

ALOS Observation scenario -simulation results-

- 1. Mission operation simulation & scenario updated**
- 2. The scenario results**
 - **Previous & latest results**
 - **Acquisition area map (Each year & cycle)**
- 3. Future**

1. Mission operation simulation & scenario updated

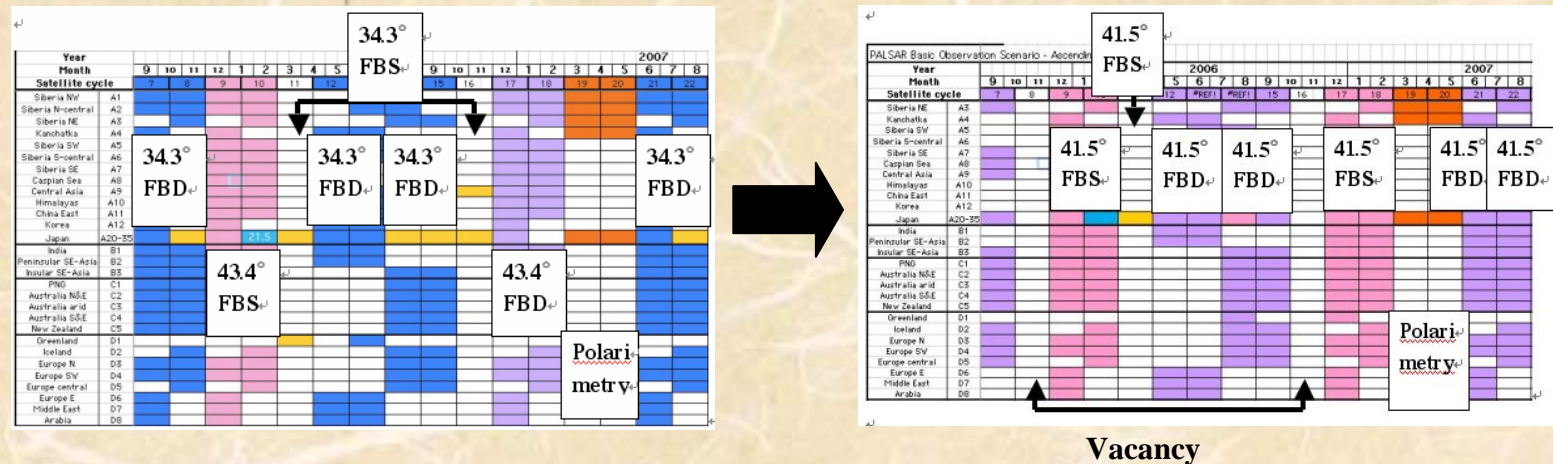
- Apr. 2004
 - ✓ Add operational restriction.
Ex.) Maneuver operation to maintain the orbit.
2path / week etc...
- Jul. 2004
 - ✓ Change the simulation algorithm. ⇒ See later viewgraph
- Oct. 2004
 - ✓ Change default PALSAR offnadir angle
43.4 & 34.3 -> 41.5 ⇒ See later viewgraph
- Feb. 2005
 - ✓ Launch date
Dec. 2004 -> Sep. 2005
 - ✓ High priority was assigned to Amazon request.
⇒ See later viewgraph



1. Mission operation simulation & scenario updated

The scenario updated

PALSAR(Ascending) default off-nadir angle: 34.3 & 43.4 -> 41.5



To increase interferometry chance.

To get wall-to-wall coverage.

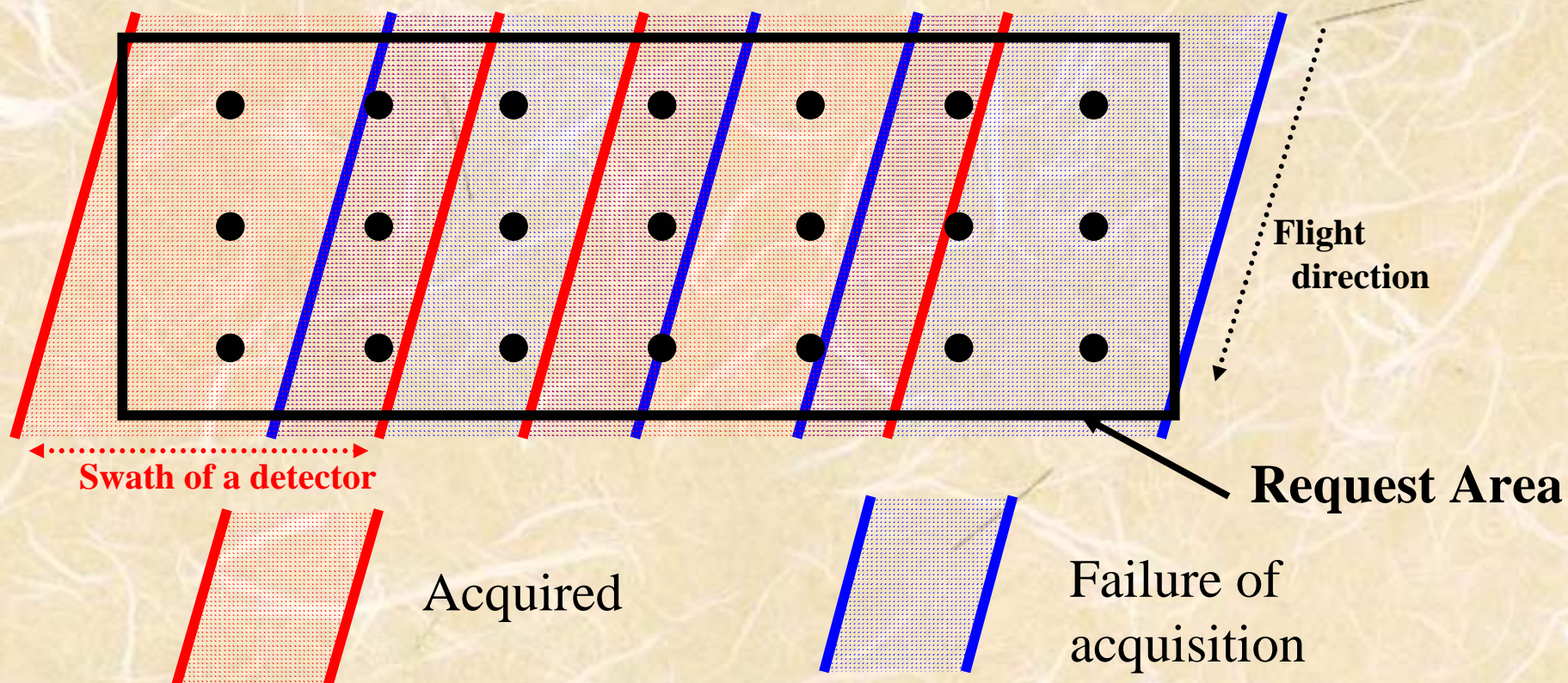
34.3((FBS_local),FBD), 43.4(FBS, FBD) => 41.5(FBS, FBD)

