

ALOS-2 Basic Observation Scenario (3rd Edition Ver. G)

September 30, 2021
JAXA/ALOS-2 Project

Details of revision

Version	Date	Page	Details of revision
A	2018/8/15	P10,18	Changed the observation mode of Japanese Ascending Scenario (Cycle110-115)
B	2019/3/20	P10,18	Changed the observation mode of Japanese Descending Scenario (Cycle127-130)
		P18,24	Added the Basic Observation Scenario for 6th year 【Japan/Global】 (Cycle132-157)
		P21,44	Changed the observation frequency and priority of Global land observations in Stripmap mode (after Cycle 125)
		P51	Changed the observation priority of the Crustal Deformation in ScanSAR mode (after Cycle 125)
		P59	Added the new sites (Canada and Greenland) in K&C Supersites
		P60	Canceled the sites which selected as PI Supersites at the 1st PI Work Shop (until Cycle124)
		P36	Canceled the earthquake and flood sites from the CEOS Supersites
		P62	Finished the observations of Crustal WG Supersites (until Cycle124)

Details of revision

Version	Date	Page	Details of revision
C	2019/9/27	P11	• Finished the observations for "ship movement management" which have been conducted as Japanese Scenario(until Cycle137)
		P21,24,31	• Changed the observation frequency of Polar regions observations in Stripmap mode (after Cycle 138)
		P47	• Changed the observation priority and observation frequency(Alaska and Siberia Area only) of the Wetlands & Rapid deforestation monitoring in ScanSAR mode (after Cycle 138)
		P52	• Changed the observation priority of the Crustal Deformation in ScanSAR mode (after Cycle 138)
		P54	• Added the low priority observation area in the Crustal Deformation in Stripmap mode (after Cycle 138)
		P59	• Added the new site (Mississippi) in K&C Supersites
		P60	• Added the new sites which selected as PI Supersites at the 4th PI Work Shop
D	2020/3/31	P17,23	• Added the Basic Observation Scenario for 7th year 【Japan/Global】 (Cycle158-183), and changed the Japanese Ascending Scenario (Cycle 157)
		P26	• Finished the low priority observations of Global land observations in Stripmap mode (after Cycle 151)
		P29,30	• Changed the observation priority of the Crustal Deformation in ScanSAR mode and Stripmap mode (after Cycle 151)
		P60	• Canceled the sites selected at the 2nd PI Work Shop from PI Supersites and added the new sites requested by ALOS-4 CVST

Details of revision

Version	Date	Page	Details of revision
E	2020/8/31	P28	•Changed the observation priority and observation area of the Wetlands & Rapid deforestation monitoring in ScanSAR mode (after Cycle 164)
		P34	•Canceled the existing 11 sites in K&C Supersites
		P60	•Added the new sites which selected as PI Supersites at the 5th PI Work Shop and requested by ALOS-4 CVST
F	2021/4/23	P17,23	•Added the Basic Observation Scenario for 8th year 【Japan/Global】 (Cycle184-209)
		P61	•Canceled the sites of RA6th from PI Supersites and added the new sites which selected at the 6th PI Work Shop and requested by ALOS-4 CVST
G	2021/9/30	P21,27	•Replaced some observation areas of WorldA and WorldB and selected priority areas (after Cycle 190)
		P35	•Added the new sites which requested by ALOS-4 CVST

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1. 3rd edition

This document is the 3rd edition of the ALOS-2 Basic Observation Scenario.

In order to expand the use of ALOS-2 data further and create new outcome, we conducted the survey to ALOS-2 users. Based on these results, we revised the basic observation scenarios as 3rd edition.

In the 3rd edition version D, we revised the Basic Observation Scenario because ALOS-2 nominal operation period had completed and we needed to consider the operational resources. In the 3rd edition version F, we planed the Basic Observation Scenario for the 8th year.

The ALOS-2 Basic observation scenario will be reviewed every 6 months based on the requests from users.

D
F

2. Purpose and Background

The PALSAR-2 instrument onboard ALOS-2 has several observation modes (Spotlight, Stripmap, ScanSAR) and right-and-left looking function to fulfill the mission requirements. This flexibility may however also trigger conflicts among user request without adequate planning.

As implementation of systematic observations are required to achieve temporally and spatially consistent data, a Basic Observation Scenario (BOS) had been developed for ALOS-2, partially succeeding ALOS systematic observation scenario. The BOS will be reviewed every 6 months to meet user requests.

3. Concepts of the Basic Observation Scenario

- Emergency observations and cal/val have highest priority. The BOS follows with the second highest priority.
- The BOS scenario is designed to fulfill the following general acquisition concepts:
 - Spatial and temporal consistency at global scales with fine spatial resolution;
 - Adequate revisit frequency, considering acquisition timing of target areas;
 - Sensor operability;
 - Long-term systematic observations.
- The BOS comprises separate plans for Japan and for the rest of the world.
- Observations over Super Sites are undertaken to the extent that they do not affect the BOS.

Notes

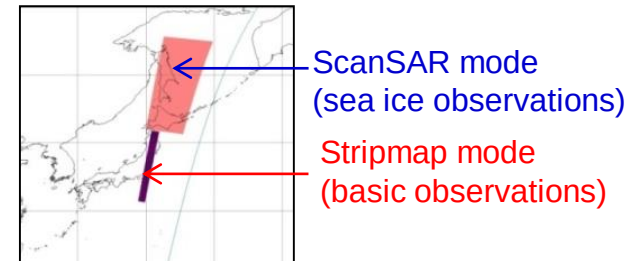
- The success rate for acquisitions within the BOS is 70-80%.

4. Basic Observation Scenario (Japan)

4.1 Overview for the Basic Observation Scenario for Japan

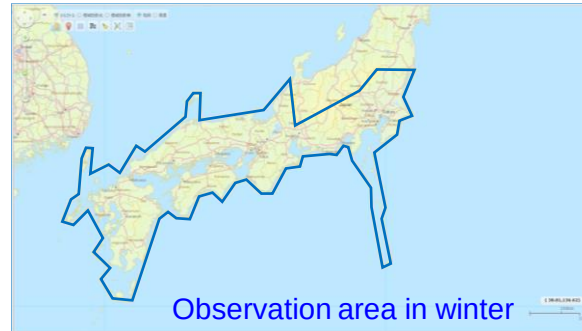
- (1) Observation over Japan are undertaken for the preparation of base maps for “Disaster” and “Differential InSAR”.
- (2) Observations for the "Disaster" base map were undertaken in modes 3 m Ultra-Fine (U2 and U3) and 100 m ScanSAR (W2) in the 1st year (U3 in descending only). In the 4th year, ascending observations in U3 mode were added. In addition, ascending observations in U3 (Left) mode and W2(Left) mode were added in the first half of 5th year. Furthermore descending observations in U2 (Left) mode were added in the second half of 5th year.
- (3) Open cycles without pre-set default observation modes are planned once every 6 cycles.
- (4) Observations in 6 m Fully Polarimetric (PLR) mode for landslide disaster and land use start from the 2nd year and are repeated every year.
- (5) Observations in ScanSAR mode for "sea ice observations" are planned over the Sea of Okhotsk during the winter (December to April).

South of Hokkaido, observation are planned in stripmap mode.



4.2 Overview for the Basic Observation Scenario for Japan

- (6) For the purpose of “ship movement management”, the observations in U3 and U2 modes are conducted with extending the areas from land to sea. However, the observations for “ship movement management” which have been conducted as Japanese Scenario were finished at Cycle137.
- (7) For securing of the observation resource, the observation in U2 mode target the areas shown in the following figure excluding snowy areas during the winter (January to March).

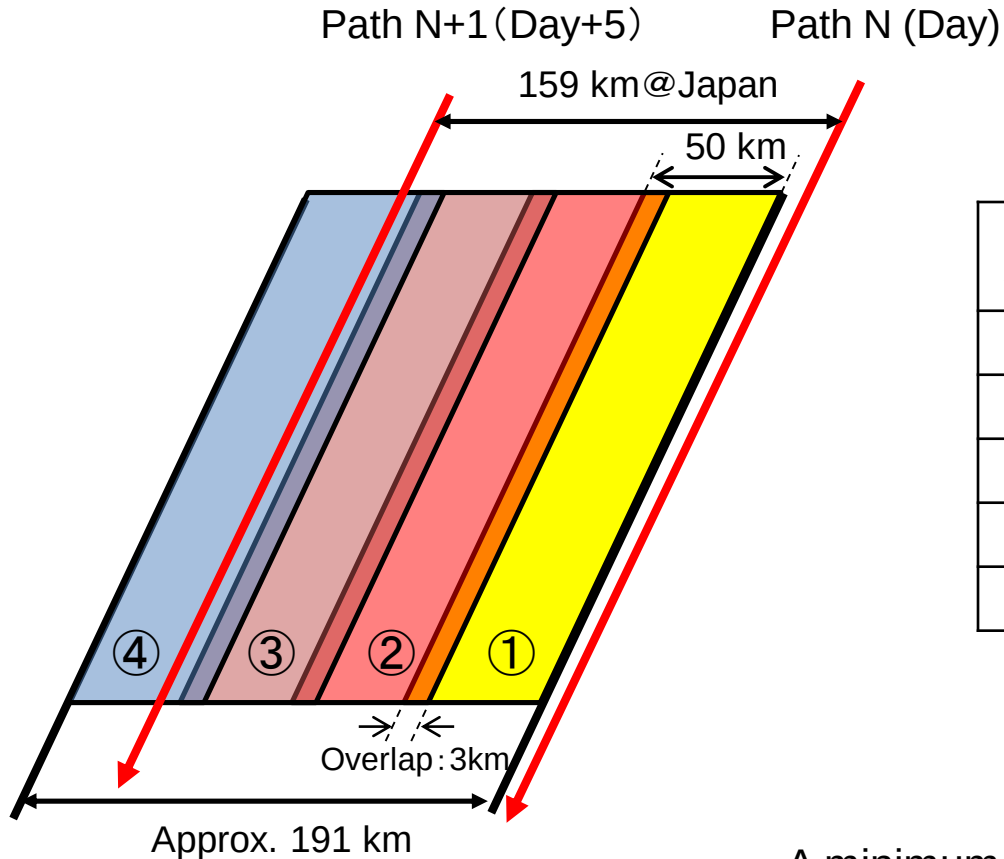


4.3 Baseline mapping

The Japan Base Map serves the objectives of “Disaster” and “Differential InSAR”. It is based on observations in two modes: Ultra-Fine Stripmap 3 m and ScanSAR 100 m .

	contents
Base Map for disaster	Observations to collect data at various incidence angles, to accommodate interferometric analysis of pre- and post-disaster data.
Base Map for Differential InSAR	Observations for periodic collection of data for differential interferometry

4.4 Japan coverage in Ultra-Fine Stripmap Mode [3 m]



Stripmap mode [3m]

Beam Group	Incidence Angle	Number of beams to cover
U1	8-30 deg.	5 beams
U2	30-44 deg.	4 beams
U3	44-56 deg.	5 beams
U4	56-64 deg.	5 beams
U5	64-70 deg.	5 beams

U2: Nominal

A minimum of 4 beams is required for gap-free coverage of Japan

⇒ Minimum: 14 days × 4 cycles = 56 days

4.5 Observation conditions for disaster base map

Items	Stripmap [3m]		ScanSAR [350km]
Satellite direction	Descending (towards south) and Ascending (towards north)	Descending and Ascending	Descending and Ascending
Beam direction	Left and right		
Beam range (incidence angle)	U2 (30.2° ~44.4°)	U3 (44.3° ~55.8°)	W2 (19.7° ~45.3°)
Polarisation	Single (HH)		Dual (HH+HV)
Frequency band	84 MHz		28 MHz

4.6 Observation conditions for Differential InSAR base map

Items	Stripmap [3m]	ScanSAR [350km]
Satellite direction	Descending (towards south) and Ascending (towards north)	
Beam direction	right	
Beam range (incidence angle)	U2 (30.2° ~44.4°)	W2 (19.7° ~45.3°)
Polarisation	Single (HH)	Dual (HH+HV)
Frequency band	84 MHz	28 MHz

Temporal frequency is a priority for interferometry. Observations are carried out during the same time periods each year.

