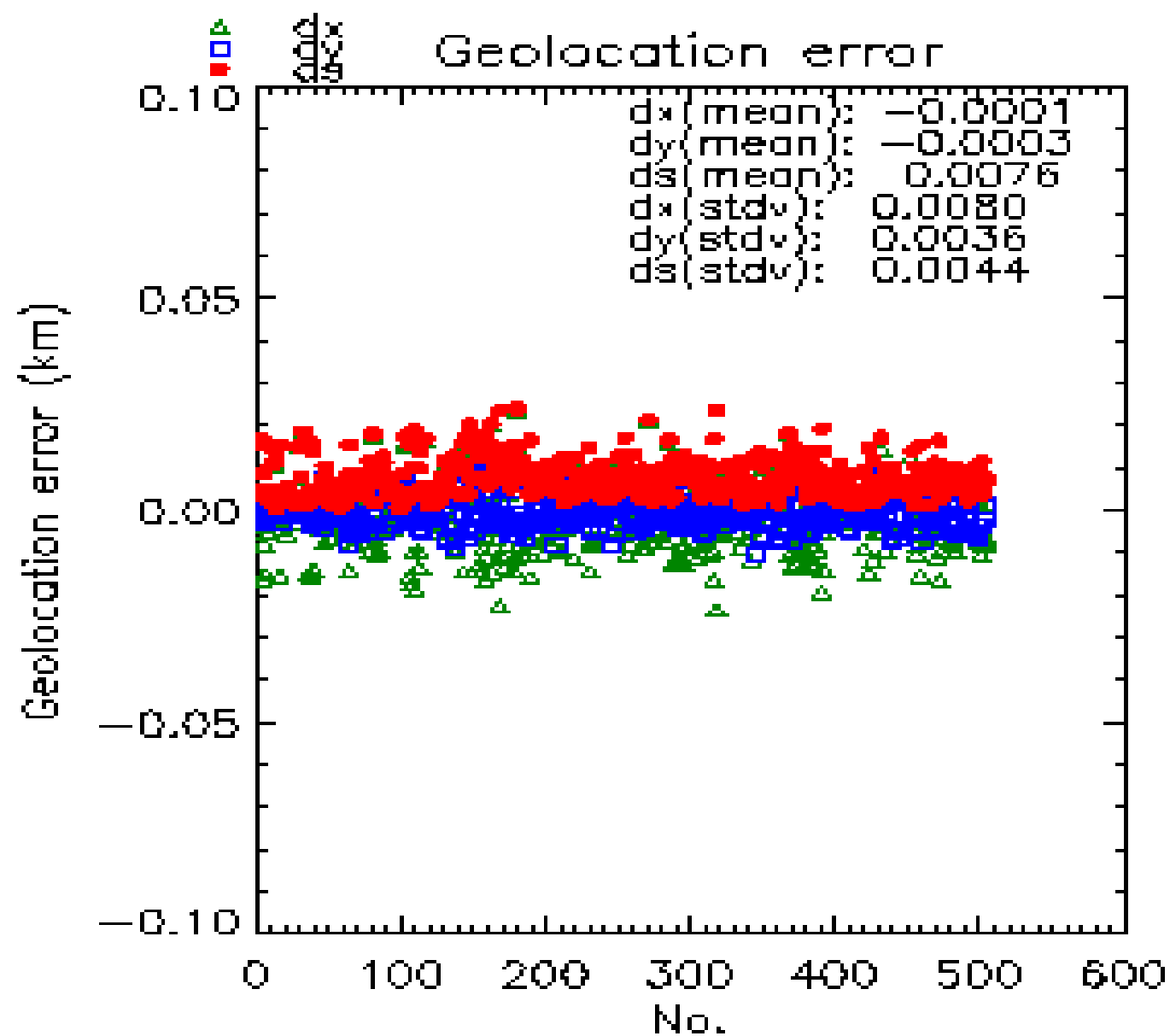
products	data	algorithm
64 look slant range amplitude-fine	strip	range-azimuth correlations- (range-Doppler)
ortho-rectified-fine	strip	SRTM-DEM based ortho
16 look slant range amplitude-scan	SCANSAR	range correlation and azimuth Specan
ortho-rectified-scan	SCANSAR	SRTM-DEM based ortho
16 look slant range amplitude-browse	strip	range correlation and azimuth Specan

Mosaicking algorithm basic

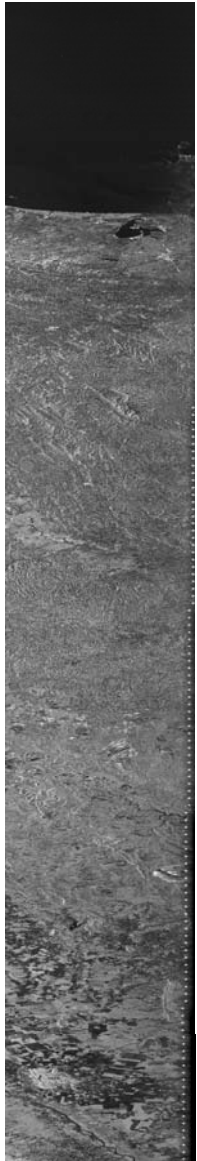
Step1: Project each strip (slant range and ortho rectified) to geo-referenced strip. (Mercator, LCC, EQR etc)

Step2: Paste the above strip to the main campus, where two selections.

- Case1: paste all the passes without considering the neighboring intensity difference
- Case2: paste all the passes correcting the foreshortening
- Correcting the intensity difference at the neighbors.



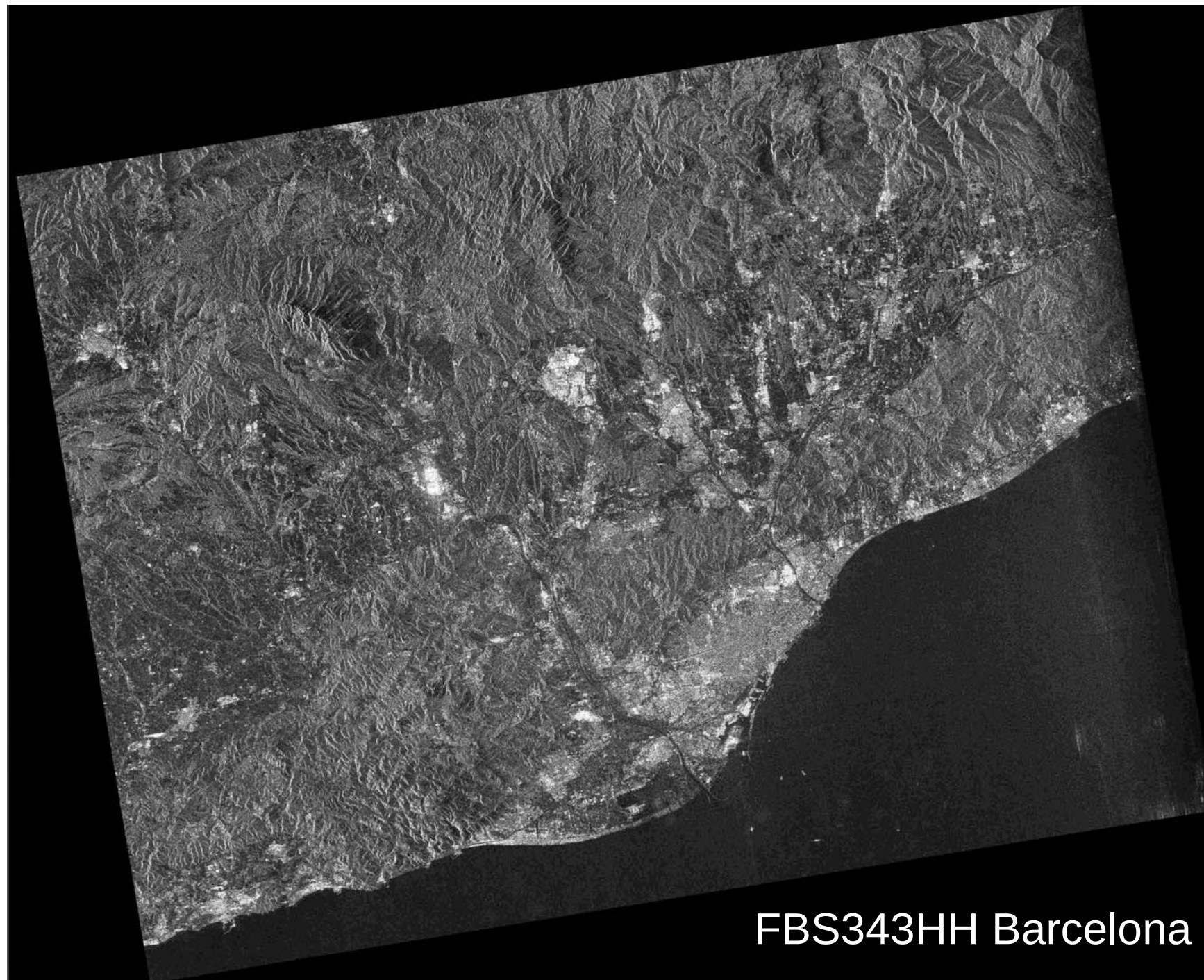
Sample images



Browse



70km



FBS343HH Barcelona

K&C Meeting 資料

- 1. モザイク
 - 1. 1 モザイク作成状況
 - 1. 2 モザイクサンプル
 - 1. 3 スラントレンジモザイクとオルソモザイクの比較
- 2. 幾何精度評価結果
 - 2. 1 東日本モザイク幾何精度評価グラフ
 - 2. 2 ボルネオモザイク幾何精度評価グラフ
 - 2. 3 幾何精度評価結果
- 3. Tileモザイク
 - 3. 1 Tile区切り図
 - 3. 2 Tile画像サンプル
- 4. データ取得状況