To reduce a load of cal/val works.

To increase vacancies for other users.

1. Mission operation simulation & scenario updated

Time success rate is adopted



- GRS success Ratio = 62%
- Time Success Ratio = 50%

GRS: Virtual point put on the ground

Change the simulation algorithm

Requested segment

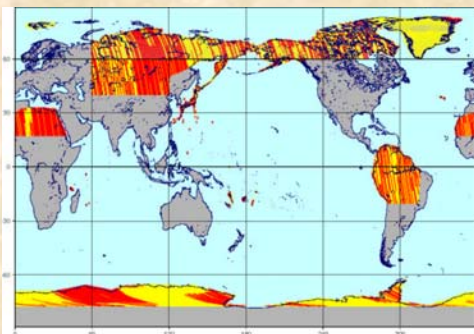
Previous

Divide the segment &
send it to First DRTS
Communication chance.
-> Additional calibration obs.
-> Low success rate.

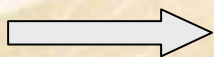
Now

Search a chance
to send the data at one time.

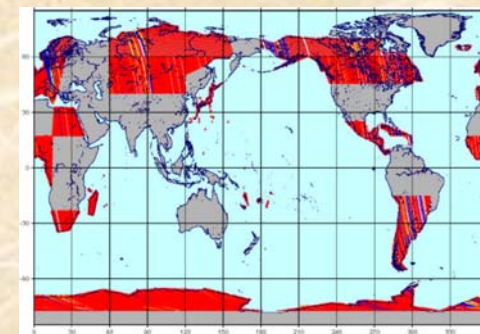
Chance to communicate DRTS
(Date relay test satellite)



Previous



Now



Red Area: Acquired
Else : Not acquired

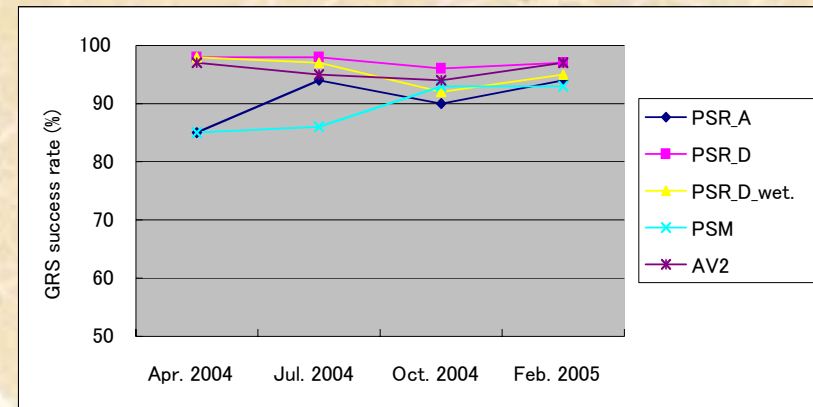
Improved for ~25%.