4.7 Analysis results: Revisit-times for Basic Observation Scenario over Japan and frequency of Differential InSAR

(1) Revisit-times after completion of base map observations of Japan

Observation mode	Average	Maximum
U2 (Ascending, Descending) U3 (Descending only)	65 hr	74 hr*
U2 (Ascending, Descending) U3 (Ascending, Descending)	53hr	62hr*
Reference: U2 (Ascending, Descending) W2 (Ascending, Descending)	61hr	132 hr

*excluding parts of Kyushu, Okinawa and some areas in southern Japan

(2) Frequency of Differential InSAR

(note: Emergency observations in case of disasters are undertaken separately)

Orbit direction	Stripmap 3m		ScanSAR 100m	
	Maximum number of observations (year) **	InSAR interval	Maximum number of observations (year) **	InSAR interval
Descending • right	4	3~3.5 months	6	1.5~4.5 months
Ascending • right	4	2.5~3.5 months	6	1.5~4.5 months

** In case of no conflict with crustal movement users

4.8 Basic Observation Scenario (Japan) - 【 7th -8thyear 】 -

7th Year																												
Cycle	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183		
Year	2020													2021														
Month/Day	07/27	08/10	08/24	09/07	09/21	10/05	10/19	11/02	11/16	11/30	12/14	12/28	01/11	01/25	02/08	02/22	03/08	03/22	04/05	04/19	05/03	05/17	05/31	06/14	06/28	07/12		
Descending	Differential InSAR						Differential InSAR+Sea Ice					Sea Ice			Differential InSAR+Sea Ice					Sea Ice		Disaster Base Map						
	U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R		U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R				U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R			U3 (10)L	U3 (11)L	U3 (12)L	U3 (13)L	U3 (14)L		
Ascending					Disaster Base Map								Differential InSAR							Differential InSAR								
	FP (3)R	FP (4)R	FP (5)R	FP (6)R	U3 (10)L	U3 (11)L	U3 (12)L	U3 (13)L	U3 (14)L					U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R			U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R			

8th Year																													
Cycle	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209			
Year	2021												2022																
Month/Day	07/26	08/09	08/23	09/06	09/20	10/04	10/18	11/01	11/15	11/29	12/13	12/27	01/10	01/24	02/07	02/21	03/07	03/21	04/04	04/18	05/02	05/16	05/30	06/13	06/27	07/11			
Descending	Differential InSAR					Disaster Base Map + Sea Ice						Sea Ice			Differential InSAR + Sea Ice				Sea Ice			Differential InSAR							
	U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R		W2 (2)L	U3 (10)R	U3 (11)R	U3 (12)R	U3 (13)R	U3 (14)R				U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R				U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R				
Ascending							Differential InSAR						Differential InSAR							Disaster Base Map									
	FP (3)R	FP (4)R	FP (5)R	FP (6)R	FP (7)R		U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R				U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R					U2 (6)L	U2 (7)L	U2 (8)L	U2 (9)L				

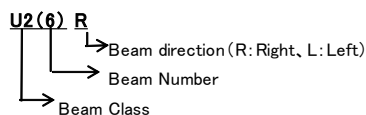


	Mode	R/L	Polarization	Beam
U2	Stripmap 3m	R	HH	6-9
U2		L	HH	6-9
U3		R	HH	10-14
U3		L	HH	10-14
FP	Stripmap 6m	R	HH+HV+VH+VV	3-7
W2	ScanSAR 350km	R	HH+HV	2
W2		L	HH+HV	2
	(Any Mode)	Open Cycle for the Recovery Observations		

* Several descending ScanSAR observations are planned for monitoring the sea ice at cycle169-177.

【Number system】

EX: U2(6)R



 Non-base map observations

4.9 Basic Observation Scenario (Japan) - 【 4th -6thyear 】 -

A

■ 4th Year

Cycle	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	
Year	2017												2018														
Month/Day	07/31	08/14	08/28	09/11	09/25	10/09	10/23	11/06	11/20	12/04	12/18	01/01	01/15	01/29	02/12	02/26	03/12	03/26	04/09	04/23	05/07	05/21	06/04	06/18	07/02	07/16	
Descending	Differential InSAR						Differential InSAR					Sea Ice			Differential InSAR+Sea Ice					Sea Ice		Differential InSAR					
	U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R		U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R				U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R			U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R		
						Disaster Base Map						Differential InSAR				Differential InSAR				Disaster Base Map							
Ascending	FP (3)R	FP (4)R	FP (5)R	FP (6)R	FP (7)R	U3 (10)L	U3 (11)L	U3 (12)L	U3 (13)L	U3 (14)L		U2 (6)R	U2 (7)R	U2 (8)R	U2(9)R	U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R			U3 (10)R	U3 (11)R	U3 (12)R	U3 (13)R	U3 (14)R	W2 (2)R

■ 5th Year

Cycle	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131
Year	2018												2019													
Month/Day	07/30	08/13	08/27	09/10	09/24	10/08	10/22	11/05	11/19	12/03	12/17	12/31	01/14	01/28	02/11	02/25	03/11	03/25	04/08	04/22	05/06	05/20	06/03	06/17	07/01	07/15
Descending	Differential InSAR					Differential InSAR+ Sea Ice					Sea Ice			Differential InSAR+ Sea Ice					Sea Ice		Disaster Base Map					
	U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R		U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R				U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R			U2 (6)L	U2 (7)L	U2 (8)L	U2 (9)L	
Ascending						Disaster Base Map							Differential InSAR							Differential InSAR						
	FP (3)R	FP (4)R	FP (5)R	FP (6)R	FP (7)R	U2 (6)L	U2 (7)L	U2 (8)L	U2 (9)L	W2 (2)L					U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R			U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R

■ 6th Year

Cycle	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157
Year	2019												2020													
Month/Day	07/29	08/12	08/26	09/09	09/23	10/07	10/21	11/04	11/18	12/02	12/16	12/30	01/13	01/27	02/10	02/24	03/09	03/23	04/06	04/20	05/04	05/18	06/01	06/15	06/29	07/13
Descending	Differential InSAR					Differential InSAR+ Sea Ice					Sea Ice		Differential InSAR+Sea Ice					Sea Ice		Differential InSAR						
	U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R		U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R				U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R			U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	
Ascending							Differential InSAR							Differential InSAR							Differential InSAR					
	FP (3)R	FP (4)R	FP (5)R	FP (6)R	FP (7)R		U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R				U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R			U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R

B

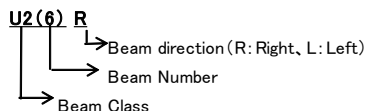
	Mode	R/L	Polarization	Beam
U2	Stripmap 3m	R	HH	6-9
U2		L	HH	6-9
U3		R	HH	10-14
U3		L	HH	10-14
FP	Stripmap 6m	R	HH+HV+VH+VV	3-7
W2	ScanSAR 350km	R	HH+HV	2
W2		L	HH+HV	2
	(Any Mode)	Open Cycle for the Recovery Observations		

* Regarding the ascending cycle84(FP6-7), cycle94(U2-9) , cycle110(FP6-7) and cycle157(FP6-7), the observations are carried out only paths where gaps occur between the paths observed with other beams.

* Several descending ScanSAR observations are planned for monitoring the sea ice at cycle91-99, cycle117-125 and cycle143-151.

【Number system】

EX: U2(6)R



 Non-base map observations

4.10 Basic Observation Scenario (Japan) - 【1st -3thyear】 -

■ 1st Year																												
Cycle	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		
Year	2014												2015															
Month/Day	08/04	08/18	09/01	09/15	09/29	10/13	10/27	11/10	11/24	12/08	12/22	01/05	01/19	02/02	02/16	03/02	03/16	03/30	04/13	04/27	05/11	05/25	06/08	06/22	07/06	07/20		
Descending	Disaster Base Map							Disaster Base Map							Disaster Base Map							Disaster Base Map						
	U2 (6)R	U2 (7)R		U2 (8)R	U2 (9)R	W2 (2)R		U2 (6)L	U2 (7)L	W2 (2)L	W2(2)L	W2(2)L	W2 (2)L	W2(2)R	W2(2)R	W2(2)R	W2(2)R	W2(2)R	W2(2)R	W2 (2)R		U3 (10)L	U3 (11)L	U3 (12)L	U3 (13)L	U3 (14)L		
Ascending	Disaster Base Map							Disaster Base Map							Differential InSAR							Differential InSAR						
	U2 (6)R	U2 (7)R		U2 (8)R	U2 (9)R	W2 (2)R		U2 (6)L	U2 (7)L	W2 (2)L	U2 (8)L	U2 (9)L	W2 (2)L		U2 (6)R	U2 (7)R	W2 (2)R	U2 (8)R	U2 (9)R	W2 (2)R		U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R			

