

Status of the PALSAR observation strategy

Manabu Watanabe

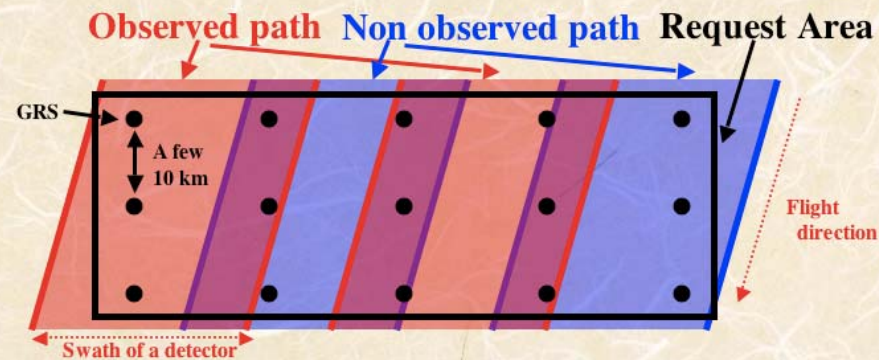
1. The latest MMO simulation result
2. An acquisition status of the scenario in cycle 7
(Oct. 20, 2006-Dec. 4, 2006)
3. An expected acquisition status in cycle 8
(Dec. 5, 2006-Jan. 19, 2007)
4. Some others.

1. Latest MMO simulation result

Two definitions of a success rate

(GRS success rate)

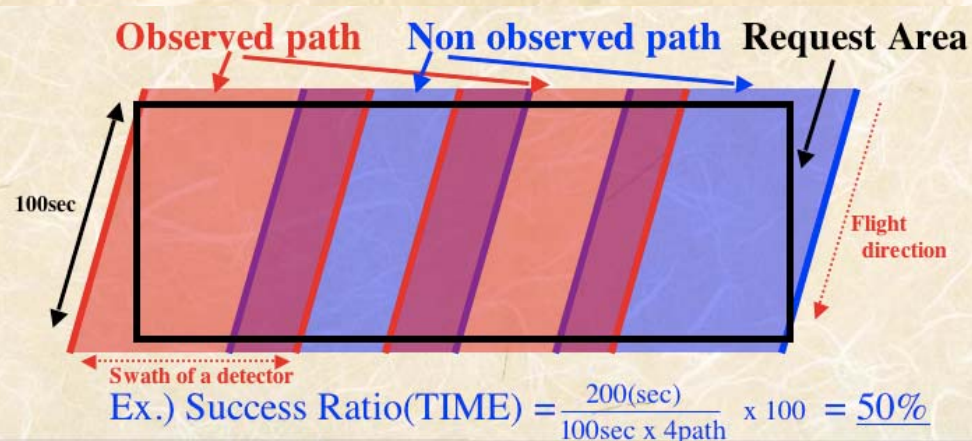
Evaluated with virtual point on the ground (GRS).



$$\text{Ex.) Success ratio(GRS)} = \frac{11}{15} \times 100 = \underline{73\%}$$

(Time success rate)

Evaluated with time, where sensors are on.



$$\text{Ex.) Success Ratio(TIME)} = \frac{200(\text{sec})}{100\text{sec} \times 4\text{path}} \times 100 = \underline{50\%}$$

1. The latest MMO simulation result

- MMO simulation done on Sept., 2006.
- Major change
PALSAR (Asc.) default mode changed from 41.5 to 34.3 from Nov. 20
- Target term
Sept. 25, 2006 ~ Nov. 1, 2009 (Cycle 6 ~ Cycle 30)

Request name	GRS success rate			Time success rate		
	Number of requested GRS	Number of acquired GRS	Success rate (%)	Request time (sec.)	Acquired time (sec.)	Success rate (%)
PALSAR (Ascending)	3,361,863	3,113,352	93	6,820,103	5,252,430	77
PALSAR (Descending)	874,132	843,361	96	1,061,981	878,560	83
PRISM	1,067,943	940,370	88	4,482,463	3,259,914	73
AVNIR2	1,045,377	999,078	96	2,737,771	2,125,612	78