2. The scenario results

Previous & latest simulation results

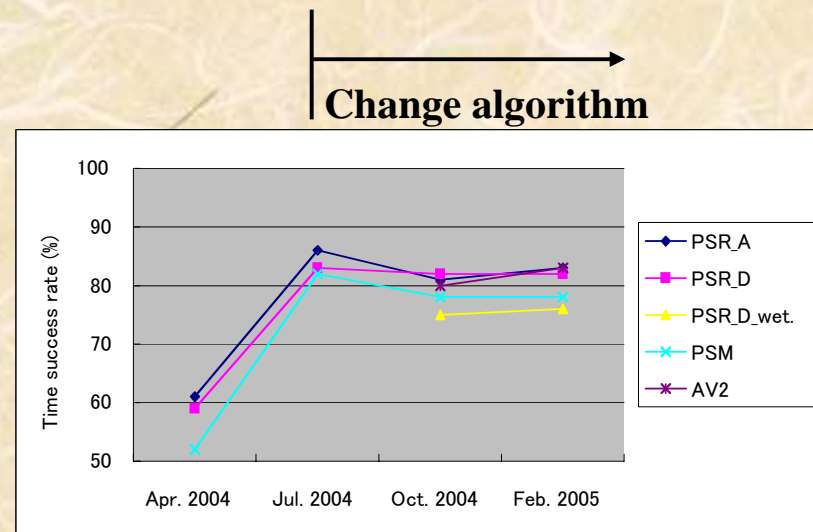
GRS success rate

	Apr. 2004	Jul. 2004	Oct. 2004	Feb. 2005
PSR_A	85	94	90	94
PSR_D	98	98	96	97
PSR_D_wet.	98	97	92	95
PSM	85	86	93	93
AV2	97	95	94	97



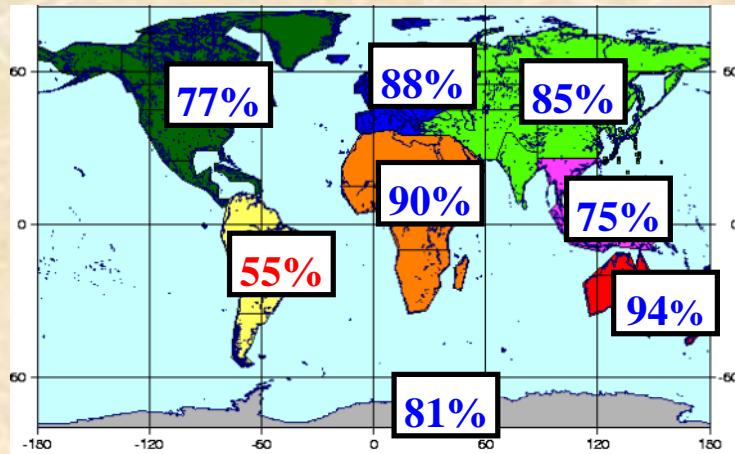
Time success rate

	Apr. 2004	Jul. 2004	Oct. 2004	Feb. 2005
PSR_A	61	86	81	83
PSR_D	61	86	82	82
PSR_D_wet.	57	80	75	76
PSM	52	82	78	78
AV2			80	83

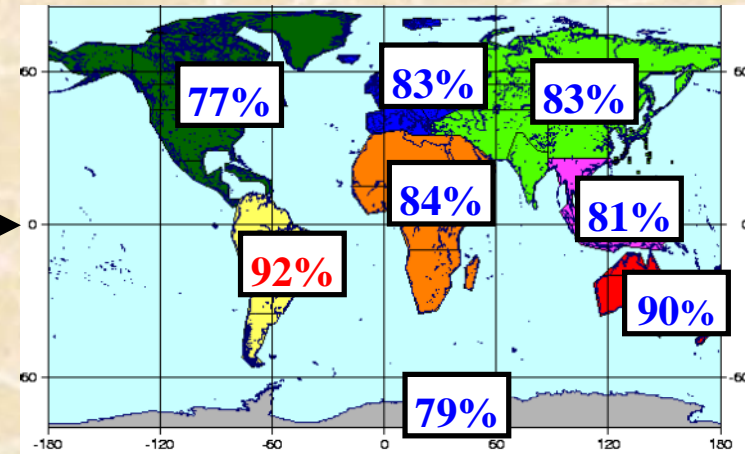


High priority was assigned to Amazon request.

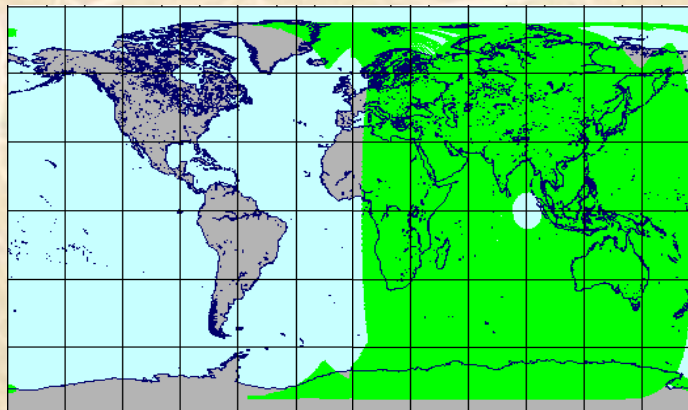
Oct. 2004



Feb. 2005



Time success rate



CF.