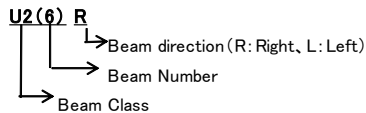
■ 2st Year																												
Cycle	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53		
Year	2015年												2016															
Month/Day	08/03	08/17	08/31	09/14	09/28	10/12	10/26	11/09	11/23	12/07	12/21	01/04	01/18	02/01	02/15	02/29	03/14	03/28	04/11	04/25	05/09	05/23	06/06	06/20	07/04	07/18		
Descending		Differential InSAR						Differential InSAR						Differential InSAR						Differential InSAR								
		W2 (2)R	U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R		U2 (6)R	U2 (7)R	W2 (2)R	W2(2)R U2(8)R	W2(2)R U2(9)R	W2 (2)R	W2(2)R	W2(2)R U2(6)R	W2(2)R U2(7)R	W2 (2)R	W2(2)R U2(8)R	W2(2)R U2(9)R	W2 (2)R		U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R			
Ascending							Differential InSAR						Differential InSAR							Differential InSAR								
	FP (3)R	FP (4)R	FP (5)R	FP (6)R	FP (7)R		U2 (6)R	U2 (7)R	W2 (2)R	U2 (8)R	U2 (9)R	W2 (2)R		U2 (6)R	U2 (7)R	W2 (2)R	U2 (8)R	U2 (9)R	W2 (2)R			U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R		

3st Year																											
Cycle	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	
Year	2016												2017														
Month/Day	08/01	08/15	08/29	09/12	09/26	10/10	10/24	11/07	11/21	12/05	12/19	01/02	01/16	01/30	02/13	02/27	03/13	03/27	04/10	04/24	05/08	05/22	06/05	06/19	07/03	07/17	
Descending		Differential InSAR					Differential InSAR+Sea Ice					Sea Ice			Differential InSAR+Sea Ice					Sea Ice			Differential InSAR				
	U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R		U2 (6)R	U2 (7)R	U2 (8)R	W2(2)R U2(9)R	W2 (2)R	W2(2)R	W2(2)R	W2(2)R	W2(2)R	W2(2)R	W2(2)R	W2 (2)R	W2(2)R			U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R		
Ascending							Differential InSAR							Differential InSAR							Differential InSAR						
	FP (3)R	FP (4)R	FP (5)R	FP (6)R	FP (7)R		U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R			U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R			U2 (6)R	U2 (7)R	U2 (8)R	U2 (9)R	W2 (2)R		

	Mode	R/L	Polarization	Beam
U2	Stripmap 3m	R	HH	6-9
U2		L	HH	6-9
U3		R	HH	10-14
U3		L	HH	10-14
FP	Stripmap 6m	R	HH+HV+VH+VV	3-7
W2	ScanSAR 350km	R	HH+HV	2
W2		L	HH+HV	2
	(Any Mode)	Open Cycle for the Recovery Observations		

【Number system】

EX: U2(6) R



Non-base map observations

5. Basic Observation Scenario (Global)

5.1 Overview for Basic Observation Scenario (Global)

• Descending acquisitions (noon, ~12:00)

- Observations of Wetlands & Rapid deforestation monitoring in **ScanSAR (350km HH+HV)** mode are 9 times per year. The overlap areas between Wetlands & Rapid Deforestation monitoring and Crustal Deformation are observed in **ScanSAR (350km HH+HV)** mode 9 times per year.
- Observations of Crustal Deformation in ScanSAR (350km HH) mode are 4 times per year (after 4th year *1).
- Observations of Crustal Deformation in **Stripmap (10m HH+HV)** mode are once per year for InSAR applications (after 4th year *2).

(Super Sites)

- Observations of JAXA super sites in **Stripmap (10m HH+HV)** mode are once per year.
- InSAR observations of Antarctic Glaciers are carried out in **Stripmap (10m HH+HV)** left-looking mode.

• Ascending acquisitions (midnight, ~24:00)

- Global observations in **Stripmap (10m HH+HV)** mode are once per year. Observations are made with higher priority in areas where the acquisition rate is low throughout the year (after Cycle 190).
- Observations of polar regions in **ScanSAR (350km HH+HV)** mode are 2 times per year to cover summer/winter seasons. Antarctic observations are carried out in left-looking mode to cover the high latitudes.
- Observations of crustal movement monitoring (ScanSAR) are once per year.

(Super Sites)

- InSAR observations of Greenland Glaciers are undertaken in **Stripmap (10m HH+HV)** mode.

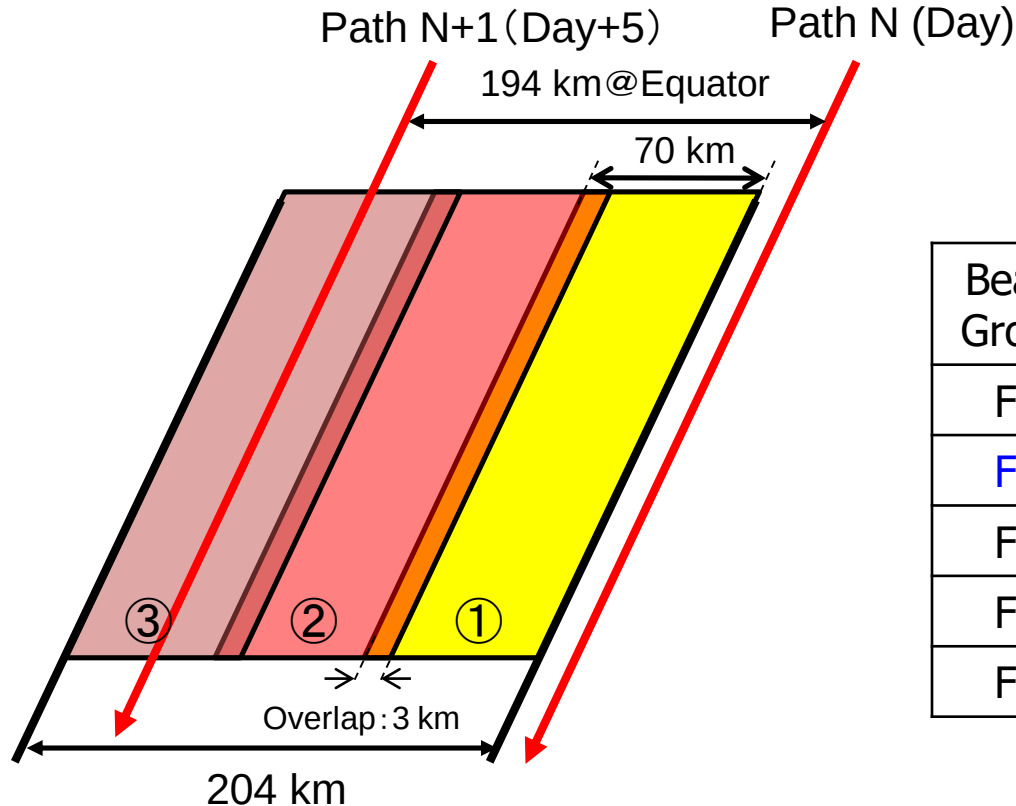
*1 Observations of Wetlands, Rapid Deforestation and Crustal Deformation in ScanSAR (350km HH+HV) mode are 9 times per year (1st – 3rd year).

*2 Observations of Forests in Stripmap (10m HH+HV) mode are twice per year (1st – 3rd year).

※ Global observations in **Stripmap (3m HH)** mode and **Stripmap (6m HH+HV+VV+VH)** mode have finished at 3rd year.

B_G
|
C

5.2 Global coverage by Fine Beam Mode [10m]



Fine Beam Mode [10m]

Beam Group	Incidence Angle	Number of beams to cover
F1	8-30 deg.	4 beams
F2	30-44 deg.	3 beams
F3	44-56 deg.	5 beams
F4	56-64 deg.	5 beams
F5	64-70 deg.	5 beams

F2: Nominal

A minimum of 3 beams is required for gap-free coverage
⇒ Minimum: 14 days × 3 cycles = 42 days

5.3 Basic Observation Scenario (Global) - 【 7th -8thyear 】 -

D

F

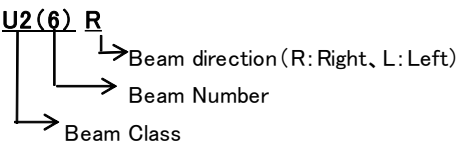
23

7th Year																												
Cycle	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183		
Year	2020												2021															
Month/Day	07/27	08/10	08/24	09/07	09/21	10/05	10/19	11/02	11/16	11/30	12/14	12/28	01/11	01/25	02/08	02/22	03/08	03/22	04/05	04/19	05/03	05/17	05/31	06/14	06/28	07/12		
Descending	Glacier Super Site	Wetland Deforest 2 Glacier SuperSite	Wetland Deforest 1	Crustal 1 Glacier Super Site	Wetland Deforest 2 Crustal 2 Glacier Super	Wetland Deforest 1	Crustal 1 10m Super Site	Wetland Deforest 2 Crustal 2	Wetland Deforest 1 10m Super	Crustal 1 10m Super Site	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Wetland Deforest 2	Wetland Deforest 1		
		W2(2)R	W2 (2)R	W2(2)R	W2(2)R	W2 (2)R	W2(2)R	W2(2)R	W2(2)R	W2(2)R	W2(2)R	W2 (2)R	W2 (2)R	W2(2)R	W2 (2)R	F2 (7)R	W2(2)R	W2 (2)R	F2 (5)R	W2(2)R	W2 (2)R	F2 (6)R	W2(2)R	W2 (2)R	W2 (2)R	W2 (2)R		
		F2(6)L	F2(6)L	(2)R	F2(6)L	F2(6)L	(2)R	F2(7)R	W2(2)R	F2(5)R	F2(6)R	W2(2)R			W2(2)R			F2(7)R		F2 (5)R		F2 (6)R		F2(6)R				
Ascending	World E(10m)			Crustal	Polar	World F(10m)						World A(10m)			North Polar	GR Super Site South Polar	World B(10m)			World C(10m)						World D(10m)		
	F2 (7)R	F2 (5)R	F2 (6)R	W2 (2)R	W2(2)R	F2 (7)R	F2 (5)R	F2 (6)R				F2 (7)R	F2 (5)R	F2 (6)R	W2(2)R	F2(6)R	F2 (6)R	F2 (7)R	F2 (5)R				F2 (7)R	F2 (5)R	F2 (6)R	F2 (7)R	F2 (5)R	F2 (6)R
8th Year																												
Cycle	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209		
Year	2021												2022															
Month/Day	07/26	08/09	08/23	09/06	09/20	10/04	10/18	11/01	11/15	11/29	12/13	12/27	01/10	01/24	02/07	02/21	03/07	03/21	04/04	04/18	05/02	05/16	05/30	06/13	06/27	07/11		
Descending	Glacier Super Site	Wetland Deforest 2 Glacier SuperSite	Wetland Deforest 1	Crustal 1 Glacier Super Site	Wetland Deforest 2 Crustal 2 Glacier Super	Wetland Deforest 1	Crustal 1 10m Super Site	Wetland Deforest 2 Crustal 2	Wetland Deforest 1 10m Super	Crustal 1 10m Super Site	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Wetland Deforest 2	Wetland Deforest 1		
		W2(2)R	W2 (2)R	W2(2)R	W2(2)R	W2 (2)R	W2(2)R	W2(2)R	W2(2)R	W2(2)R	W2(2)R	W2 (2)R	W2 (2)R	W2(2)R	W2 (2)R	F2 (7)R	W2(2)R	W2 (2)R	F2 (5)R	W2(2)R	W2 (2)R	F2 (6)R	W2(2)R	W2 (2)R	W2 (2)R	W2 (2)R		
		F2(6)L	F2(6)L	(2)R	F2(6)L	F2(6)L	(2)R	F2(7)R	W2(2)R	F2(5)R	F2(6)R	W2(2)R			W2(2)R			F2(7)R		F2 (5)R		F2 (6)R		F2(6)R				
Ascending	World E(10m)			Crustal	Polar	World F(10m)						World A(10m)			North Polar	GR Super Site South Polar	World B(10m)			World C(10m)						World D(10m)		
	F2 (7)R	F2 (5)R	F2 (6)R	W2 (2)R	W2(2)R	F2 (7)R	F2 (5)R	F2 (6)R				F2 (7)R	F2 (5)R	F2 (6)R	W2(2)R	F2(6)R	F2 (6)R	F2 (7)R	F2 (5)R				F2 (7)R	F2 (5)R	F2 (6)R	F2 (7)R	F2 (5)R	F2 (6)R