1. Mosaic

1. 1 Generation status

Mosaic area	Mosaic type	Mode	Pixel spacing	Map projection
Japan all	Slant Range	FBS343	200m	EQR
East Japan	Slant Range	FBS343	50m	EQR
	Ortho	FBS343	50m	EQR
Borneo	Slant Range	FBS415	50m	EQR
	Slant Range	FBS415	100m	EQR

※ EQR : Equi rectangular projection

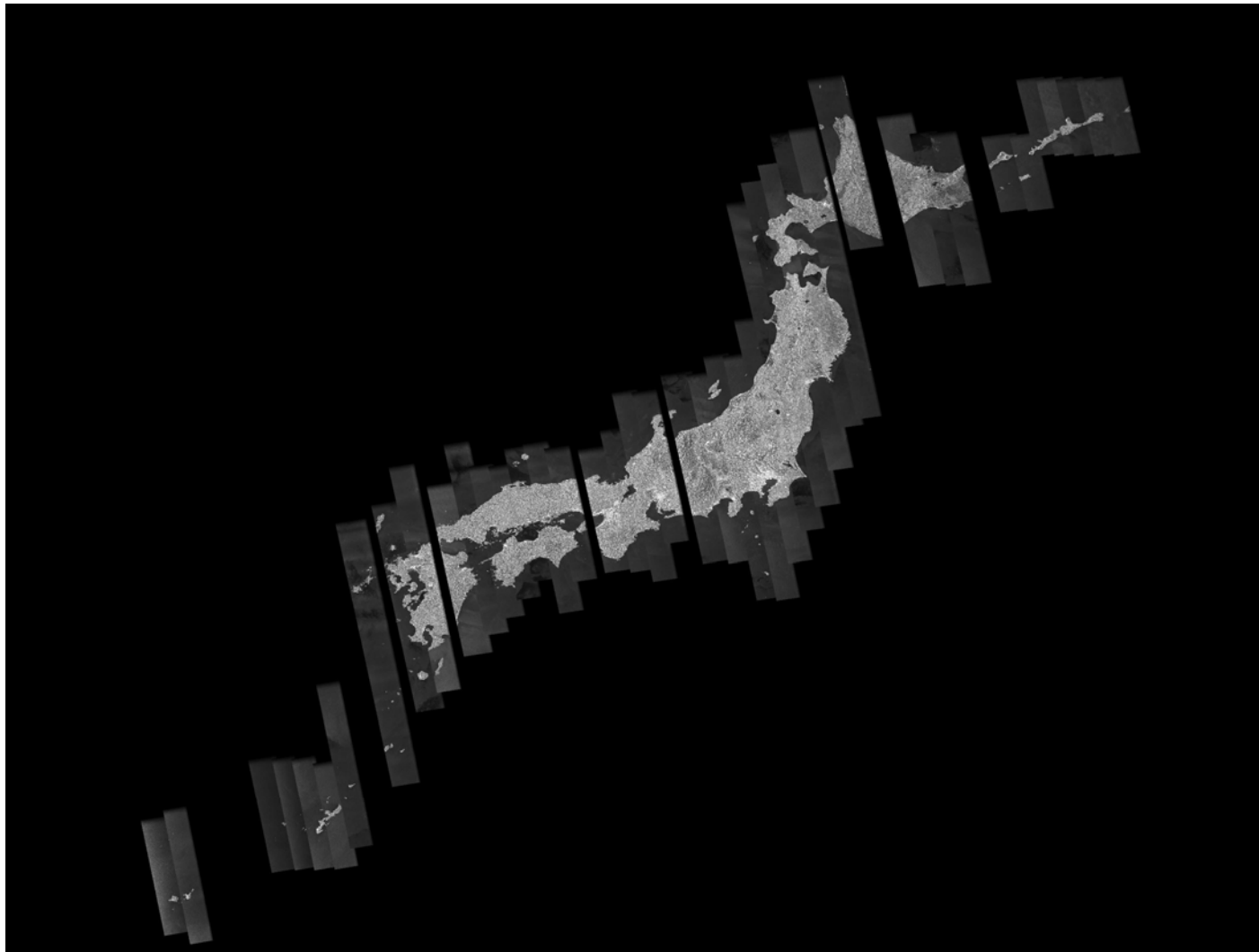
1.2 Mosaic example (1/3)

Mosaic area : Japan all

Mode : FBS34.3 [deg]

Data : RSP384~441

Obs.Date : Dec,2006 ~ Jan,2007



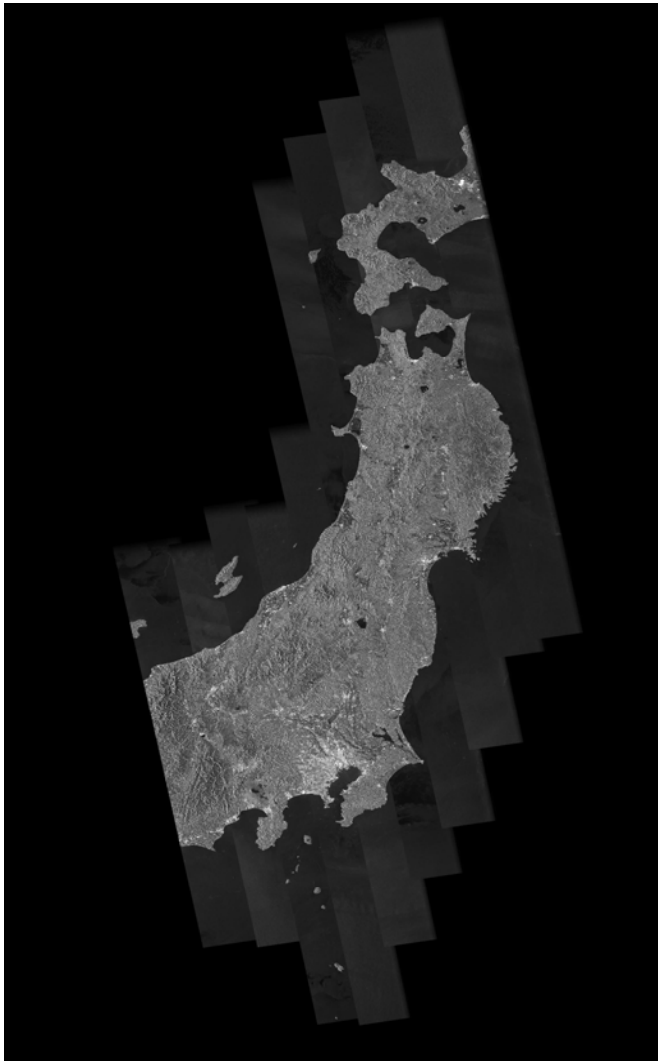
1.2 Mosaic example(2/3)

Mosaic area : East Japan

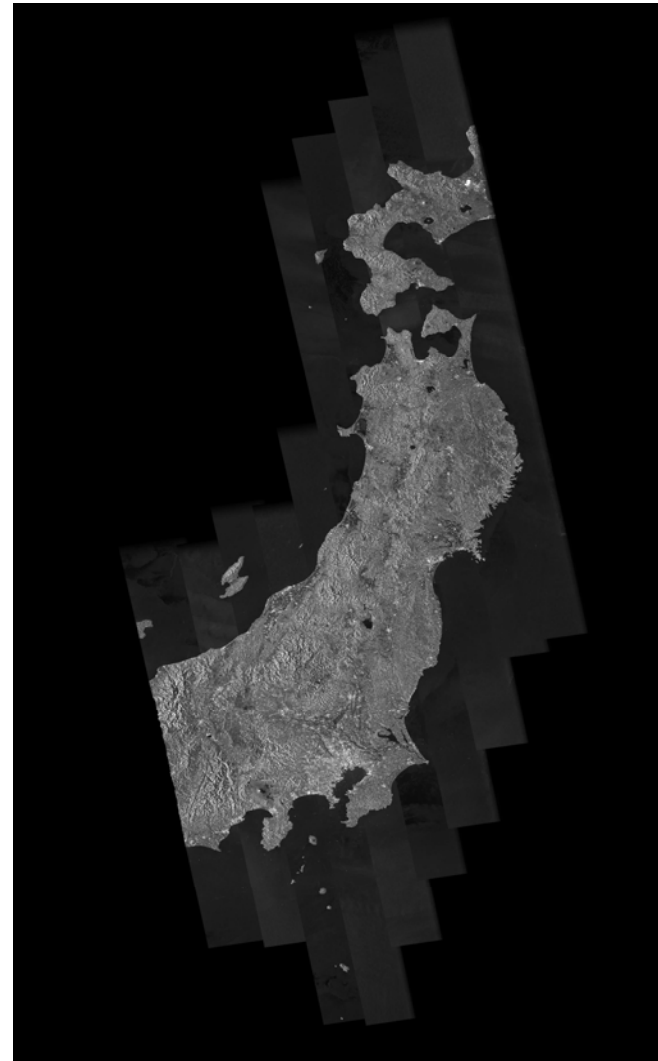
Mode : FBS34.3 [deg]