ALOS path which can be communicated to DRTS is plotted

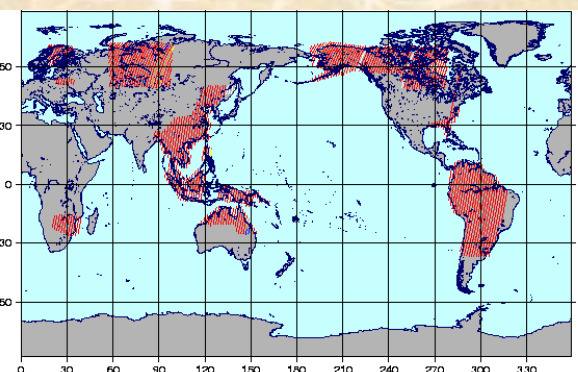
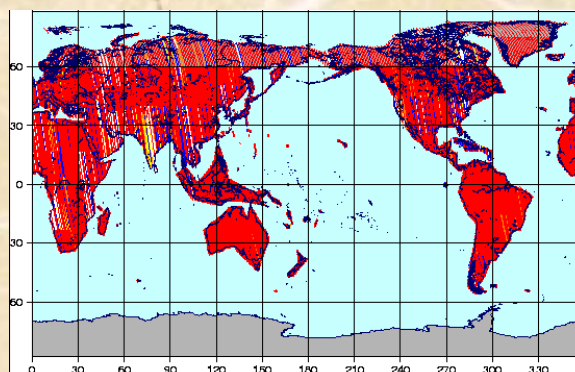
Acquisition area map

(One year)

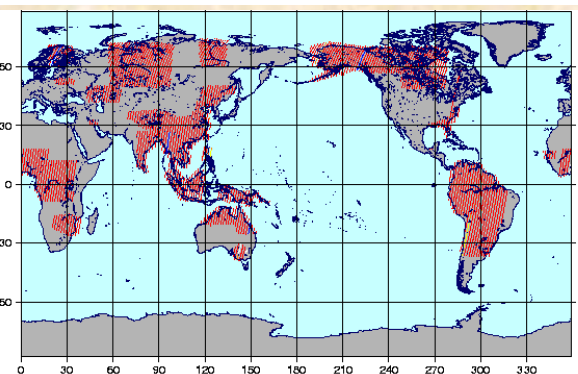
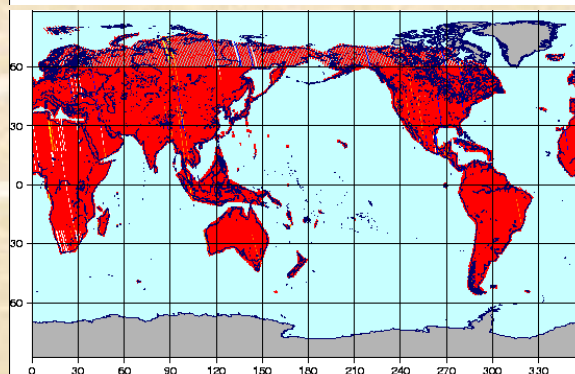
**PALSAR(Ascending)
41.5 ° FBD**