	Mode	R/L	Polarization	Beam
U2	Stripmap 3m	R	HH	6-9
FP	Stripmap 6m	R	HH+HV+VH+VV	3-7
F2	Stripmap 10m	R	HH+HV	5-7
F2		L	HH+HV	6
W2	ScanSAR 350km	R	HH+HV	2
W2		R	HH	2
W2		L	HH+HV	2
V2	ScanSAR 490km	R	HH+HV	2
	(Any Mode)	Open Cycle for the Recovery Observations		

【Number system】

EX: U2(6)R



U2(6)R Supersites

5.4 Basic Observation Scenario (Global) - 【 4th -6thyear 】 -

4th Year																													
Cycle	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105			
Year	2017												2018																
Month/Day	07/31	08/14	08/28	09/11	09/25	10/09	10/23	11/06	11/20	12/04	12/18	01/01	01/15	01/29	02/12	02/26	03/12	03/26	04/09	04/23	05/07	05/21	06/04	06/18	07/02	07/16			
Descending	Glacier Super Site	Crustal Glacier Super Site	Wetland Deforest	Glacier Super Site	Crustal Glacier Super Site	Wetland Deforest	10m (SuperSite)		Wetland Deforest	10m (SuperSite)	Crustal	Wetland Deforest 1&2	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Crustal 1	Wetland Deforest 2 Crustal 2	Wetland Deforest 1	Wetland Deforest 2	Wetland Deforest 1			
		W2(2)R	W2 (2)R		W2(2)R	W2 (2)R	F2(7)R	F2(5)R	W2 (2)R	F2(6)R	W2(2)R	W2 (2)R	W2 (2)R	W2 (2)R	W2 (2)R	F2 (7)R	W2(2)R	W2 (2)R	F2 (5)R	W2(2)R	W2 (2)R	F2 (6)R	W2(2)R	W2 (2)R	W2 (2)R	W2 (2)R			
	F2(6)L	F2(6)L		F2(6)L	F2(6)L																								
Ascending	North Polar Crustal	Polar	World 1-1(10m)				World 2-1(10m)				Polar	South Polar	World A(10m)			GR Super Site	World B(10m)			World C(10m)			South Polar	World D(10m)					
	W2 (2)R	W2(2)R	F2 (7)R	F2 (5)R	F2 (6)R		F2 (7)R	F2 (5)R	F2 (6)R	W2(2)R	W2(2)L	F2 (7)R	F2 (5)R	F2 (6)R	F2(6)R	F2 (6)R	F2 (7)R	F2 (5)R		F2 (7)R	F2 (5)R	F2 (6)R	W2(2)L	F2 (7)R	F2 (5)R	F2 (6)R			
		W2(2)L								W2(2)L																			

5th Year																																																				
Cycle	106		107		108		109		110		111		112		113		114		115		116		117		118		119		120		121		122		123		124		125		126		127		128		129		130		131	
Year	2018																								2019																											
Month/Day	07/30		08/13		08/27		09/10		09/24		10/08		10/22		11/05		11/19		12/03		12/17		12/31		01/14		01/28		02/11		02/25		03/11		03/25		04/08		04/22		05/06		05/20		06/03		06/17		07/01		07/15	
Descending	Glacier Super Site		Wetland Deforest 2 Glacier SuperSite		Wetland Deforest 1		Crustal 1 Glacier Super Site		Wetland Deforest 2 Crustal 2 Glacier Super		Wetland Deforest 1		Crustal 1 10m Super Site		Wetland Deforest 2 Crustal 2		Wetland Deforest 1 10m Super		Crustal 1 10m Super Site		Wetland Deforest 2 Crustal 2		Wetland Deforest 1		Crustal 1		Wetland Deforest 2 Crustal 2		Wetland Deforest 1		Crustal 1		Wetland Deforest 2 Crustal 2		Wetland Deforest 1		Crustal 1		Wetland Deforest 2 Crustal 2		Wetland Deforest 1		Wetland Deforest 2		Wetland Deforest 1							
		W2(2)R		W2 (2)R		W2(2)R		W2(2)R		W2 (2)R		W2(2)R		W2(2)R		W2(2)R		W2(2)R		W2(2)R		W2 (2)R		W2 (2)R		W2(2)R		W2 (2)R		W2 (2)R		F2 (7)R		W2(2)R		W2 (2)R		F2 (5)R		W2(2)R		W2 (2)R		W2 (2)R		W2 (2)R						
	F2(6)L	F2(6)L		(2)R		F2(6)L	F2(6)L		(2)R		F2(7)R	W2(2)R	F2(5)R	F2(6)R	W2(2)R		(2)R		W2 (2)R		W2 (2)R		W2(2)R																													
Ascending	World E(10m)				North Polar Crustal		North Polar		World F(10m)								World A(10m)				North Polar		GR Super Site South Polar		World B(10m)								World C(10m)								World D(10m)											
	F2 (7)R	F2 (5)R	F2 (6)R		W2 (2)R		F2 (7)R	F2 (5)R	F2 (6)R					F2 (7)R	F2 (5)R	F2 (6)R		W2(2)R		F2(6)R		F2 (6)R	F2 (7)R	F2 (5)R																												

6th Year																																																				
Cycle	132		133		134		135		136		137		138		139		140		141		142		143		144		145		146		147		148		149		150		151		152		153		154		155		156		157	
Year	2019																								2020																											
Month/Day	07/29		08/12		08/26		09/09		09/23		10/07		10/21		11/04		11/18		12/02		12/16		12/30		01/13		01/27		02/10		02/24		03/09		03/23		04/06		04/20		05/04		05/18		06/01		06/15		06/29		07/13	
Descending	Glacier Super Site		Wetland Deforest 2 Glacier Super Site		Wetland Deforest 1		Crustal 1 Glacier Super Site		Wetland Deforest 2 Crustal 2 Glacier Super		Wetland Deforest 1		Crustal 1 10m Super Site		Wetland Deforest 2 Crustal 2		Wetland Deforest 1 10m Super		Crustal 1 10m Super Site		Wetland Deforest 2 Crustal 2		Wetland Deforest 1		Crustal 1		Wetland Deforest 2 Crustal 2		Wetland Deforest 1		Crustal 1		Wetland Deforest 2 Crustal 2		Wetland Deforest 1		Crustal 1		Wetland Deforest 2 Crustal 2		Wetland Deforest 1		Wetland Deforest 2		Wetland Deforest 1							
Ascending	World E(10m)						North Polar Crustal		Polar		World F(10m)								World A(10m)						North Polar		GR Super Site South Polar		World B(10m)						World C(10m)						World D(10m)											

	Mode	R/L	Polarization	Beam
U2	Stripmap 3m	R	HH	6-9
FP	Stripmap 6m	R	HH+HV+VH+VV	3-7
F2	Stripmap 10m	R	HH+HV	5-7
F2		L	HH+HV	6
W2	ScanSAR 350km	R	HH+HV	2
W2		R	HH	2
W2		L	HH+HV	2
V2	ScanSAR 490km	R	HH+HV	2
	(Any Mode)	Open Cycle for the Recovery Observations		

【 Number system 】

EX: U2(6) R

U2(6) R

→ Beam direction (R: Right, L: Left)

→ Beam Number

→ Beam Class



Supersites

B,C

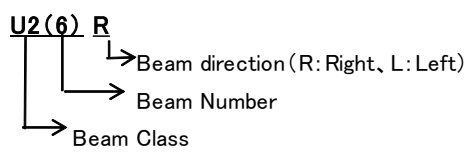
5.5 Basic Observation Scenario (Global) - [1st -3thyear] -