Data : RSP400~409

Obs.Date : Dec,2006 ~ Jan,2007



Slant Range mosaic



Ortho mosaic

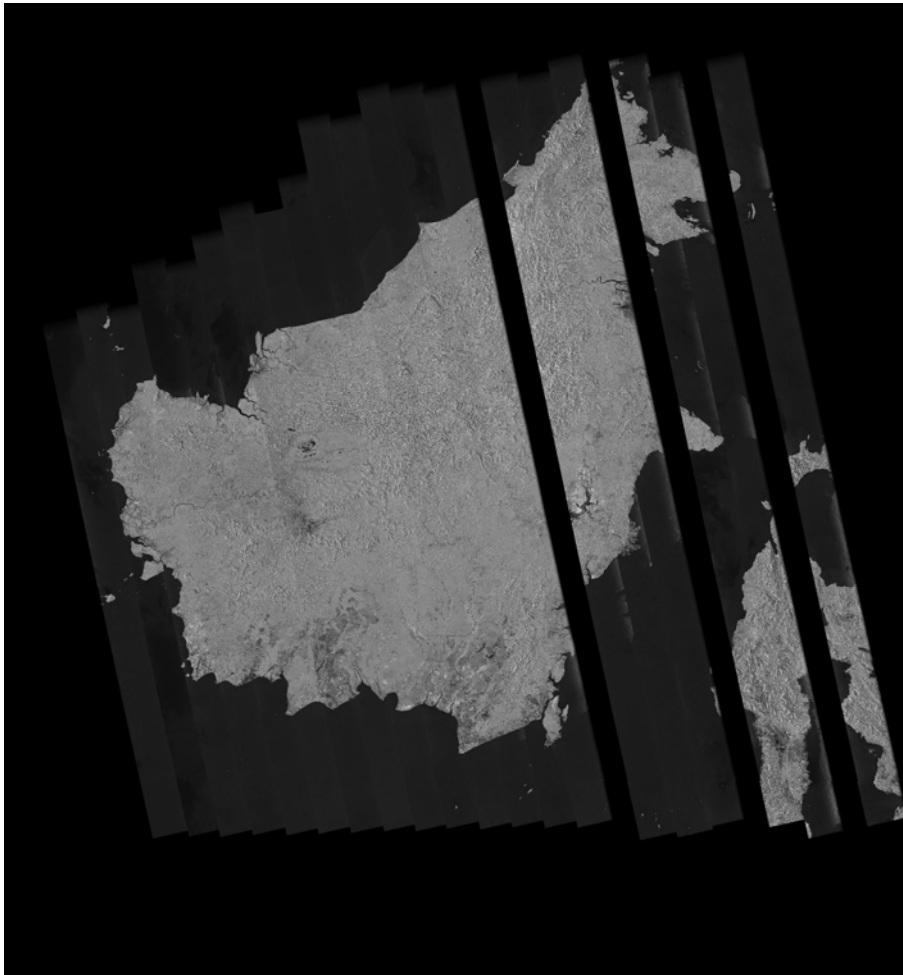
1.2 Mosaic example (3/3)

Mosaic area : Borneo

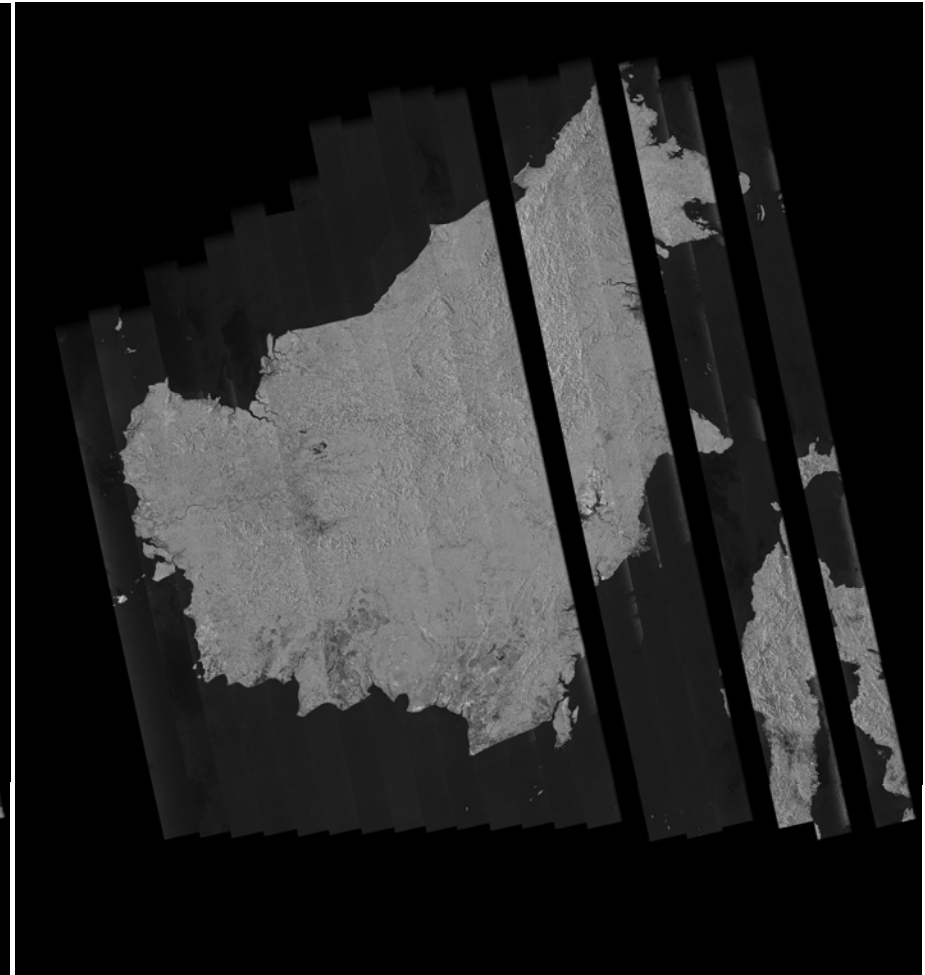
Mode : FBS41.5 [deg]