**PALSAR (Descending)
ScanSAR**

**Jun. 2006
|
May 2007
(1 year)**



**Jun. 2007
|
May 2008
(1 year)**



Red Area: Acquired

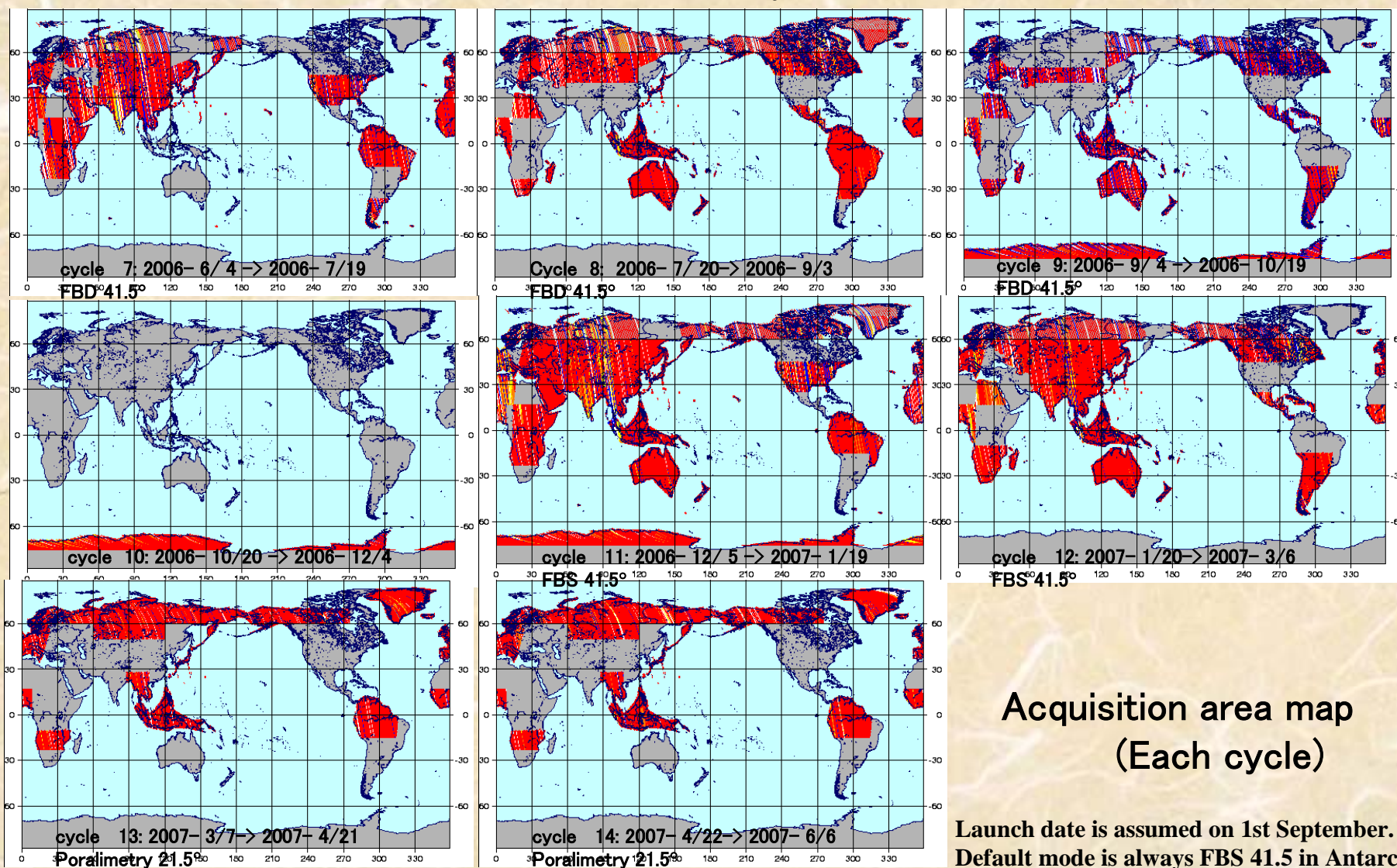
Else : Failure of acquisition



2. The scenario results

PALSAR (Ascending)

Jun. 2006 ~ May 2007



Acquisition area map
(Each cycle)

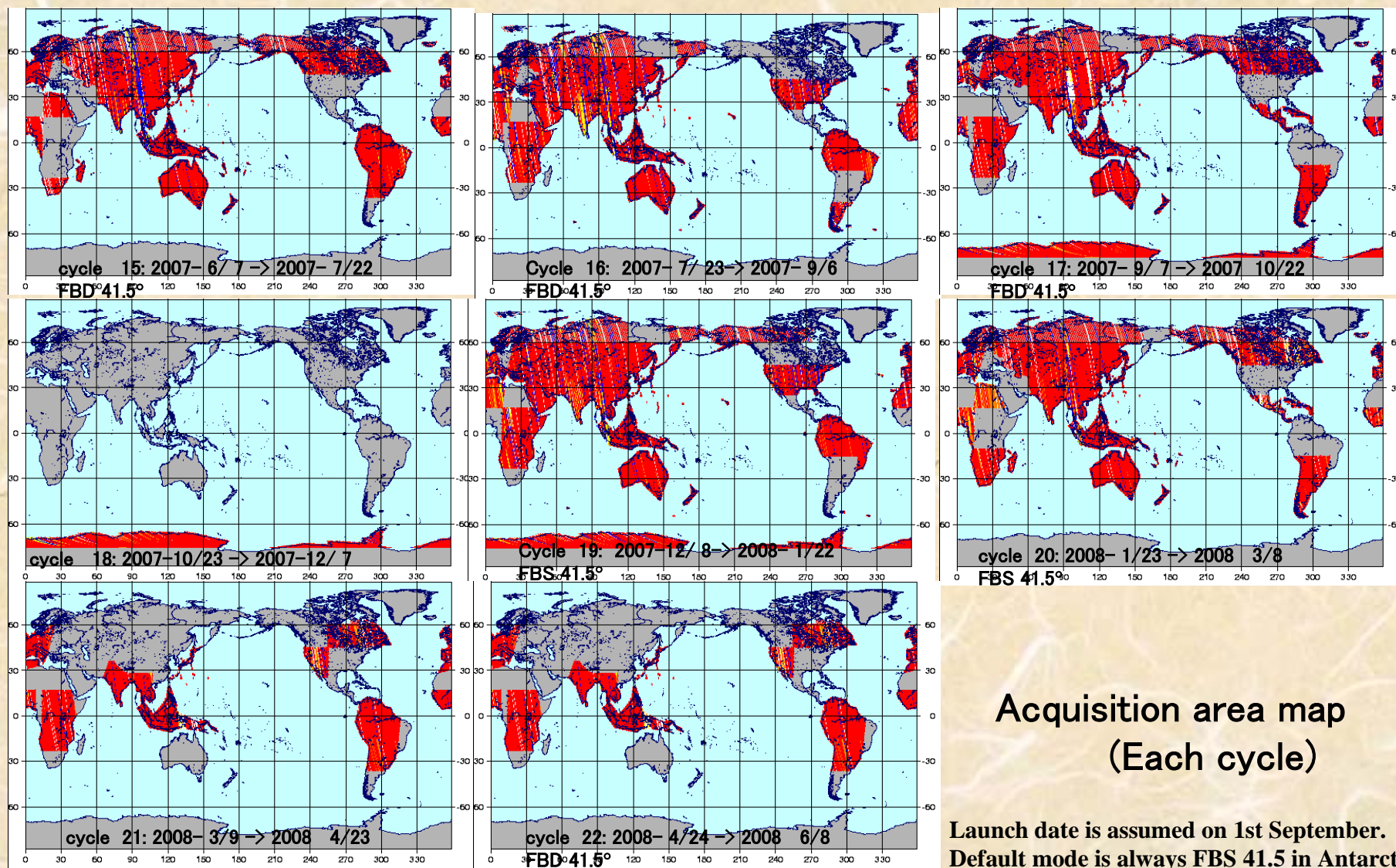
Launch date is assumed on 1st September.
Default mode is always FBS 41.5 in Antarctica.