See detail in other material

2. An acquisition status of the scenario in cycle 7 (Oct. 20, 2006-Dec. 4, 2006)

			Actual acquisition			MMO simulation			(Actual) - (MMO sim)		
			req[scene]	obs[scene]	obs rate[%]	req[scene]	obs[scene]	obs rate[%]	req[scene]	obs[scene]	obs rate[%]
PALSAR	Asce	All	8650	3678	43	7276	3909	54	1374	-231	-11
		10/20~11/19(FBS41.5)	5625	2321	41	5101	2405	47	524	-84	-6
		11/20~12/4(FBS34.3)	3025	1357	45	2674	1883	70	351	-526	-26
	Desce	ScanSAR	285	146	51	217	140	64	68	6	-13
		ScanSAR (Wetlands)	867	325	37	722	344	48	145	-19	-10
PRISM	Desce		55848	19179	34	54158	23737	44	1690	-4558	-9
AVNIR-2	Desce		19941	9372	47	18652	10064	54	1289	-692	-7

Only nadir scene for PRISM

Event

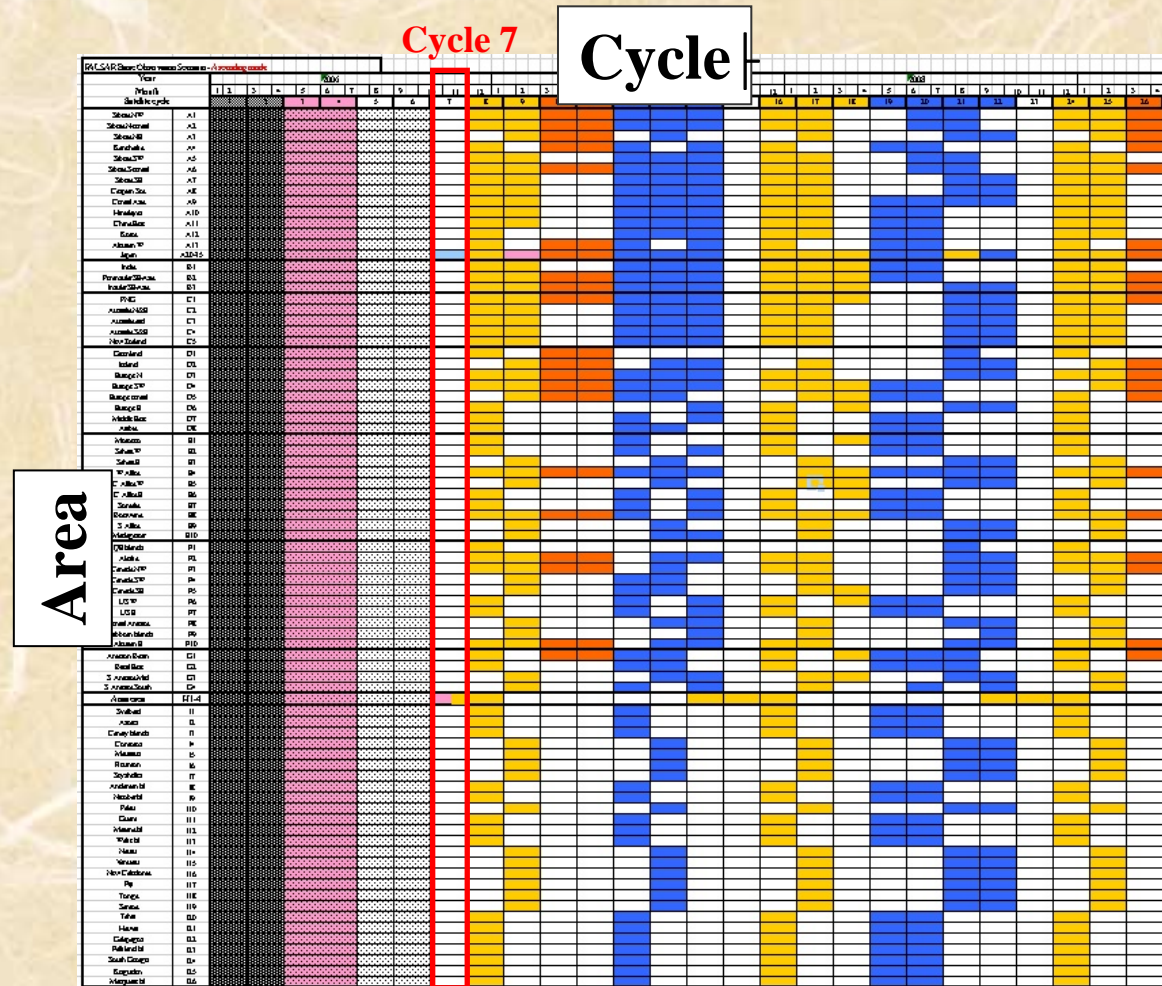
- PALSAR default off-nadir angle 41.5 -> 34.3 from Nov. 20