Data : RSP412~434

Obs.Date : Aug~Oct, 2006



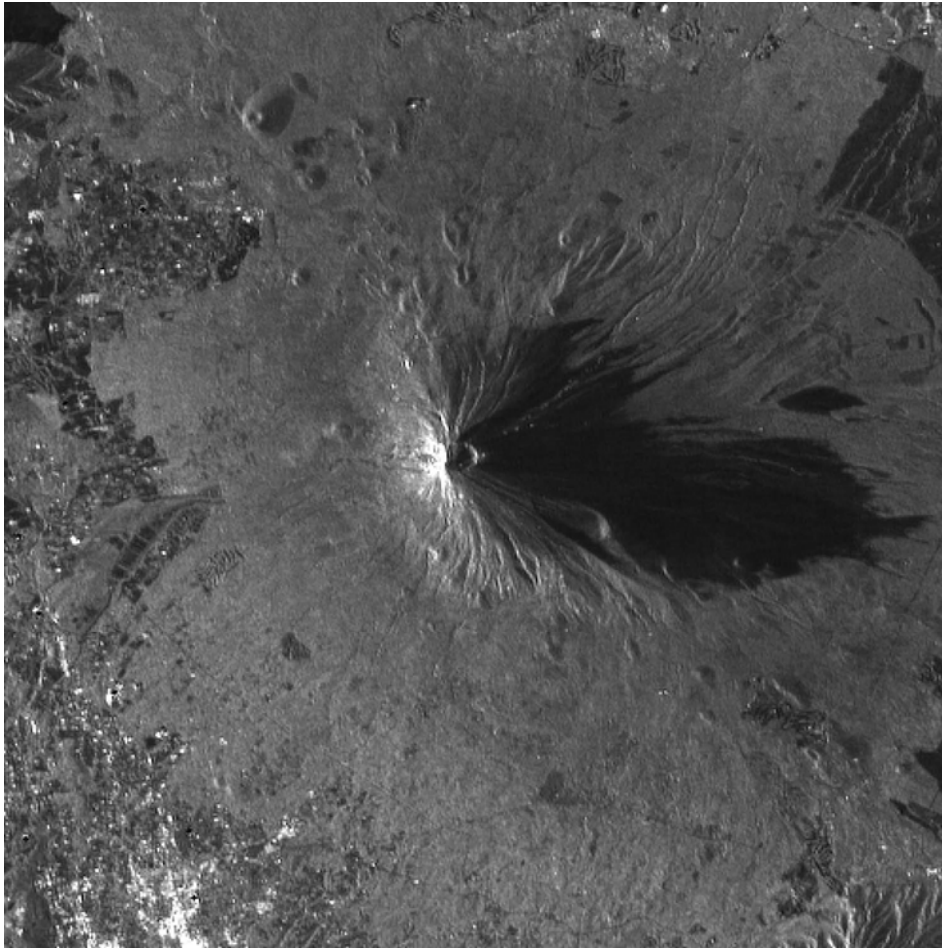
Pixel spacing : 50m



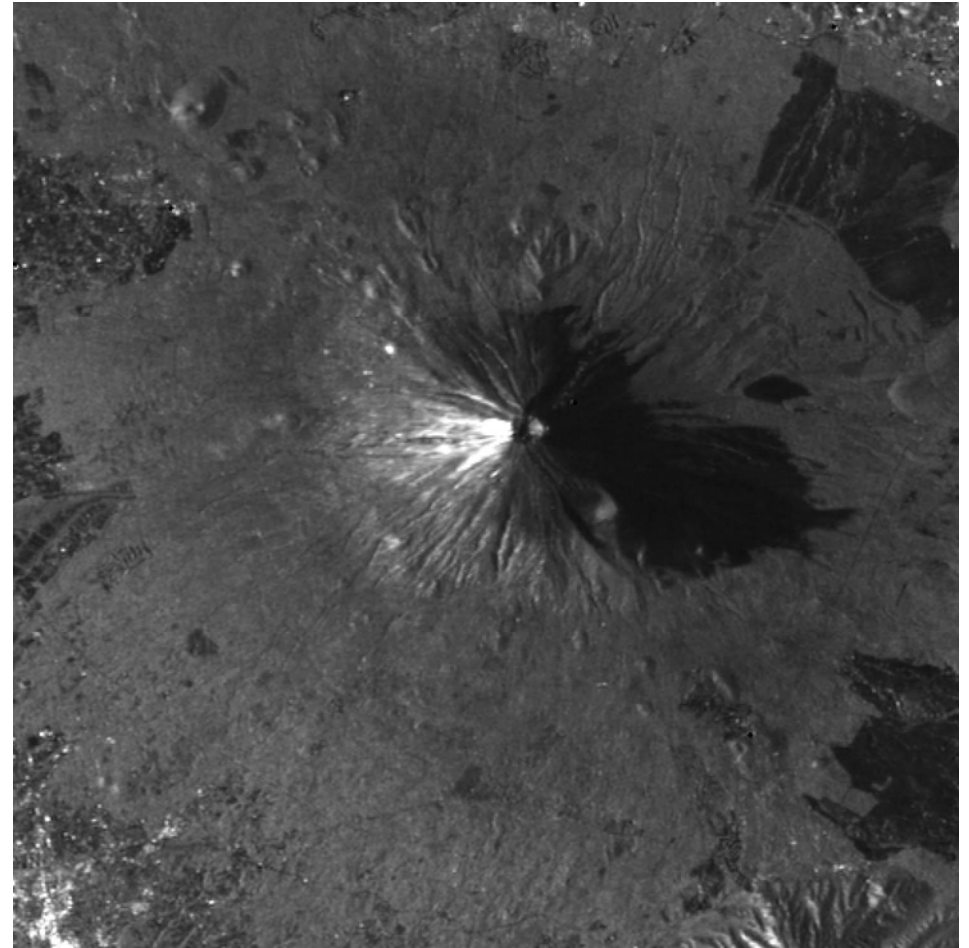
Pixel spacing : 100m

1.3 Comparison of Slant range mosaic and ortho mosaic (1/2)

【Mt. Fuji region】

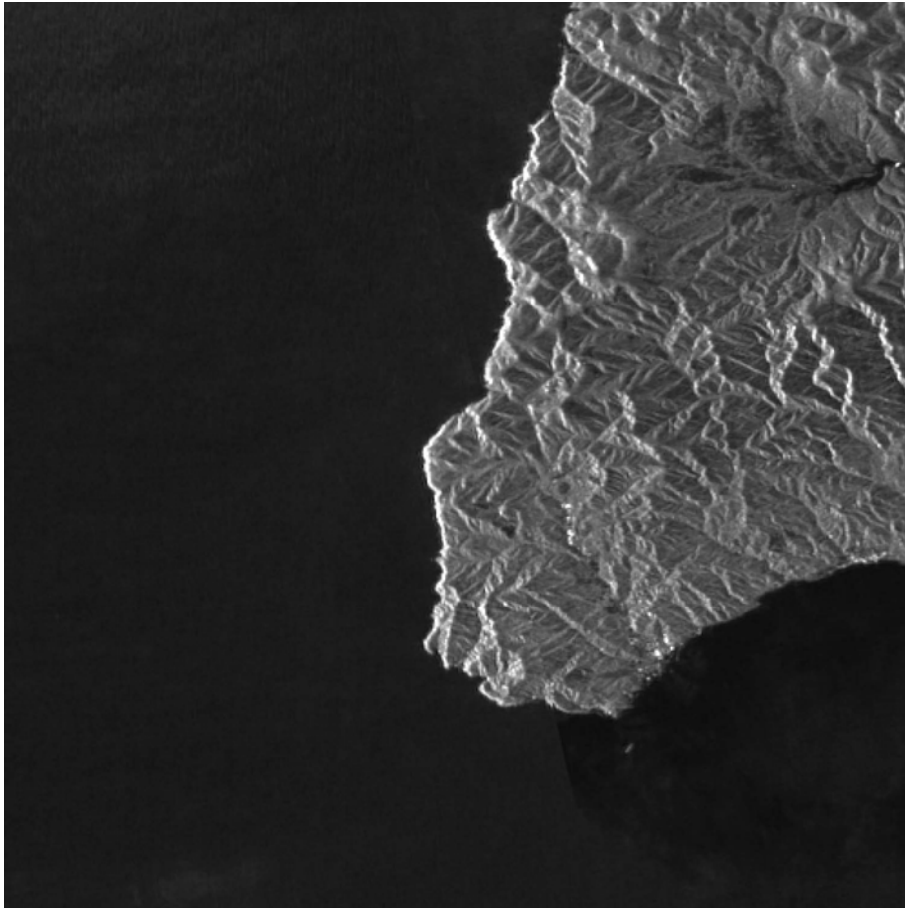


Slant Range mosaic

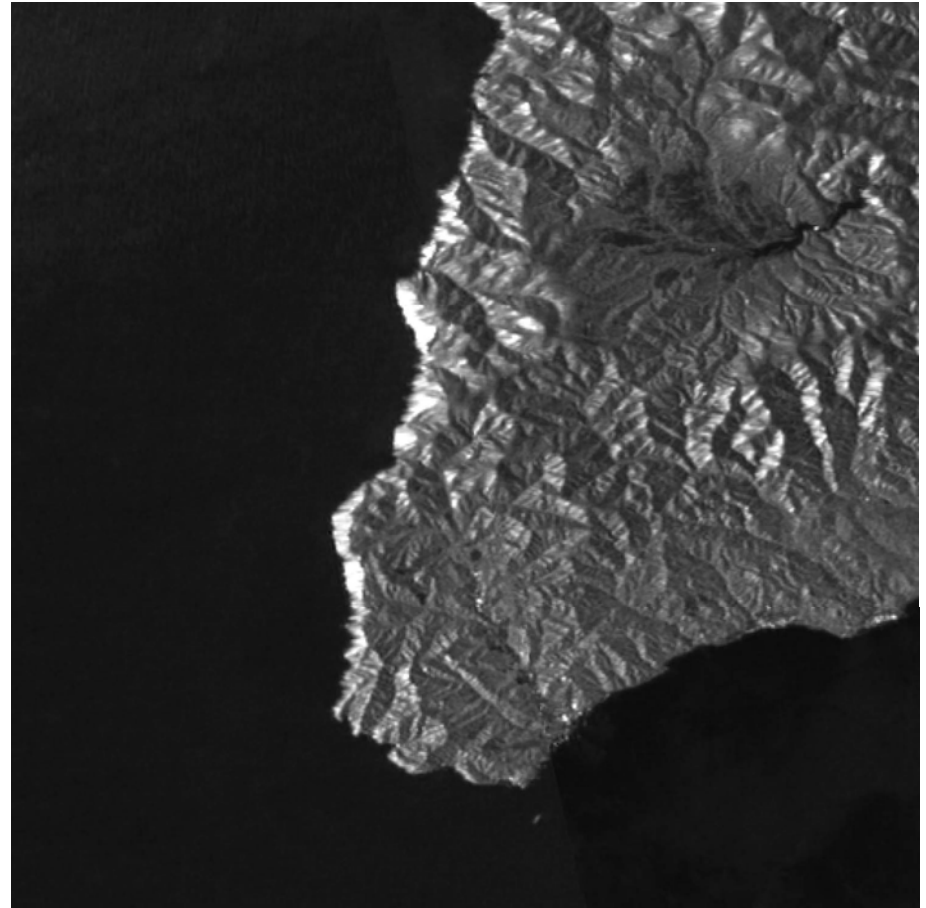


Ortho mosaic

1.3 Comparison of slant range and ortho mosaic (2/2) - border between two passes