2. The scenario results

PALSAR (Ascending)

Jun. 2007 ~ May 2008



Acquisition area map
(Each cycle)

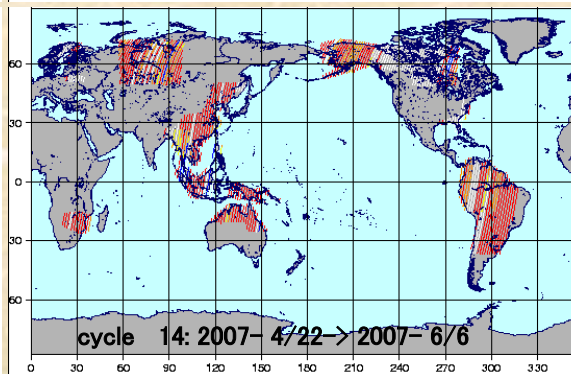
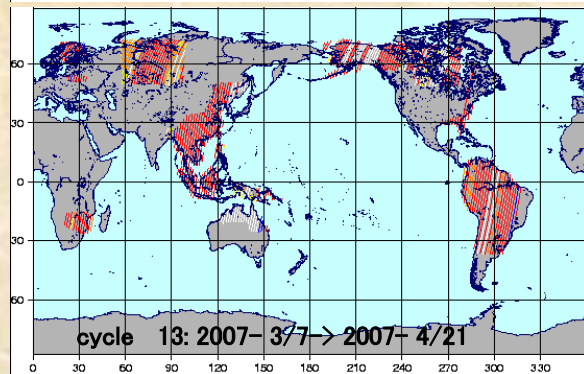
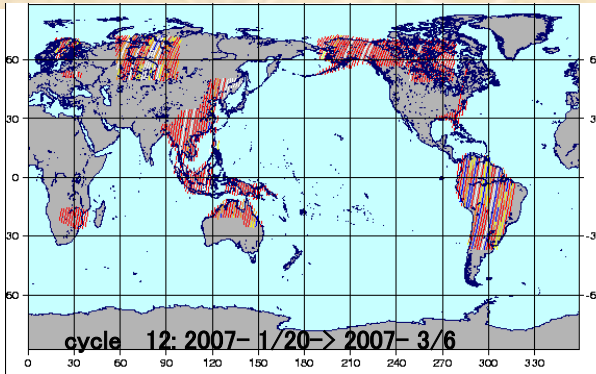
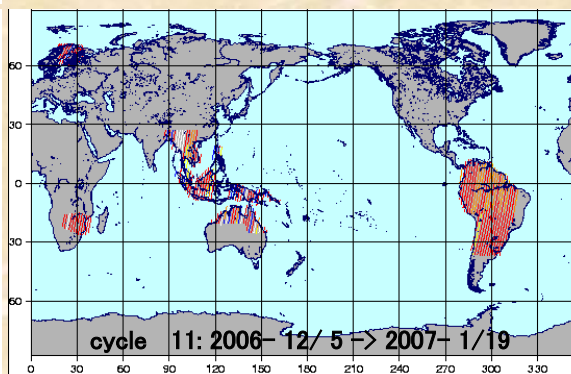
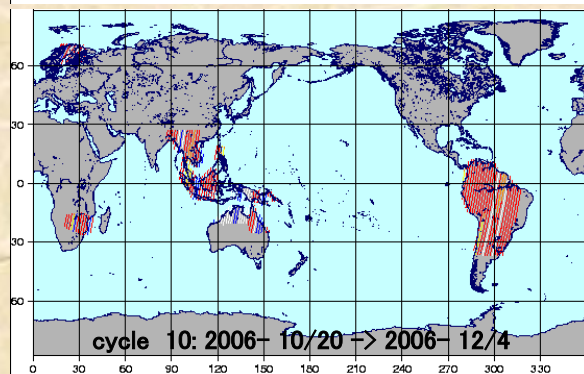
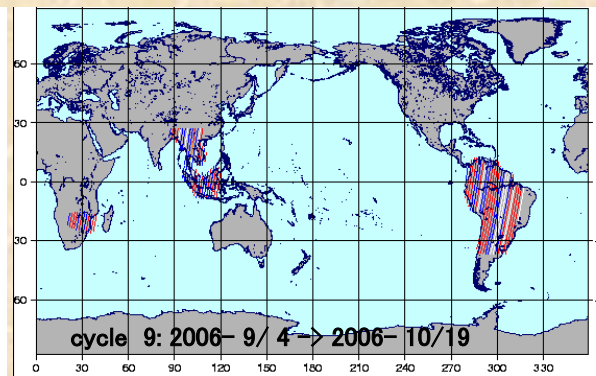
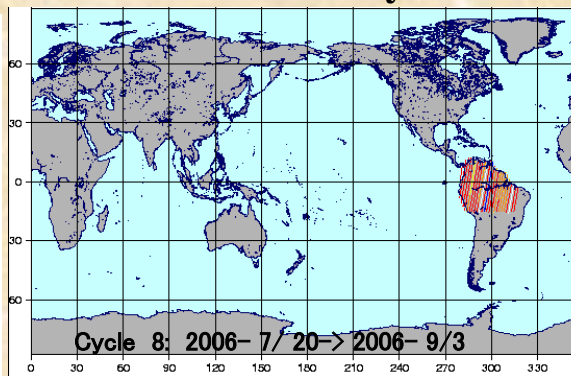
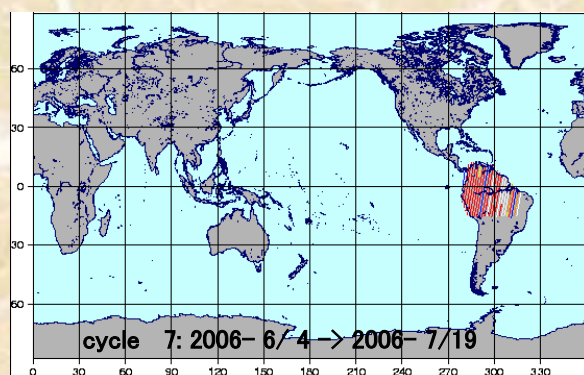
Launch date is assumed on 1st September.
Default mode is always FBS 41.5 in Antarctica.