■ 1st Year																											
Cycle	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	
Year	2014												2015														
Month/Day	08/04	08/18	09/01	09/15	09/29	10/13	10/27	11/10	11/24	12/08	12/22	01/05	01/19	02/02	02/16	03/02	03/16	03/30	04/13	04/27	05/11	05/25	06/08	06/22	07/06	07/20	
Descending	Crustal Wetland Deforest	Glacier Super Site	Crustal Wetland Deforest	Glacier Super Site	sub-Arctic Super Site	Crustal Wetland Deforest	Global 3m (1/3)		Crustal Wetland Deforest	Global 3m (1/3)		Crustal Wetland Deforest		sub-Arctic Super Site	Crustal Wetland Deforest	Crustal&Forest 14-day InSAR		Crustal Wetland Deforest	Crustal&Forest 14-day InSAR		Crustal Wetland Deforest	Crustal&Forest 14-day InSAR		Crustal Wetland Deforest	sub-Arctic Super Site	Crustal Wetland Deforest	
	W2 (2)R		W2 (2)R		V2(2)R	W2 (2)R	U2 (6)R	U2 (7)R	W2 (2)R	U2 (8)R	U2 (9)R	W2 (2)R		V2(2)R	W2 (2)R	F2 (5)R	F2 (5)R	W2 (2)R	F2 (6)R	F2 (6)R	W2 (2)R	F2 (7)R	F2 (7)R	W2 (2)R	V2(2)R	W2 (2)R	
Ascending	Crustal	Polar	World 1-1(10m)				World 2-1(10m)			Polar	North Polar	World 1-2(10m)			GR Super Site	GR Super Site	Global FP6m (1/5)						World 2-2(10m)				
	W2 (2)R	W2(2)R	F2 (7)R	F2 (5)R	F2 (6)R			F2 (7)R	F2 (5)R	F2 (6)R	W2(2)R	W2(2)R	F2 (7)R	F2 (5)R	F2 (6)R			FP (6)R	FP (5)R	FP (4)R	FP (3)R	FP (7)R		F2 (7)R	F2 (5)R	F2 (6)R	
■ 2nd Year																											
Cycle	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	
Year	2015												2016														
Month/Day	08/03	08/17	08/31	09/14	09/28	10/12	10/26	11/09	11/23	12/07	12/21	01/04	01/18	02/01	02/15	02/29	03/14	03/28	04/11	04/25	05/09	05/23	06/06	06/20	07/04	07/18	
Descending	Glacier Super Site	Glacier Super Site	Crustal Wetland Deforest	Glacier Super Site	sub-Arctic Super Site	Crustal Wetland Deforest	Global 3m (2/3)		Crustal Wetland Deforest	Global 3m (2/3)		Crustal Wetland Deforest		sub-Arctic Super Site	Crustal Wetland Deforest	Crustal&Forest		Crustal Wetland Deforest	Crustal&Forest		Crustal Wetland Deforest	Crustal&Forest		Crustal Wetland Deforest	sub-Arctic Super Site	Crustal Wetland Deforest	
			W2 (2)R		V2(2)R	W2 (2)R	U2 (6)R	U2 (7)R	W2 (2)R	U2 (8)R	U2 (9)R	W2 (2)R		V2(2)R	W2 (2)R	F2 (5)R	F2 (6)R	W2 (2)R	F2 (7)R	F2 (5)R	W2 (2)R	F2 (6)R	F2 (7)R	W2 (2)R	V2(2)R	W2 (2)R	
Ascending	North Polar	Polar	World 1-1(10m)				World 2-1(10m)			Polar	South Polar	World 1-2(10m)			GR Super Site	GR Super Site	Global FP6m (2/5)						World 2(10m)				
	W2(2)R	W2(2)R	F2 (7)R	F2 (5)R	F2 (6)R			F2 (7)R	F2 (5)R	F2 (6)R	W2(2)R	W2(2)R	F2 (7)R	F2 (5)R	F2 (6)R			FP (6)R	FP (5)R	FP (4)R	FP (3)R	FP (7)R		F2 (7)R	F2 (5)R	F2 (6)R	
■ 3rd Year																											
Cycle	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	
Year	2016												2017														
Month/Day	08/01	08/15	08/29	09/12	09/26	10/10	10/24	11/07	11/21	12/05	12/19	01/02	01/16	01/30	02/13	02/27	03/13	03/27	04/10	04/24	05/08	05/22	06/05	06/19	07/03	07/17	
Descending	Glacier Super Site	Glacier Super Site	Crustal Wetland Deforest	Glacier Super Site		Crustal Wetland Deforest	Global 3m (3/3)		Crustal Wetland Deforest	Global 3m (3/3)		Crustal Wetland Deforest			Crustal Wetland Deforest	Crustal&Forest		Crustal Wetland Deforest	Crustal&Forest		Crustal Wetland Deforest	Crustal&Forest		Crustal Wetland Deforest	Crustal Wetland Deforest		
			W2 (2)R			W2 (2)R	U2 (6)R	U2 (7)R	W2 (2)R	U2 (8)R	U2 (9)R	W2 (2)R			W2 (2)R	F2 (5)R	F2 (6)R	W2 (2)R	F2 (7)R	F2 (5)R	W2 (2)R	F2 (6)R	F2 (7)R	W2 (2)R		W2 (2)R	
Ascending	North Polar	Polar	World 1-1(10m)				World 2-1(10m)			Polar	South Polar	World 1-2(10m)			GR Super Site	GR Super Site	Global FP6m (3/5)						World 2-2(10m)				
	W2 (2)R	W2(2)R	F2 (7)R	F2 (5)R	F2 (6)R			F2 (7)R	F2 (5)R	F2 (6)R	W2(2)R	W2(2)R	F2 (7)R	F2 (5)R	F2 (6)R			FP (6)R	FP (5)R	FP (4)R	FP (3)R	FP (7)R		F2 (7)R	F2 (5)R	F2 (6)R	

	Mode	R/L	Polarization	Beam
U2	Stripmap 3m	R	HH	6-9
FP	Stripmap 6m	R	HH+HV+VH+VV	3-7
F2	Stripmap 10m	R	HH+HV	5-7
F2		L	HH+HV	6
W2	ScanSAR 350km	R	HH+HV	2
W2		R	HH	2
W2		L	HH+HV	2
V2	ScanSAR 490km	R	HH+HV	2
	(Any Mode)	Open Cycle for the Recovery Observations		

[Number system]

EX: U2(6) R



 Supersites

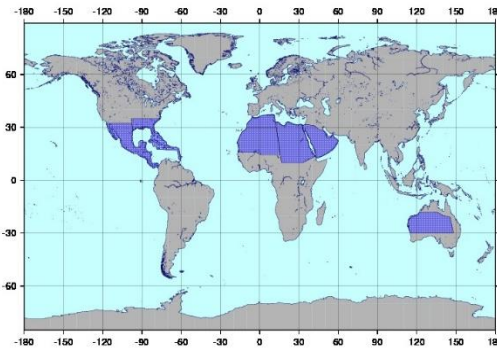
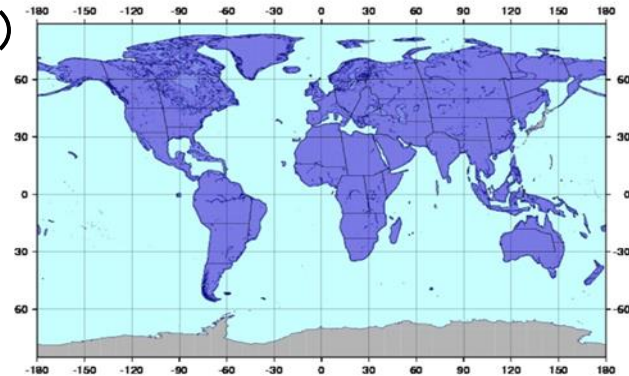
Basic Observation Scenario (Global)

Global land areas – baseline mapping (Cycle 151-189)

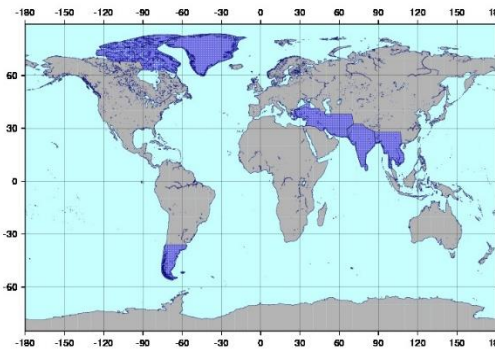
Temporal repeat: Ascending 1 cov/year

GSD: 10 m (off-nadir 28.2° - 36.2°)

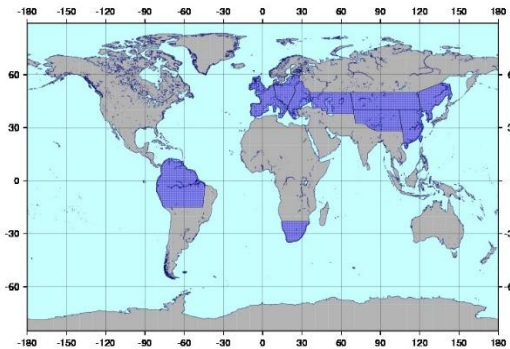
Mode: Stripmap Dual-pol (HH+HV/28MHz)



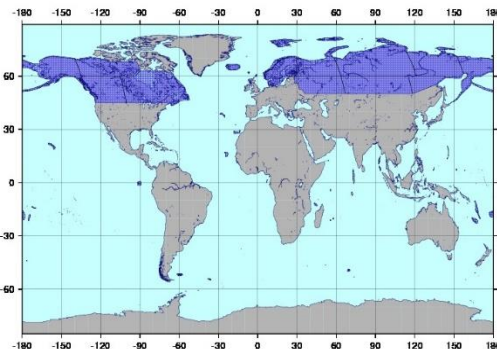
WorldA



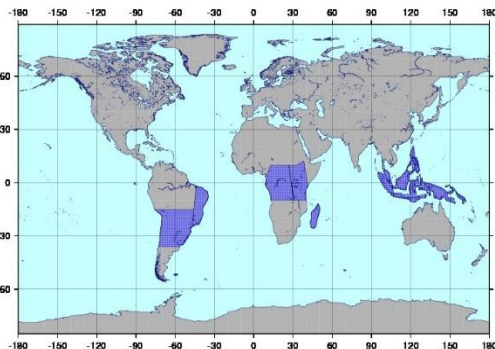
WorldB



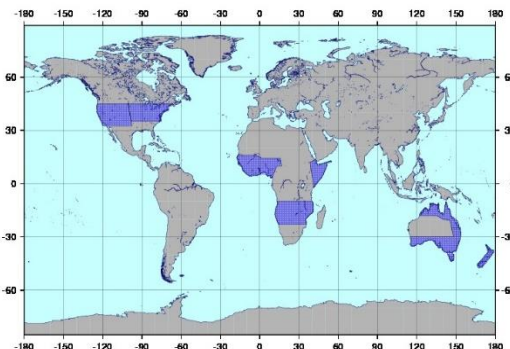
WorldC



WorldD



WorldE



WorldF

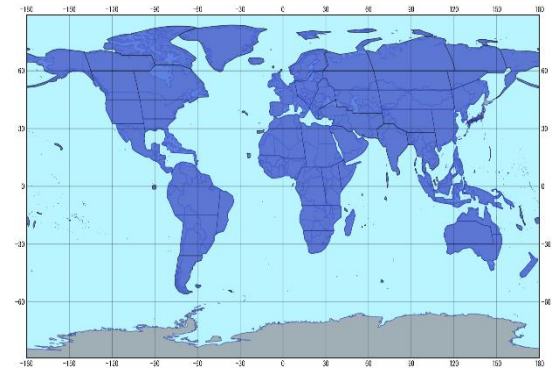
Basic Observation Scenario (Global)

Global land areas – baseline mapping (Cycle 190-209)

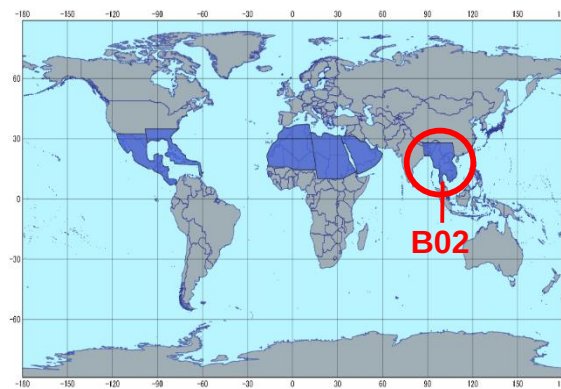
Temporal repeat: Ascending 1 cov/year

GSD: 10 m (off-nadir 28.2° - 36.2°)