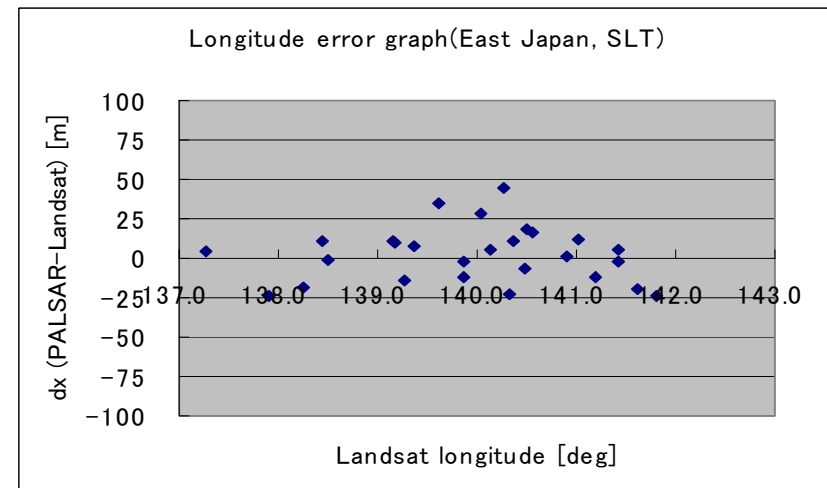
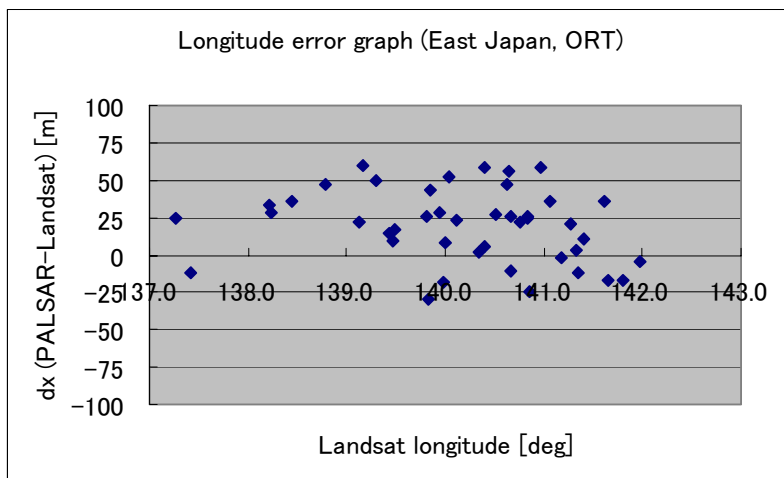
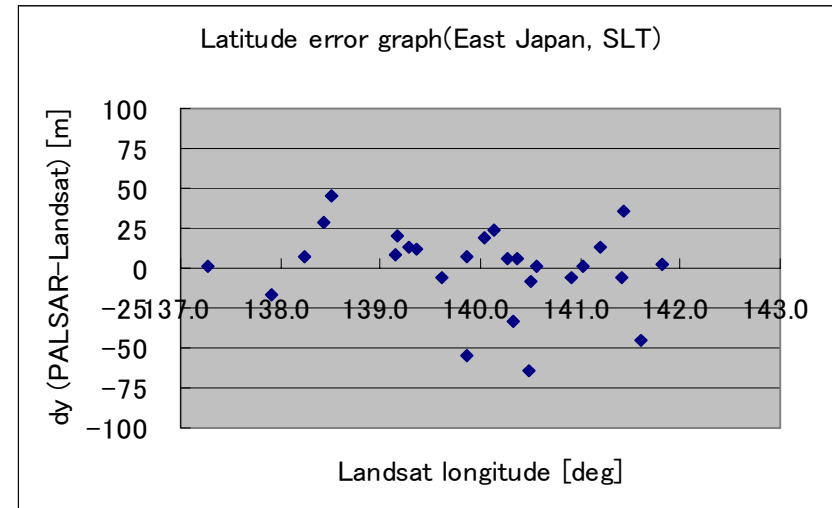
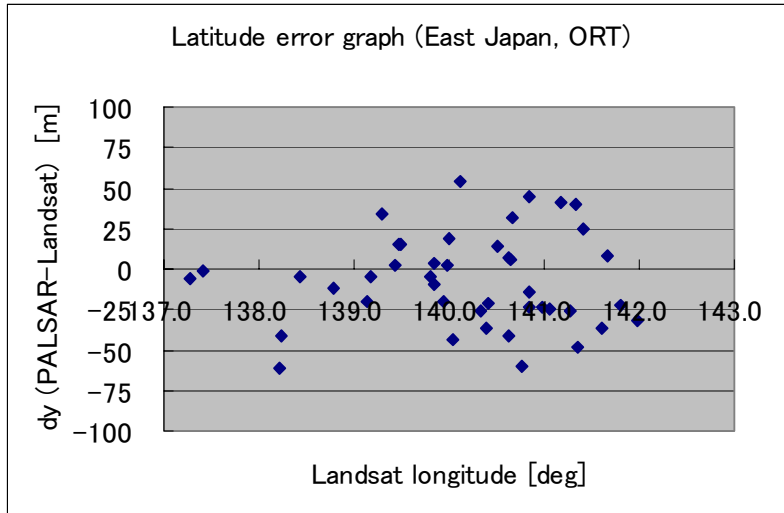
Slant Range mosaic



Ortho mosaic

2. Geometric evaluation

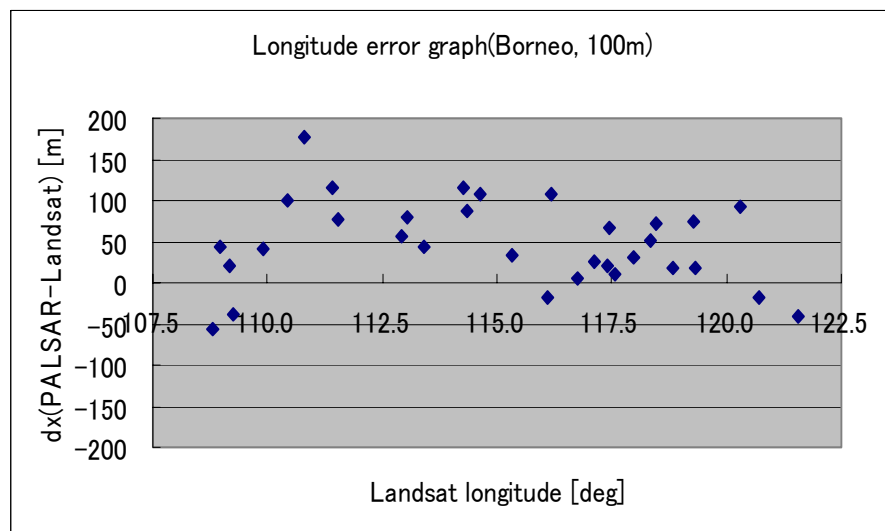
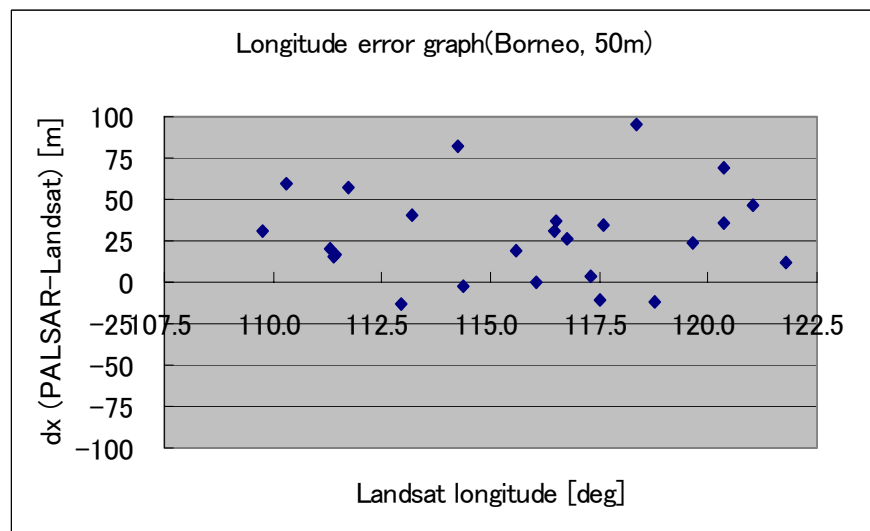
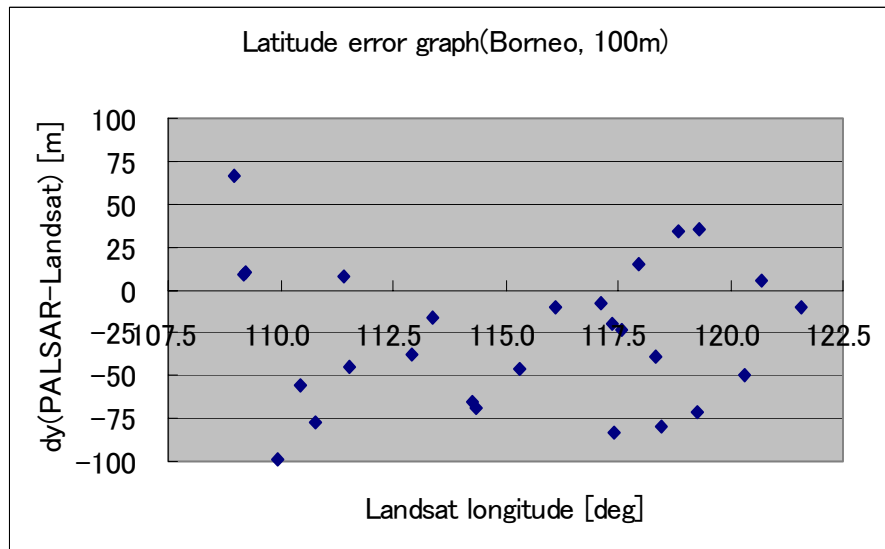
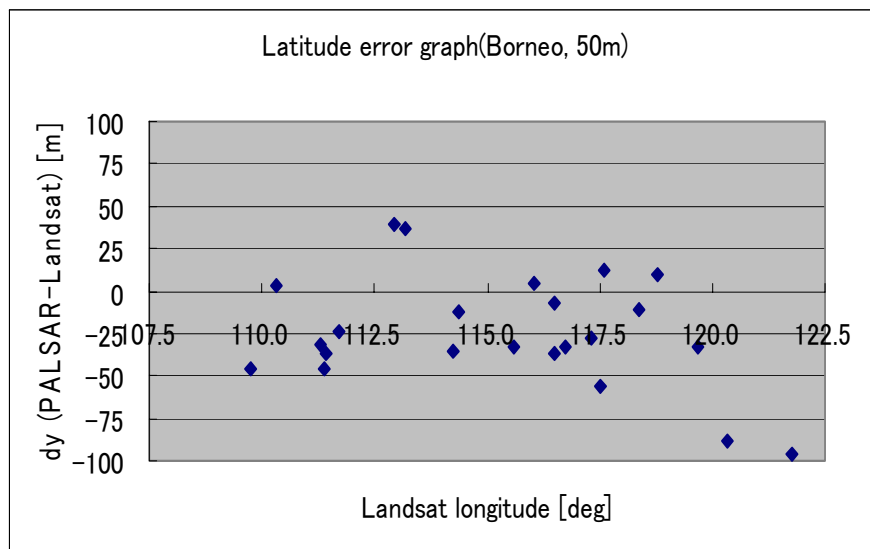
2.1 East Japan