2. The scenario results

PALSAR (Wetland)

Jun. 2006 ~ May 2007



Acquisition area map
(Each cycle)

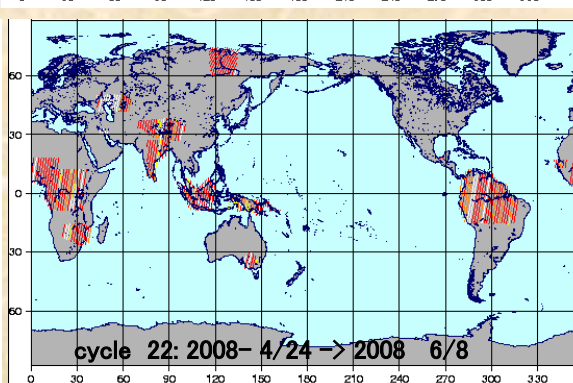
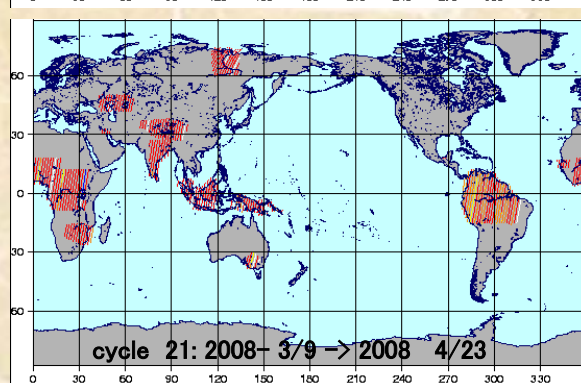
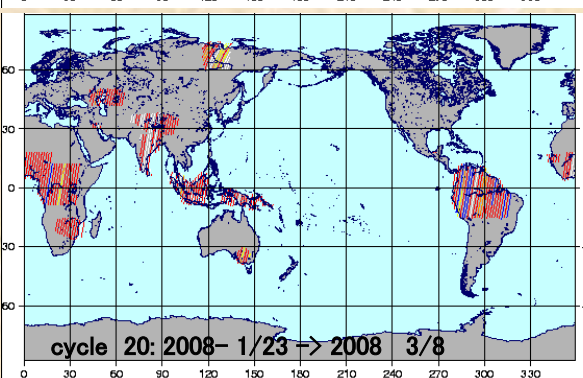
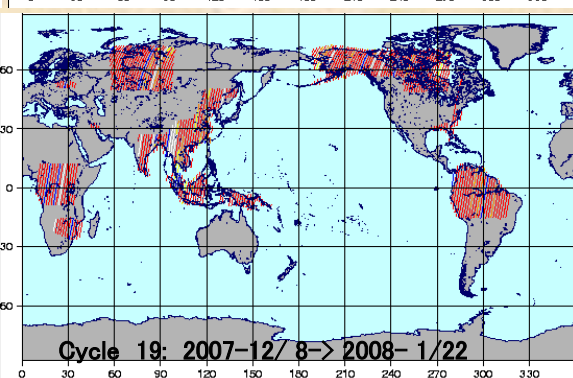
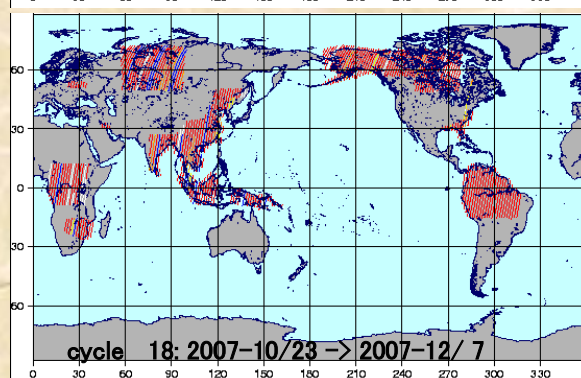
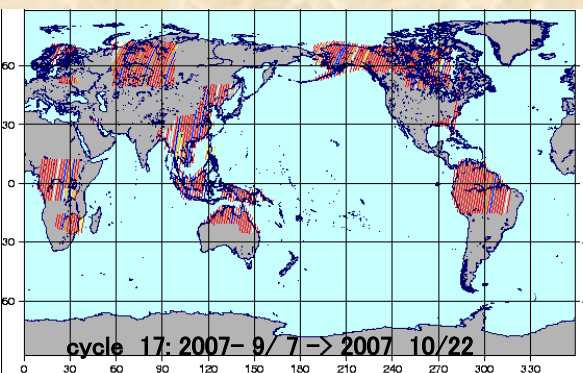
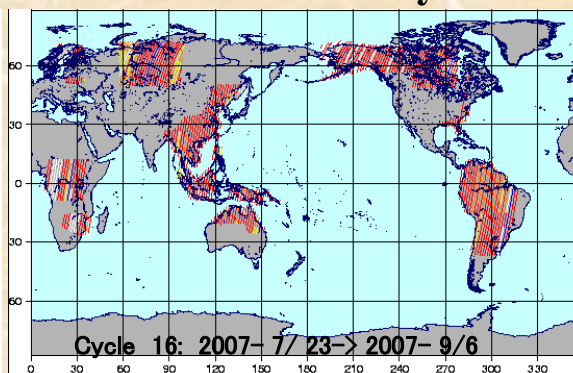
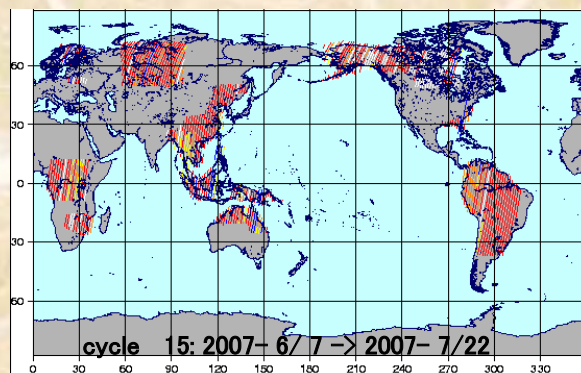
Launch date is assumed on 1st September.