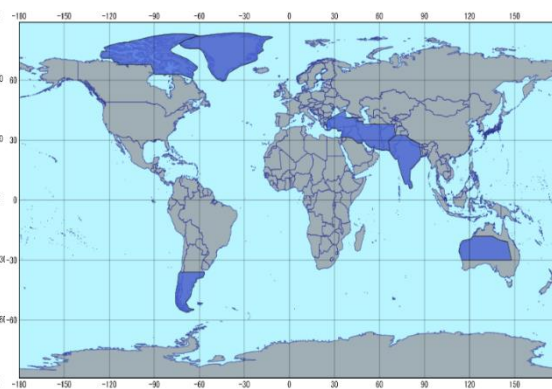
Mode: Stripmap Dual-pol (HH+HV/28MHz)



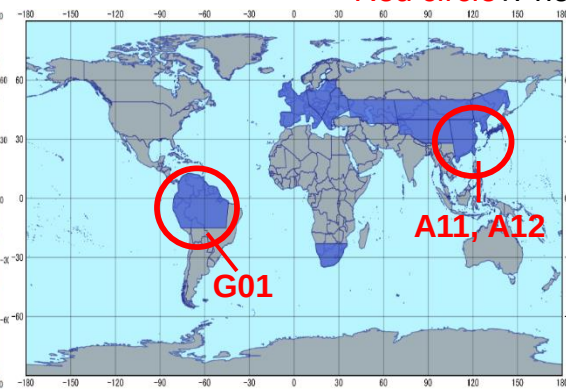
Red circle: Priority area



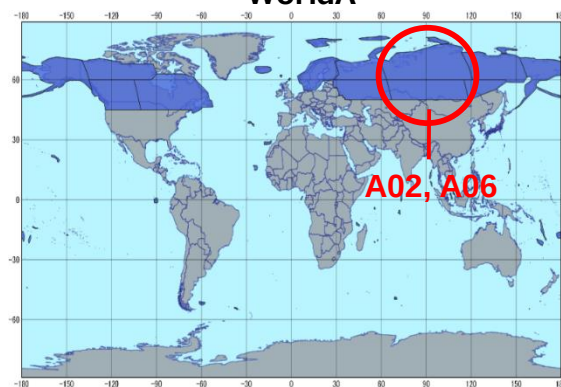
WorldA



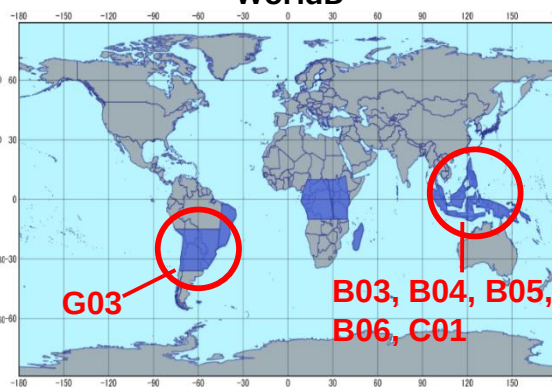
WorldB



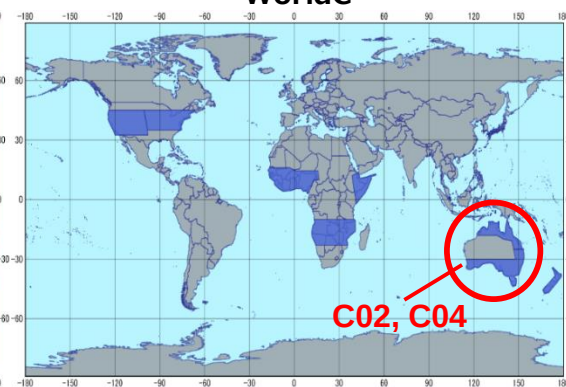
WorldC



WorldD



WorldE



WorldF

Basic Observation Scenario (Global)

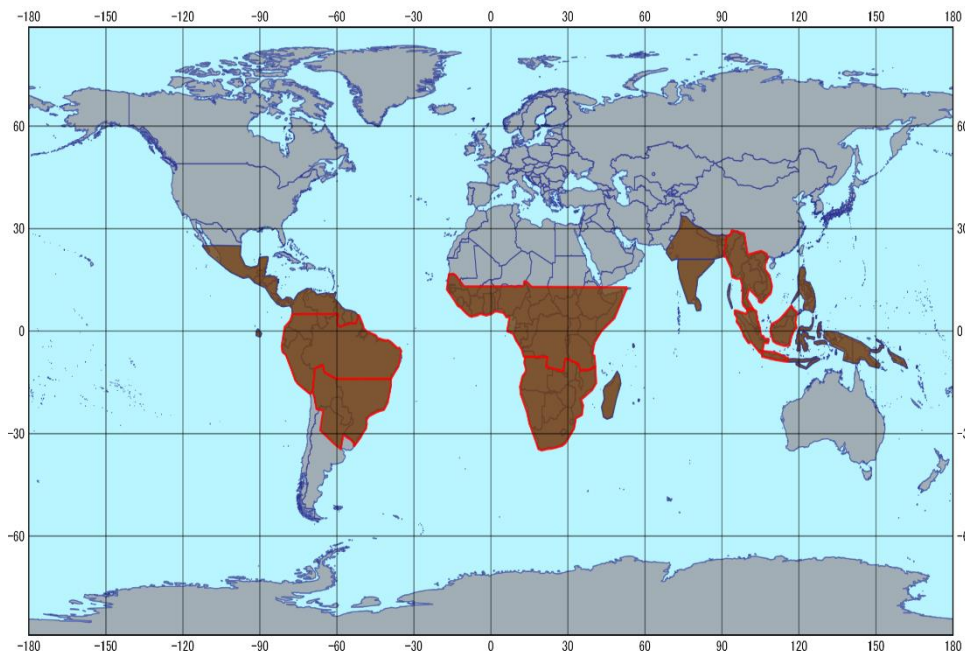
Wetlands & Rapid deforestation monitoring (Cycle 164-209)

Temporal repeat: Descending 9 cov/year (Alaska & Siberia: 6 cov/year)

GSD: 100 m (off-nadir 26.2° - 41.8°)

Mode: ScanSAR 350km Dual-pol (HH+HV/14MHz)

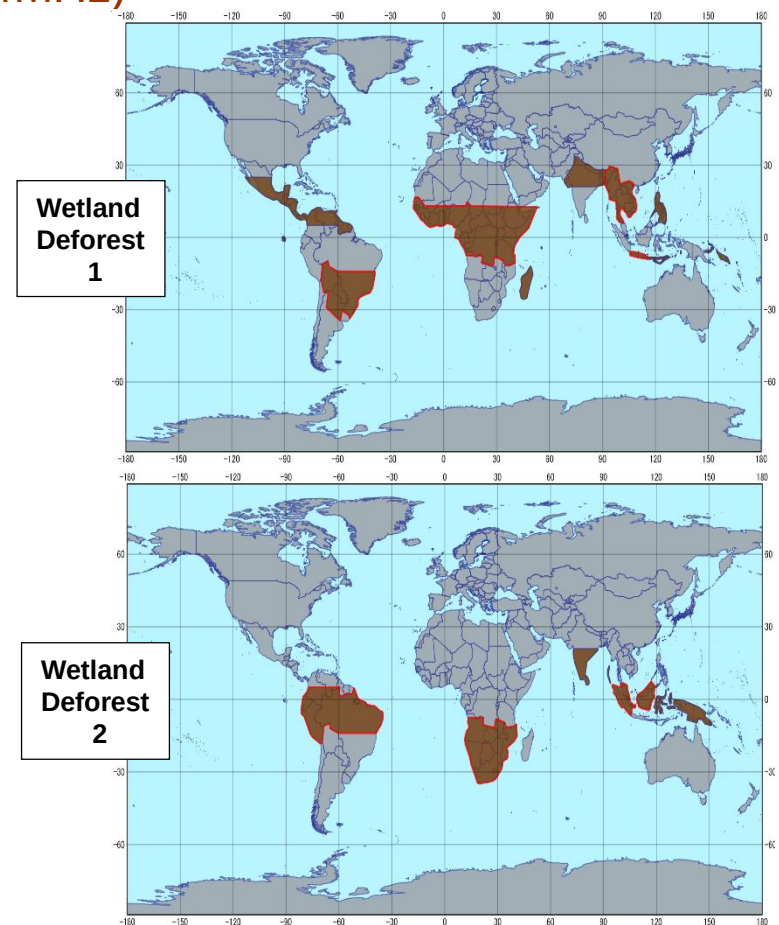
□ : High priority
■ : Low priority



Wetlands & Rapid deforestation monitoring Area

The observation area is divided into "Wetland Deforest 1" and "Wetland Deforest 2".

*The overlap areas between "Wetland Deforest" and "Crustal Deformation" are observed in ScanSAR (HH+HV) mode at the Cycle of Wetland Deforest.



E

Basic Observation Scenario (Global)

Crustal Deformation (Cycle 151-209)

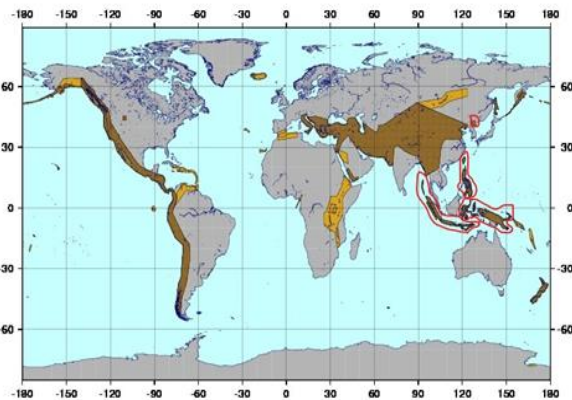
Temporal repeat: Ascending 1 cov/year, Descending 4 cov/year

GSD: 100 m (off-nadir 26.2° – 41.8°)

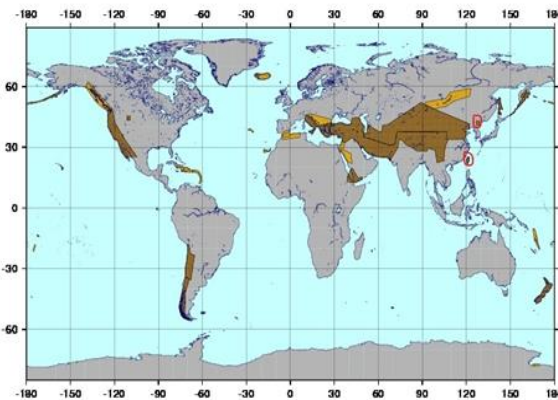
Mode: ScanSAR 350km (HH/14MHz)