Ortho rectified image

Slant range image

2.2 Geometric evaluation - Borneo Mosaic



50m Borneo mosaic

100m-Borneo mosaic

2.3 Geometric evaluations

Mosaic name	Mosaic type	Pixel spacing	GCP	RMSE [deg]		RMSE [m]	
				Latitude	Longitude	Latitude	Longitude
East Japan	Slant Range	50m	35	0.000387	0.000432	42.91	37.61 ※1
	Ortho	50m	43	0.00026	0.000355	28.91	30.9 ※1
Borneo	Slant Range	50m	27	0.000516	0.000556	57.23	61.86 ※2
	Slant Range	100m	32	0.000585	0.000629	64.99	70.03 ※2

※1 East Japan : 1[deg] ≐ 87[km/deg]
 ※2 Borneo : 1[deg] ≐ 110[km/deg]

$$RMSE = \sqrt{\frac{\sum_{i=1}^N (A_{(i)} - T_{(i)})^2}{N}}$$

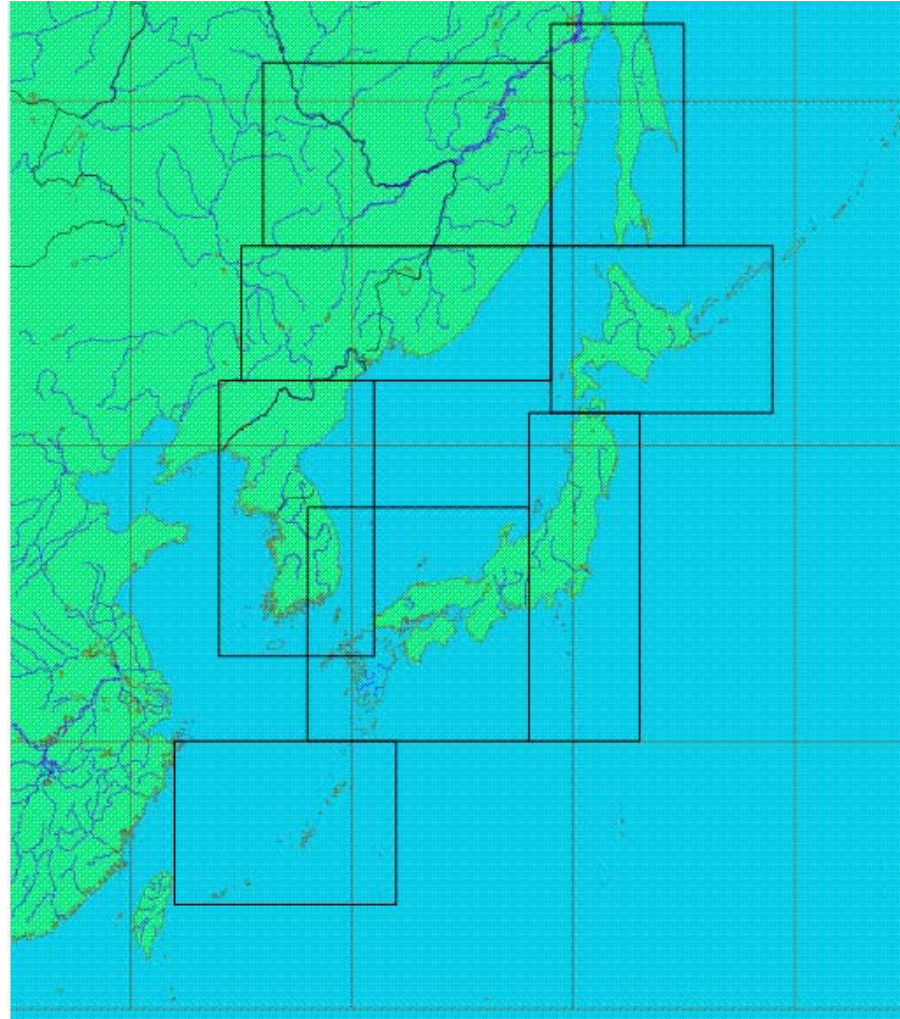
A(i) : PALSAR mosaic latitude or longitude