2. The scenario results

PALSAR (Wetland)

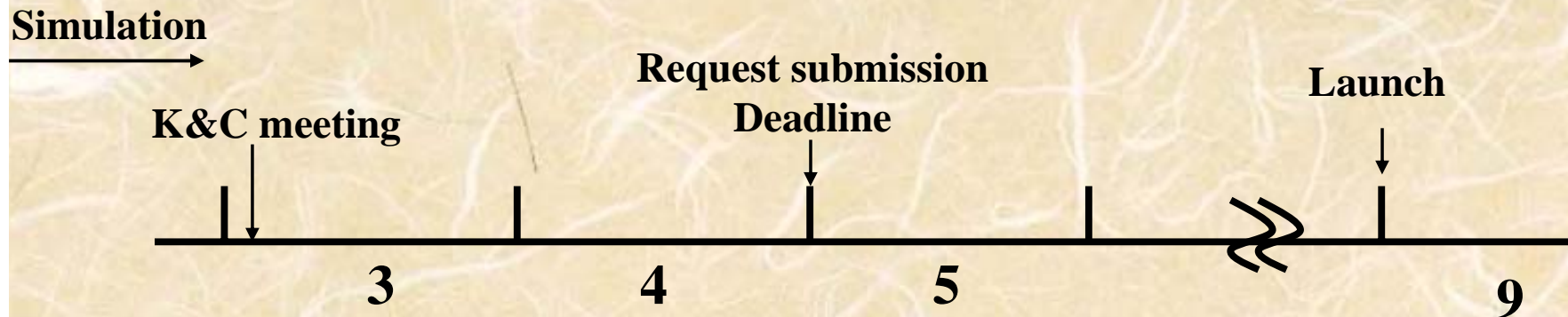
Jun. 2007 ~ May 2008



Acquisition area map
(Each cycle)

Launch date is assumed on 1st September.

3. *Future*

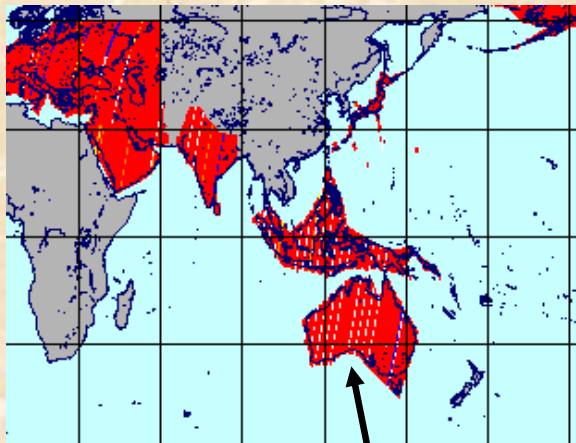


- Mission operation simulation has been finished and the other results are summarizing now.
- One more simulation may be performed, if the results isn't good.

Operational restriction

- Maneuver Operation

Frequency: 2 path / week.



Sensor ; PRISM (+1.2 °)

Date ; 2006.04.19 - 2006.06.03
(1 cycle)

Red Area: Acquired

Else : Not acquired

- Star tracker (STT) Operation

Frequency: 3path / week (2005.02.28 - 2005.07.31)

3path / 2 weeks (2005.08.01 - 2006.02.26)

3path / 4 weeks (2006.02.27 -)