□ : High priority
■ : Middle priority
■ : Low priority

D

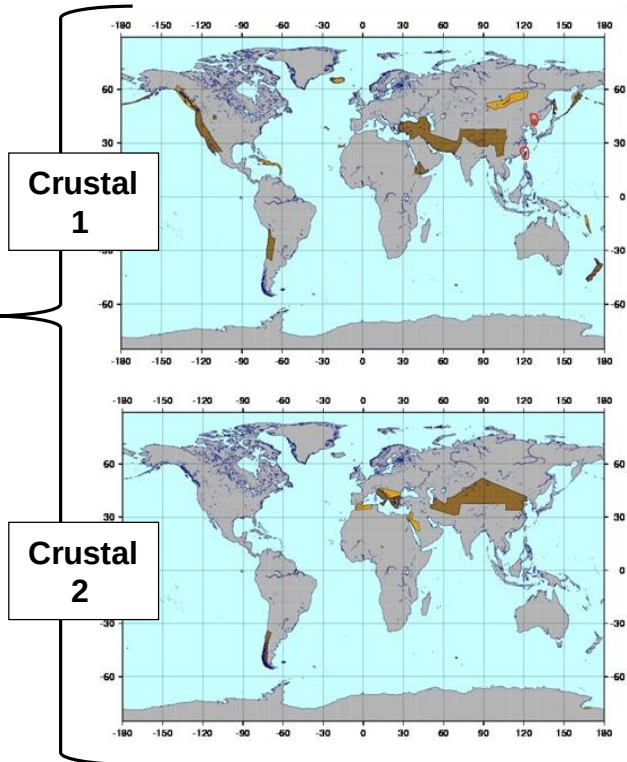


Ascending: 1cov/year



Descending: 4cov/year

The observation area is divided into "Crustal 1" and "Crustal 2".
*The red area is observed in ScanSAR (HH+HV) mode at the Cycle of Wetland Deforest.



Basic Observation Scenario (Global)

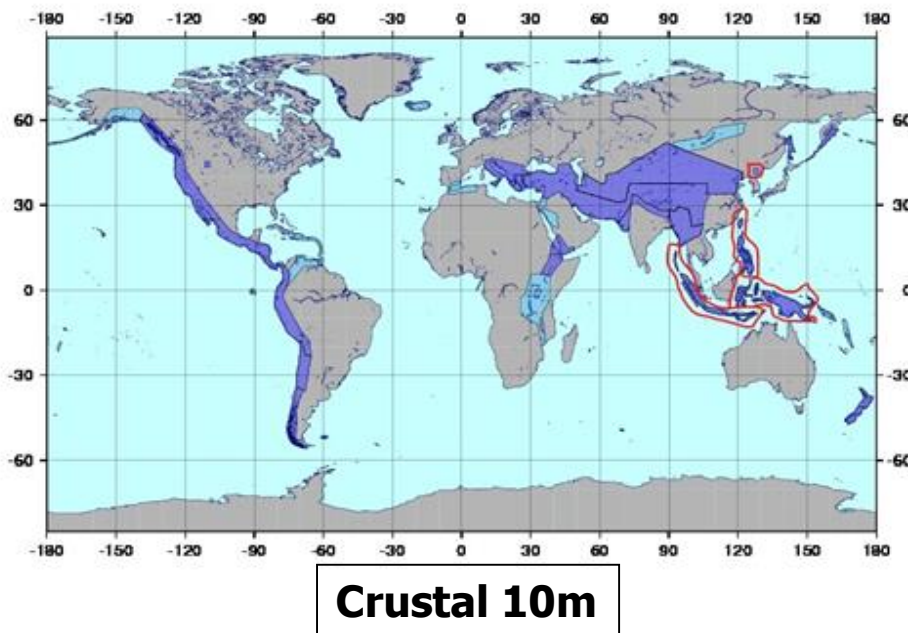
Crustal Deformation (Cycle 151-209)

Temporal repeat: Descending 1 cov/year

GSD: 10 m (off-nadir $28.2^\circ - 36.2^\circ$)

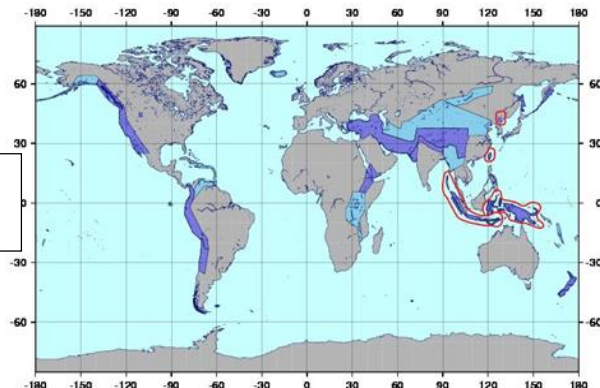
Mode: Stripmap Dual-pol (HH+HV/28MHz)

□ : High priority
■ : Middle priority
■ : Low priority

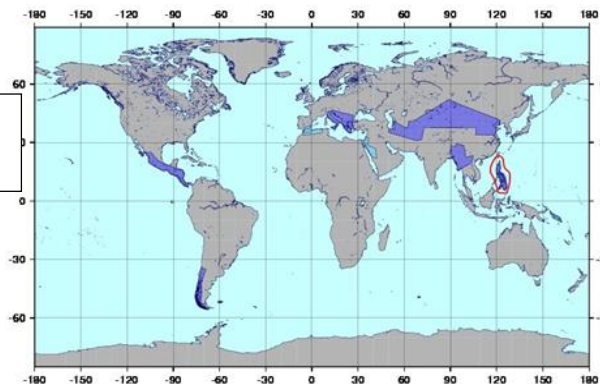


The observation area is divided into "Crustal 1" and "Crustal 2".

Crustal 1



Crustal 2



Basic Observation Scenario (Global)

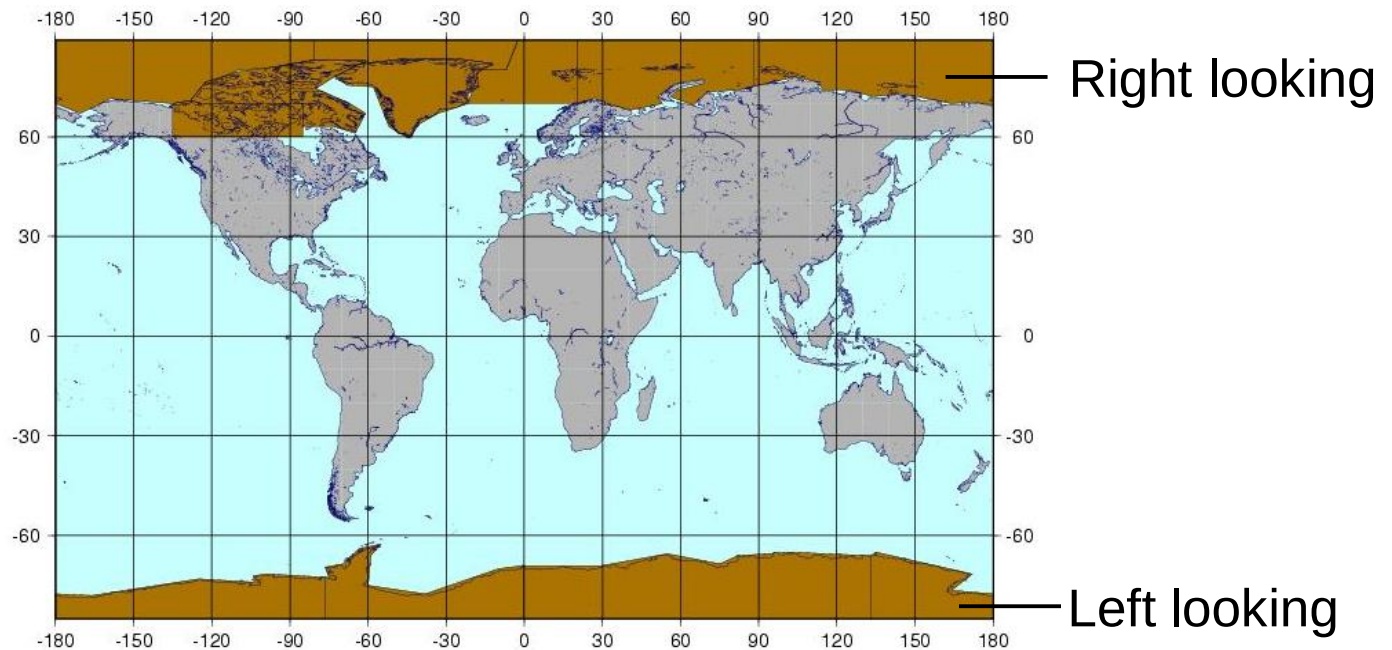
Polar Ice (Cycle 138-209)

Temporal repeat: **Ascending 2 cov/year**

GSD: **100 m (off-nadir 26.2° – 41.8°)**

Mode: **ScanSAR 350km (HH+HV/14MHz)**

C
|



Supersites 10m (JAXA)