T(i) : Landsat mosaic latitude or longitude

N : Number of GCP

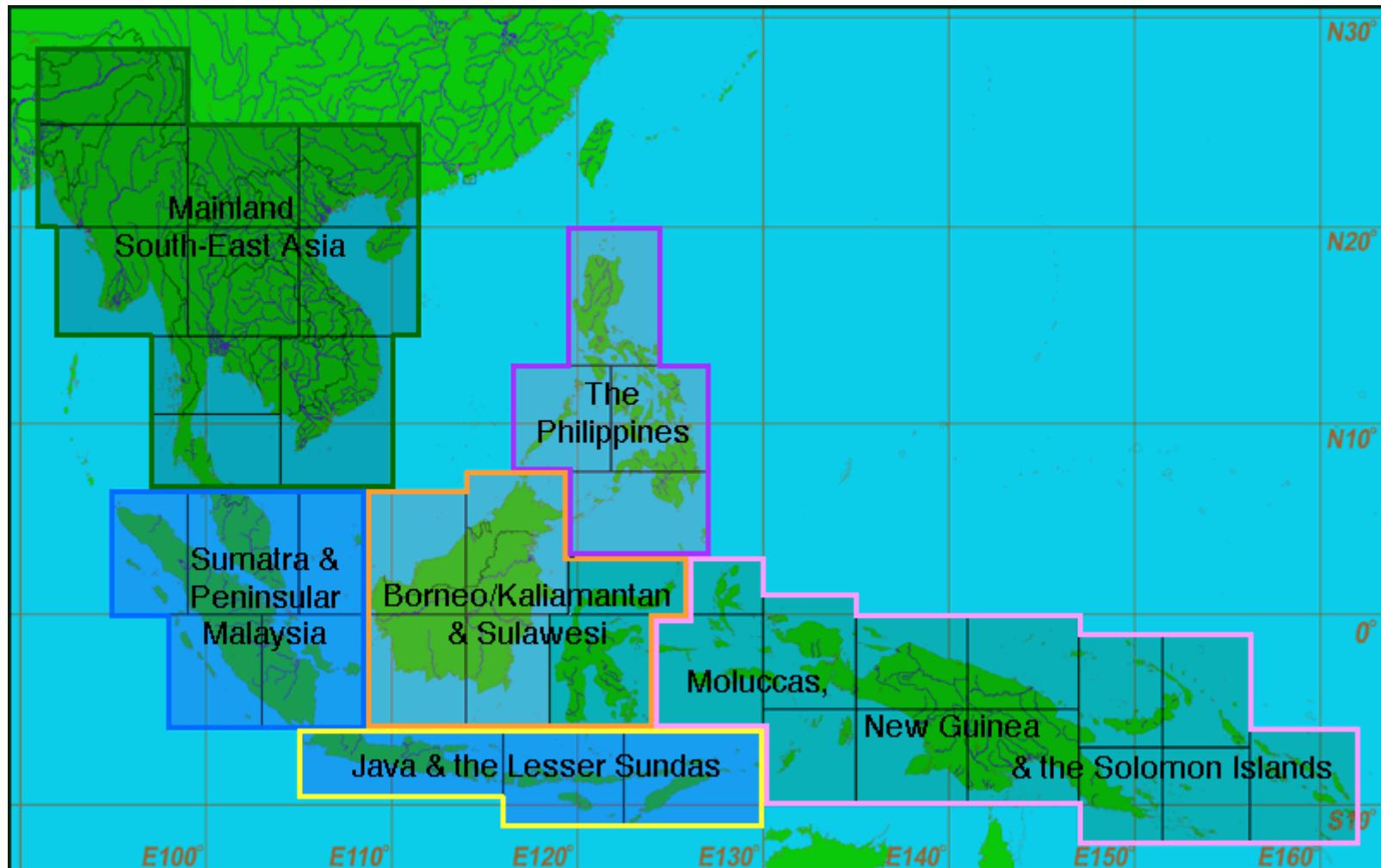
3. Tile images

3.1 Tile definition (1/2)



Japan area Tile map

3.1 Tile definitions (2/2)

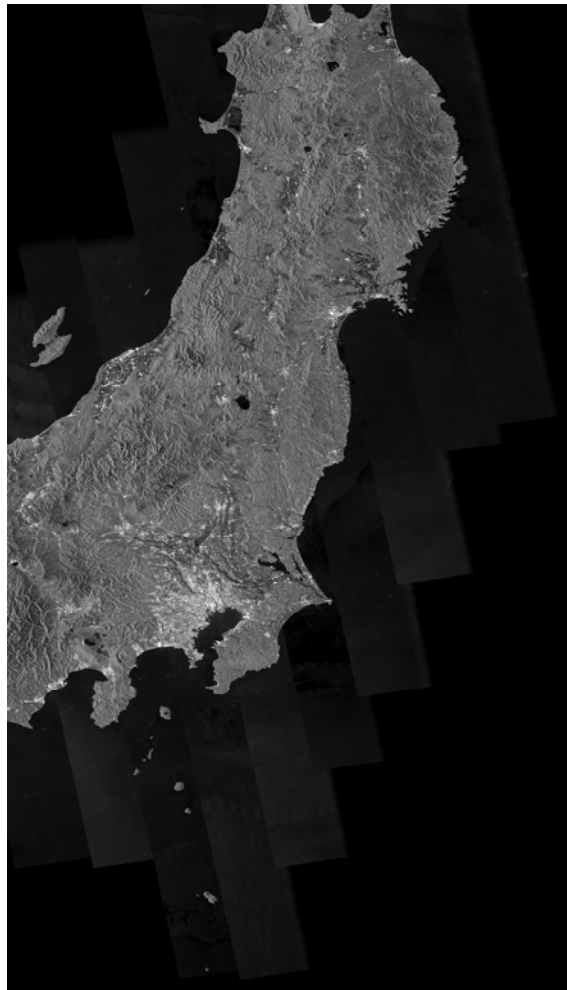


South-East Asia area Tile map

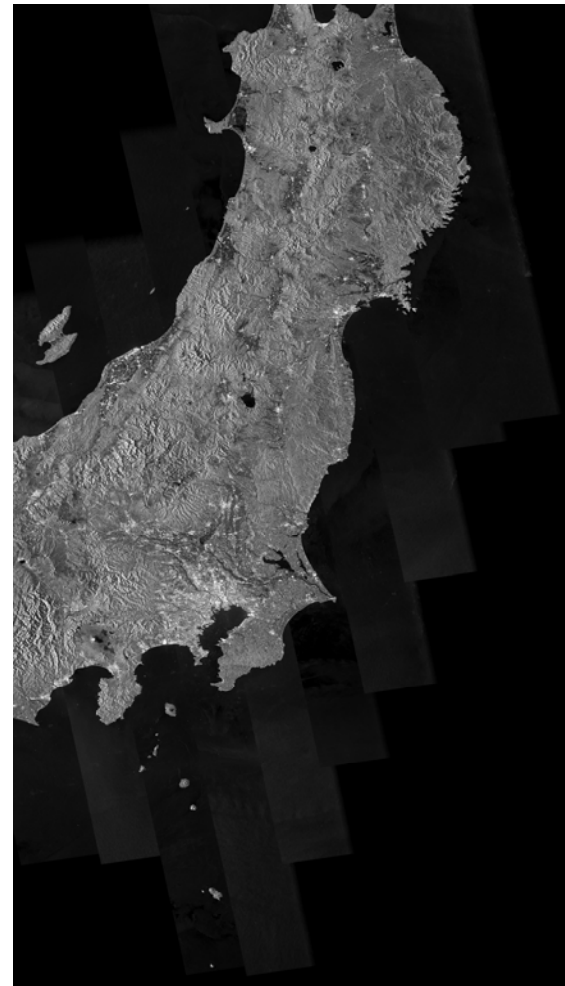
3.2 Tile image samples (1/2)

【Tile information】

Upper Left Corner		Lower Right Corner		pixel	line	Mbytes
Latitude	Longitude	Latitude	Longitude			
41.0	138.0	32.25	143.0	11133	19481	212