Results

- MMO simulation estimated low success rate due to a lot of operational restriction (see next viewgraph).
- Success rate of actual acquisition is ~10% lower than that of MMO simulation due to an additional operational restriction.

ICE check out?

Scenario (PALSAR Ascending)



Cycle 7: No default observation mode & small number of requests
 -> Exchange of computers used in Space Network, etc.

3. An expected acquisition status in cycle 8

(Dec. 4, 2006 - Jan. 19, 2007)

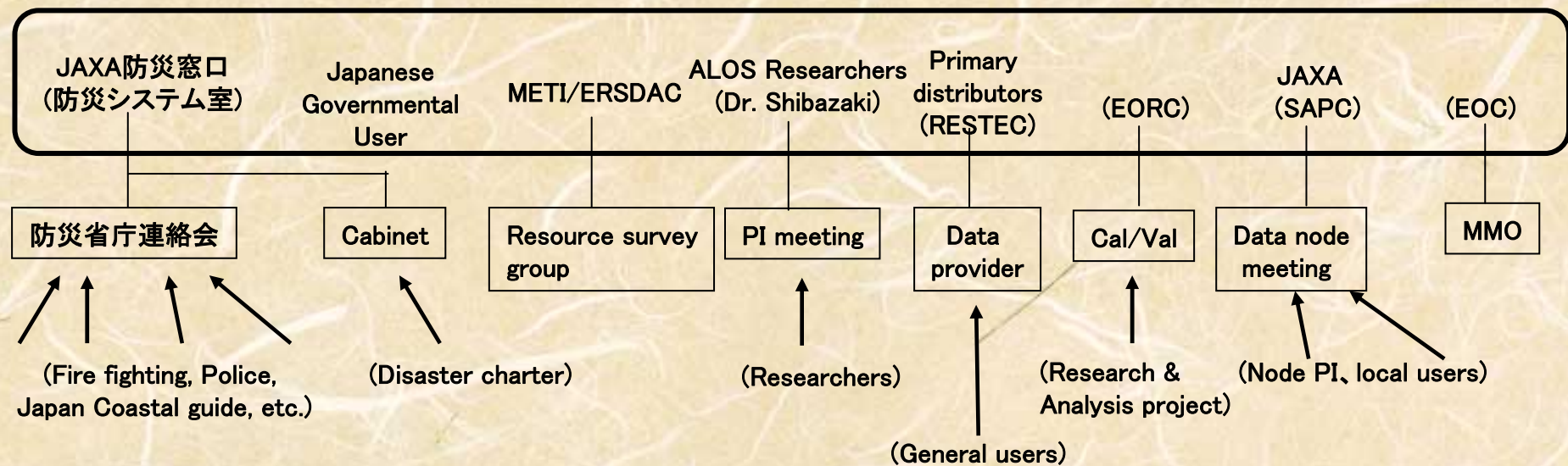
Because of a solar activity and other troubles, ALOS sensors were suspended for ~12 days.

- Dec. 7 (UT 08:00)
ALOS sensors moved to a standby mode, due to a huge solar flare.
- Dec. 12 (UT 05:00) ~ Dec. 18 (UT 23:00)
Recovering process was delayed, due to a miss-operation, and other reasons.
- Dec. 18 (UT 23:00)~
Restart nominal observation.

Success rate in the cycle 8 will be $12/46=26\%$ lower than the one estimated by the MMO simulation.

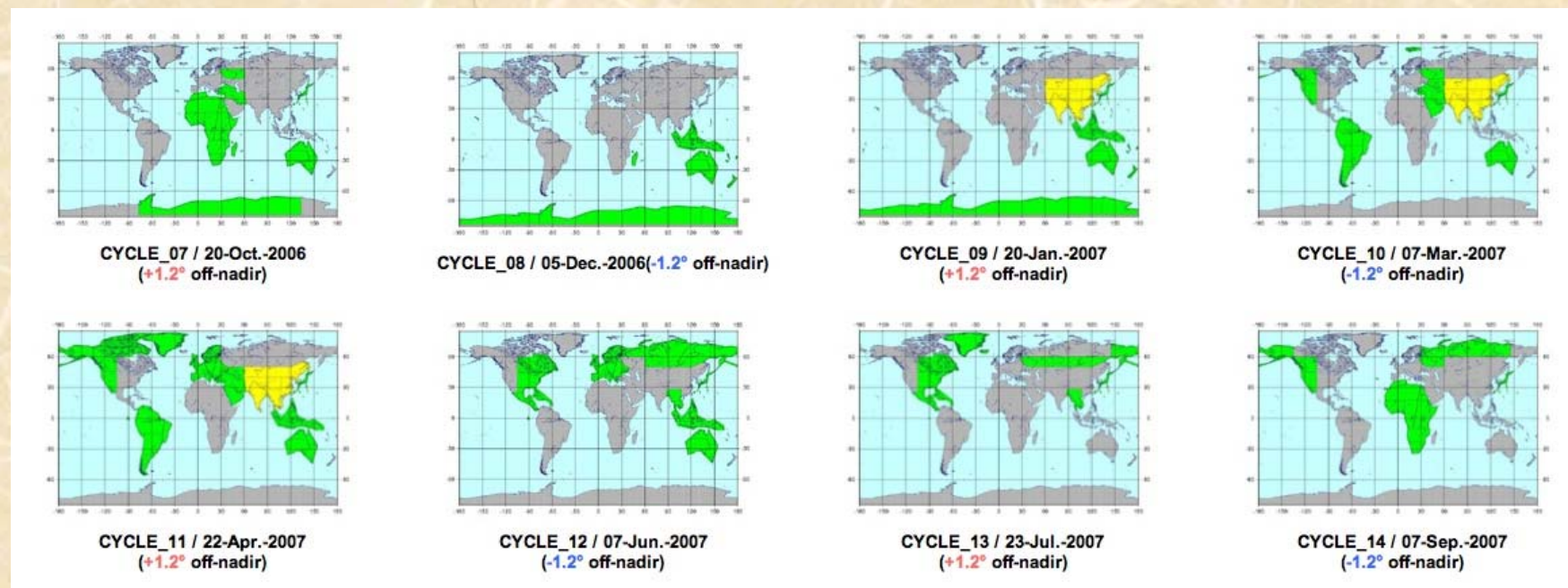
4. Some others

1. ALOS observation plan was maintained/managed by a meeting held at two times/year.



2. PRISM scenario changed.

Change observation mode from triplet to nadir+backward around China in cycle 9 ~ 11.



Green: Triplet mode. Yellow: Nadir (70km) + Backward (35km)