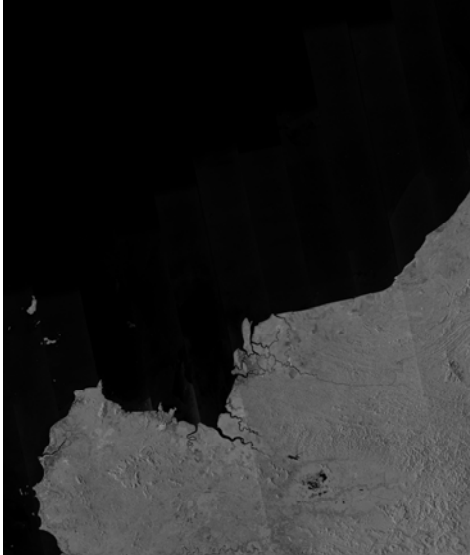
Slant Range mosaic



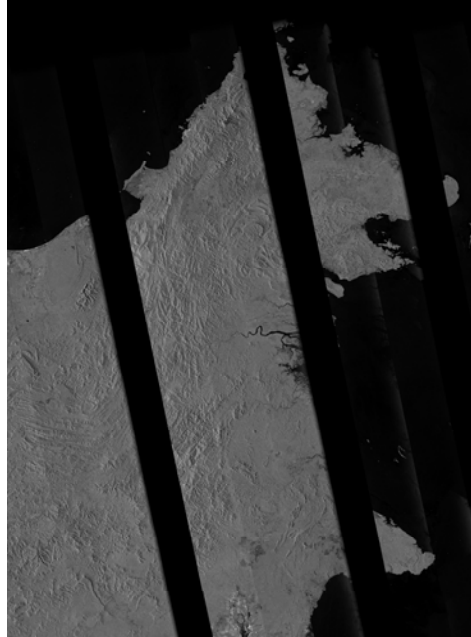
Ortho mosaic

3.2 Tile image samples(2/2)

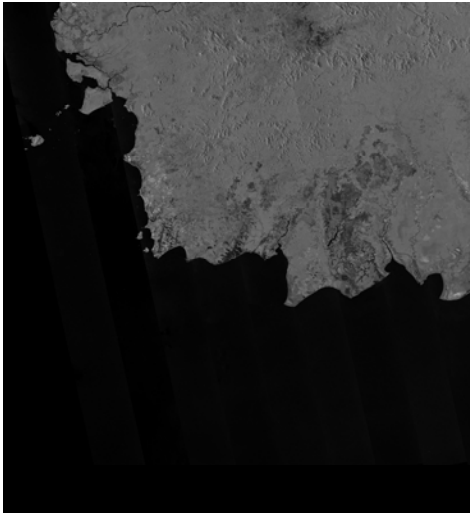
Tile #1



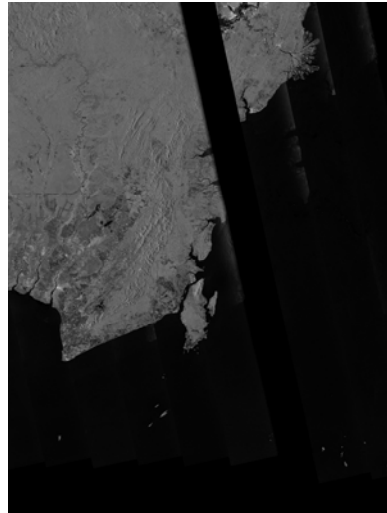
Tile #3



Tile #2



Tile #4

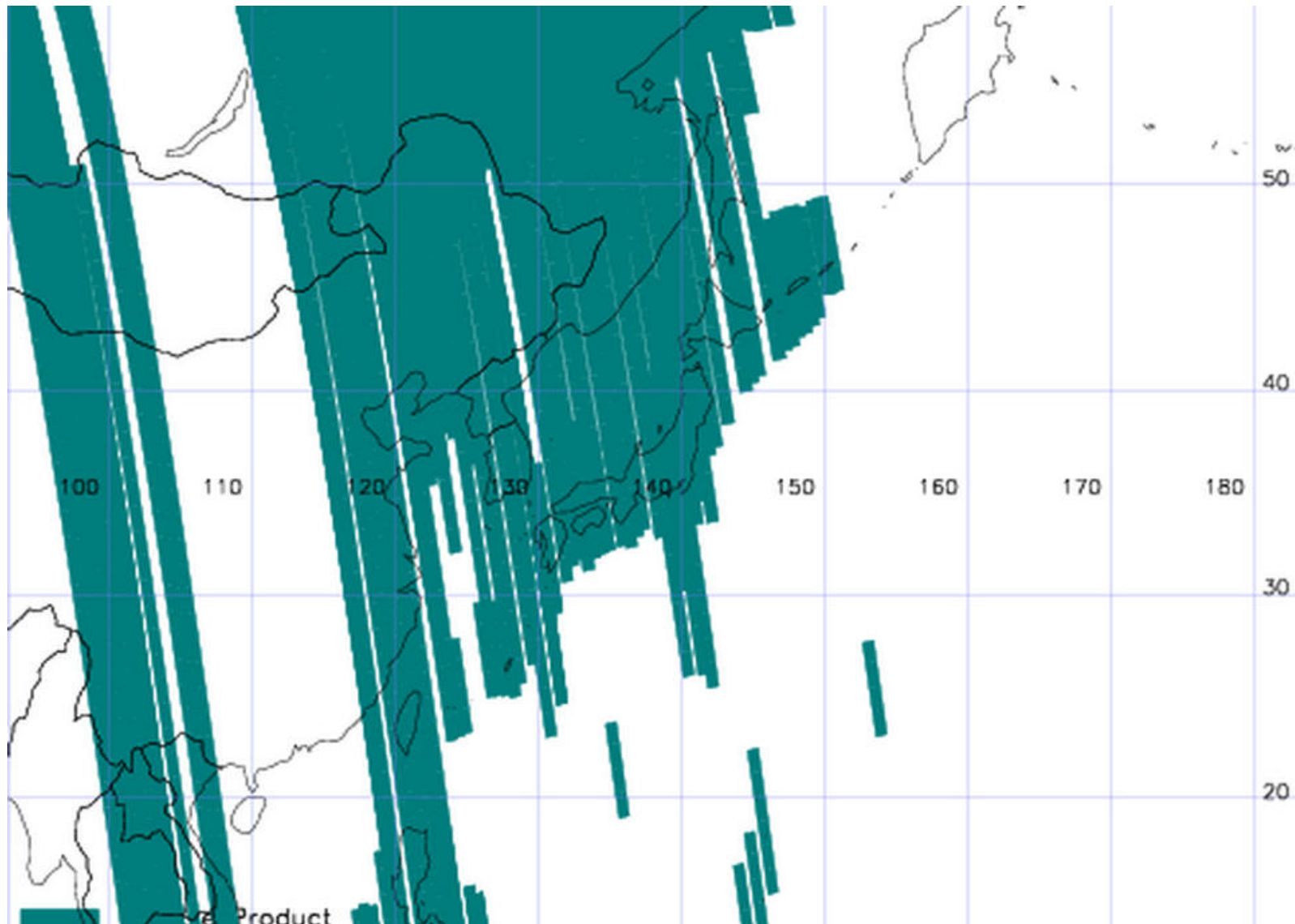


【Tile information】

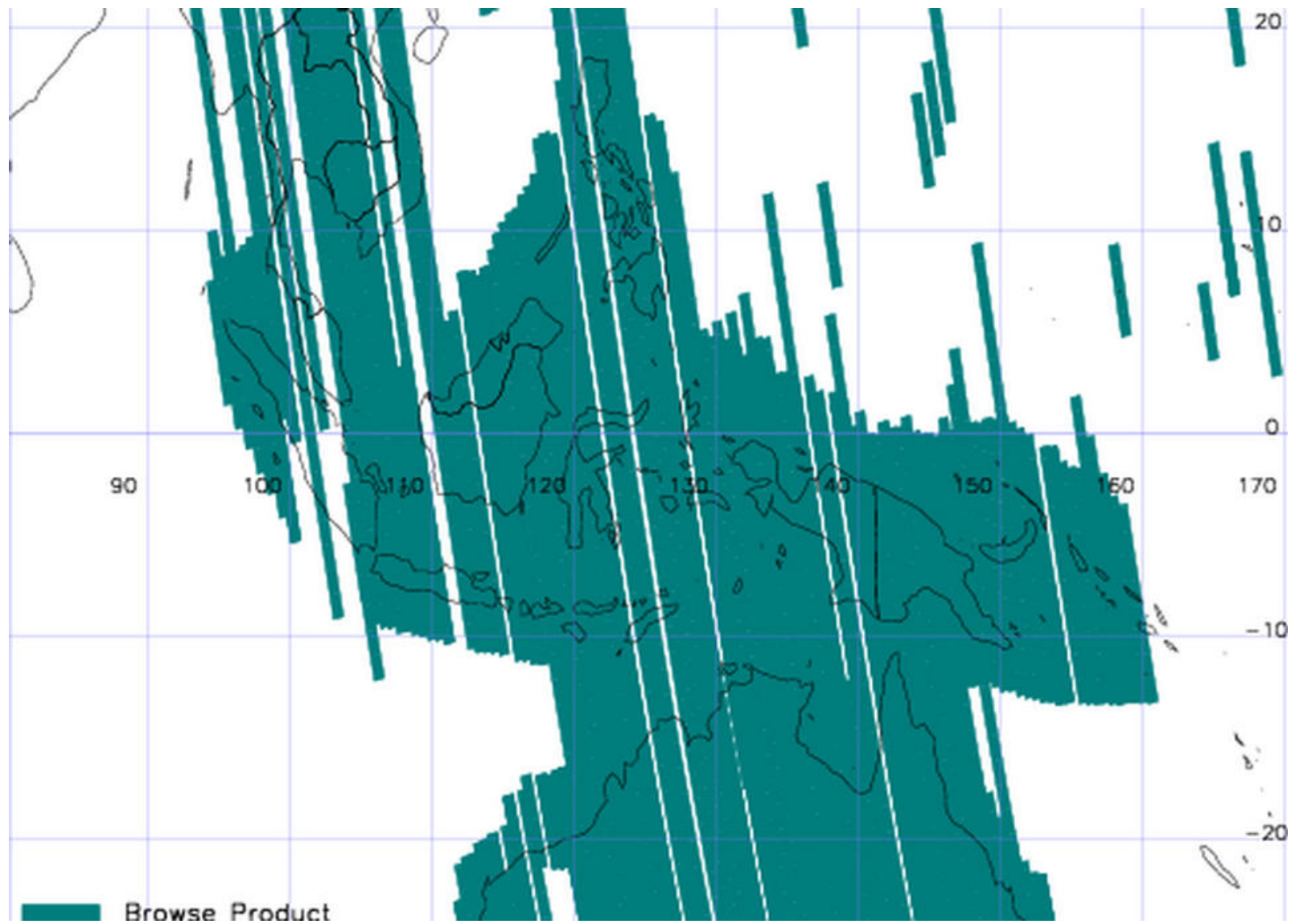
Tile #	Upper Left Corner		Lower Right Corner		pixel	line	Mbytes
	Latitude	Longitude	Latitude	Longitude			
1	6.5	108.5	0.0	114.0	12246	14473	173
2	0.0	108.5	-6.0	114.0	12246	13358	160
3	7.5	114.0	0.0	119.5	12246	16699	200
4	0.0	114.0	-6.0	118.5	10019	13358	131

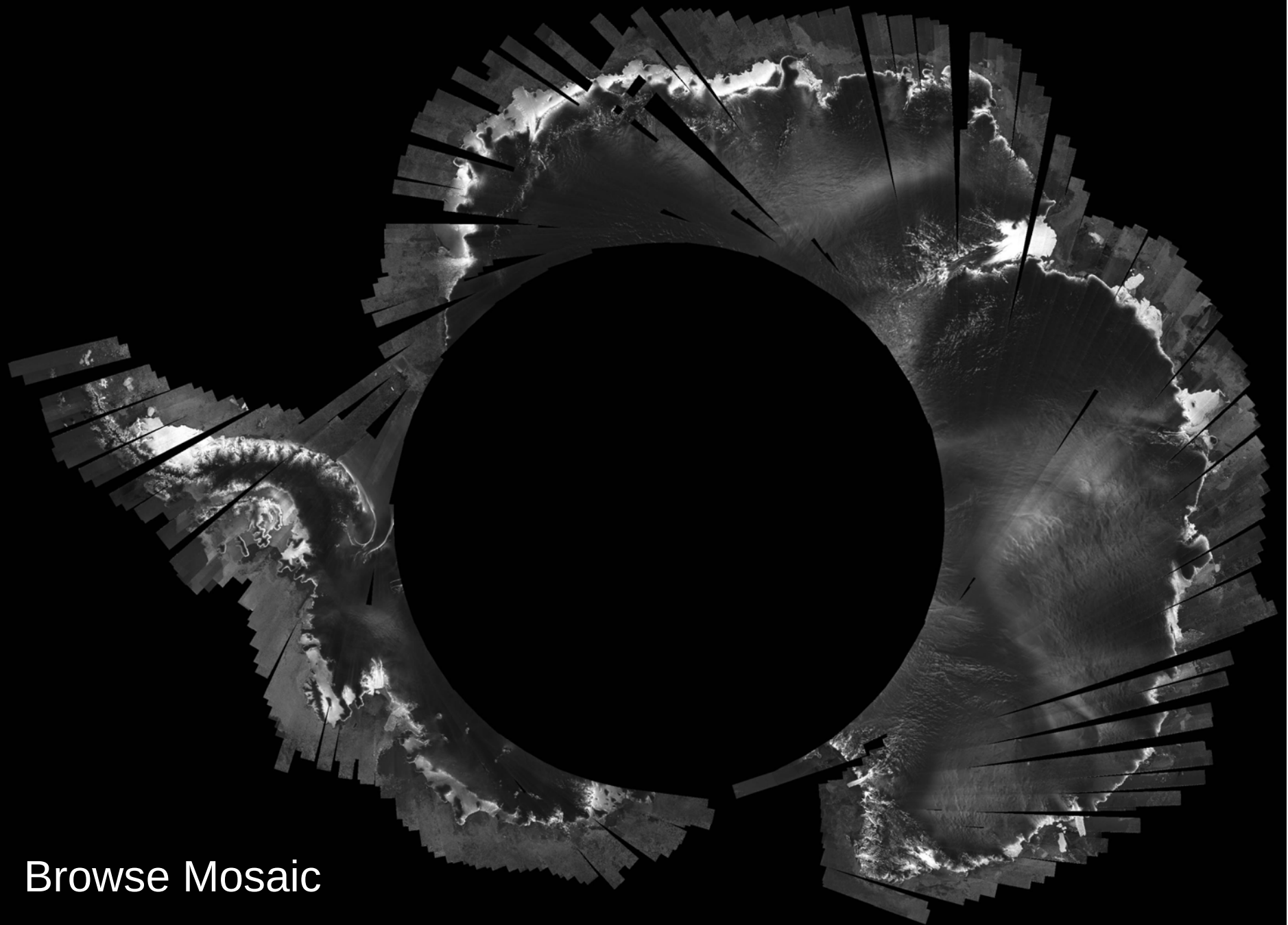
4. Data acquisition status

4. 1 Japan Area (FBS34.3[deg])



4. 2 South-East Asia Area (FBS34.3[deg])





Browse Mosaic