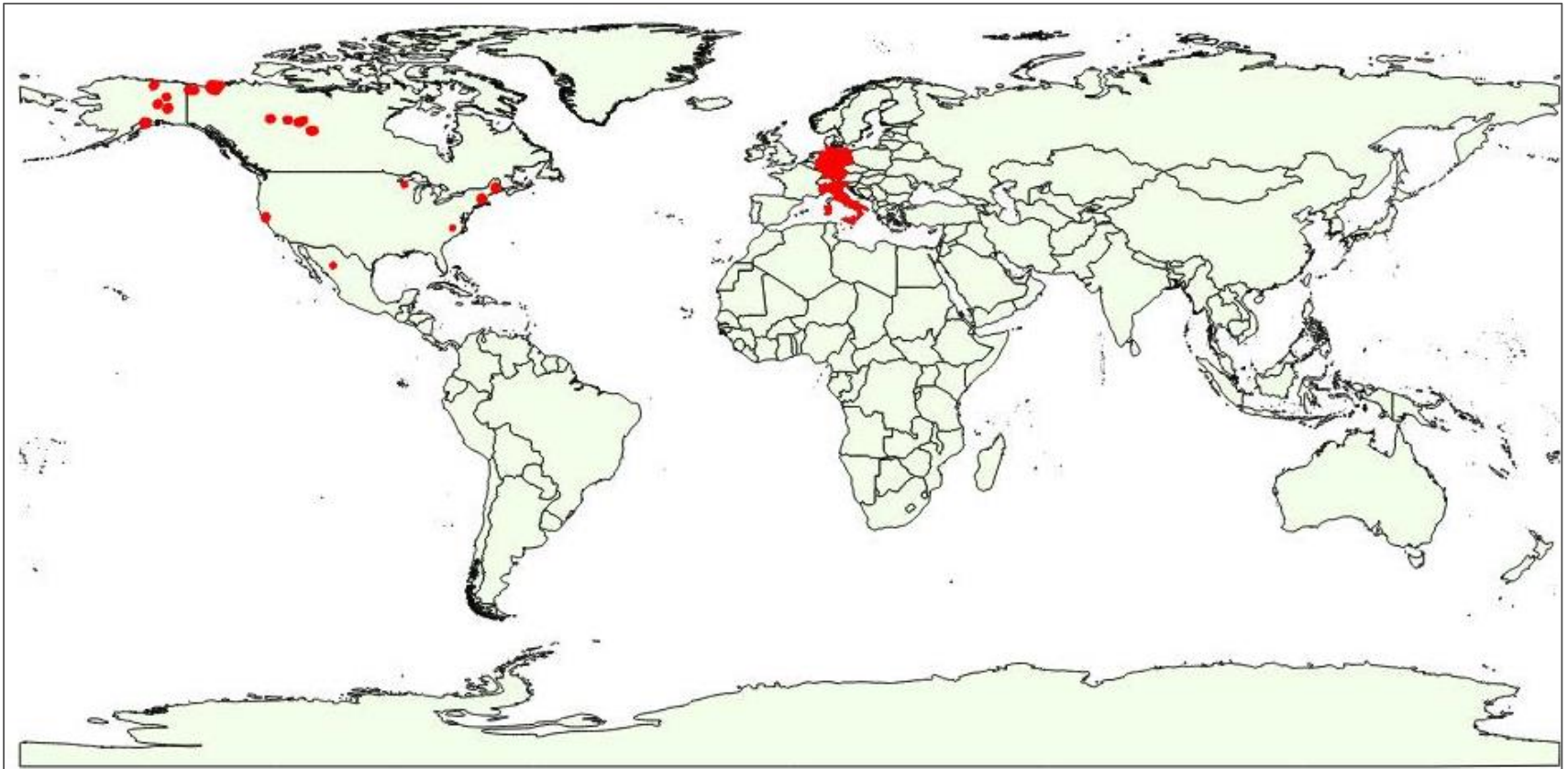
10m Super Sites (Cycle 112-209)

Temporal repeat: Descending 1 cov/year

GSD: 10 m (off-nadir 28.2° – 36.2°)

Mode: Stripmap Dual-pol (HH+HV/28MHz)

● : 10m Super Site



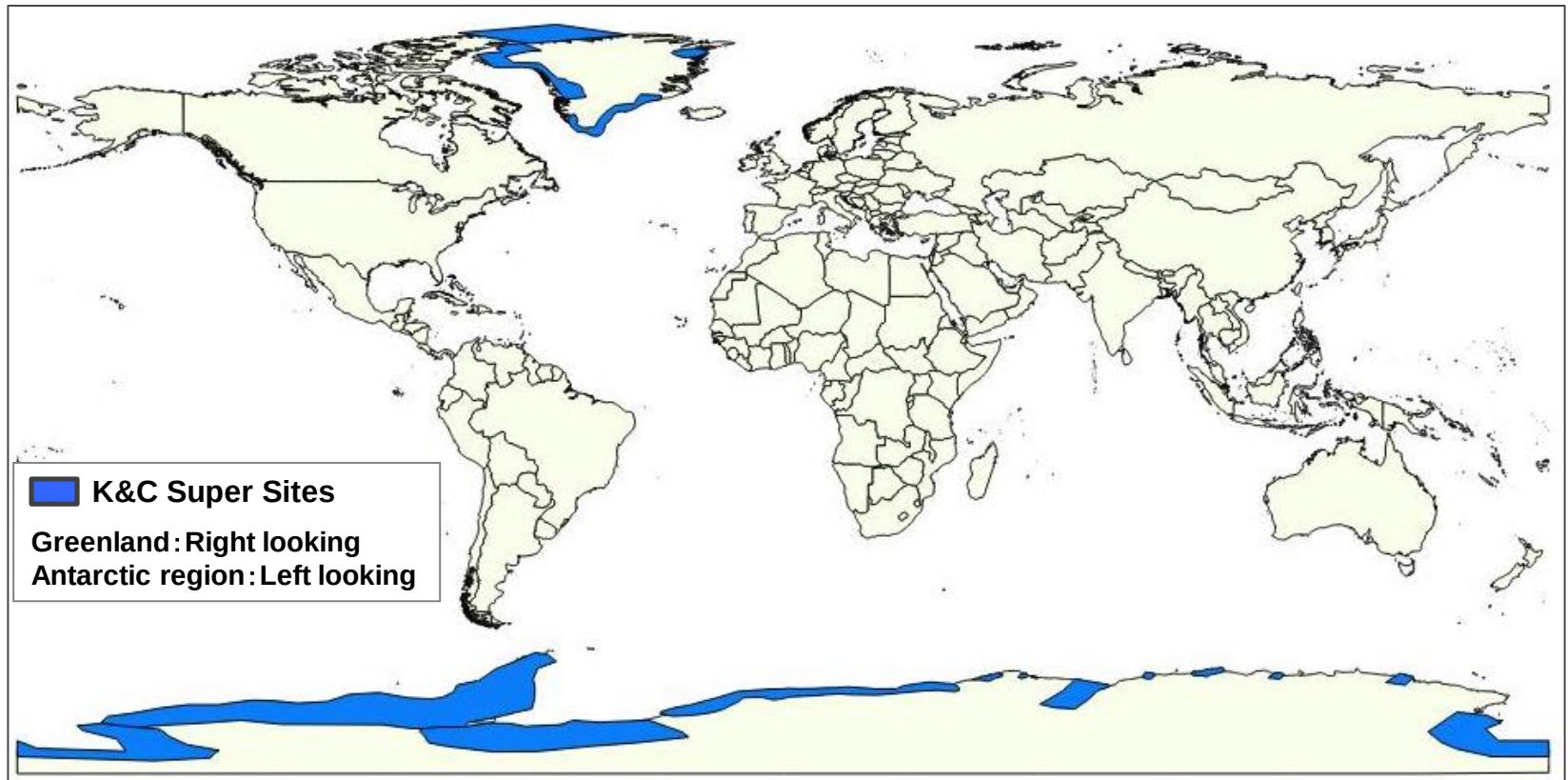
Supersites (K&C)

Glacier movement

Temporal repeat : Descending Antarctic region 4 cov/year, Ascending Greenland 3 cov/year

GSD: 10 m (off-nadir 32.5°)

Mode: Stripmap Dual-pol (HH/28MHz)

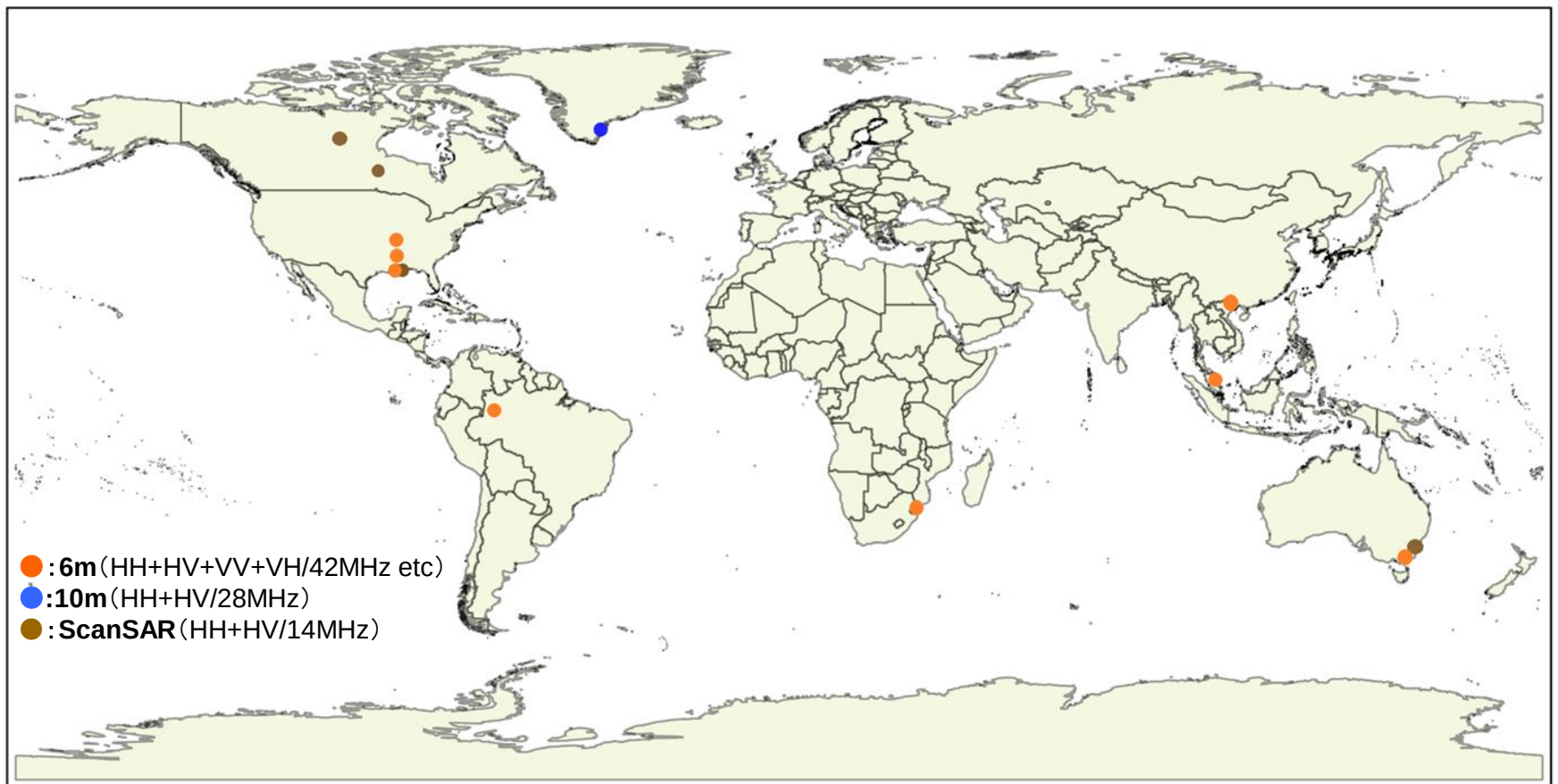


Supersites (K&C)

K&C Supersites

Temporal Repeat: When observation requests do not conflict with the BOS

GSD/Mode: based on the PI requests



E

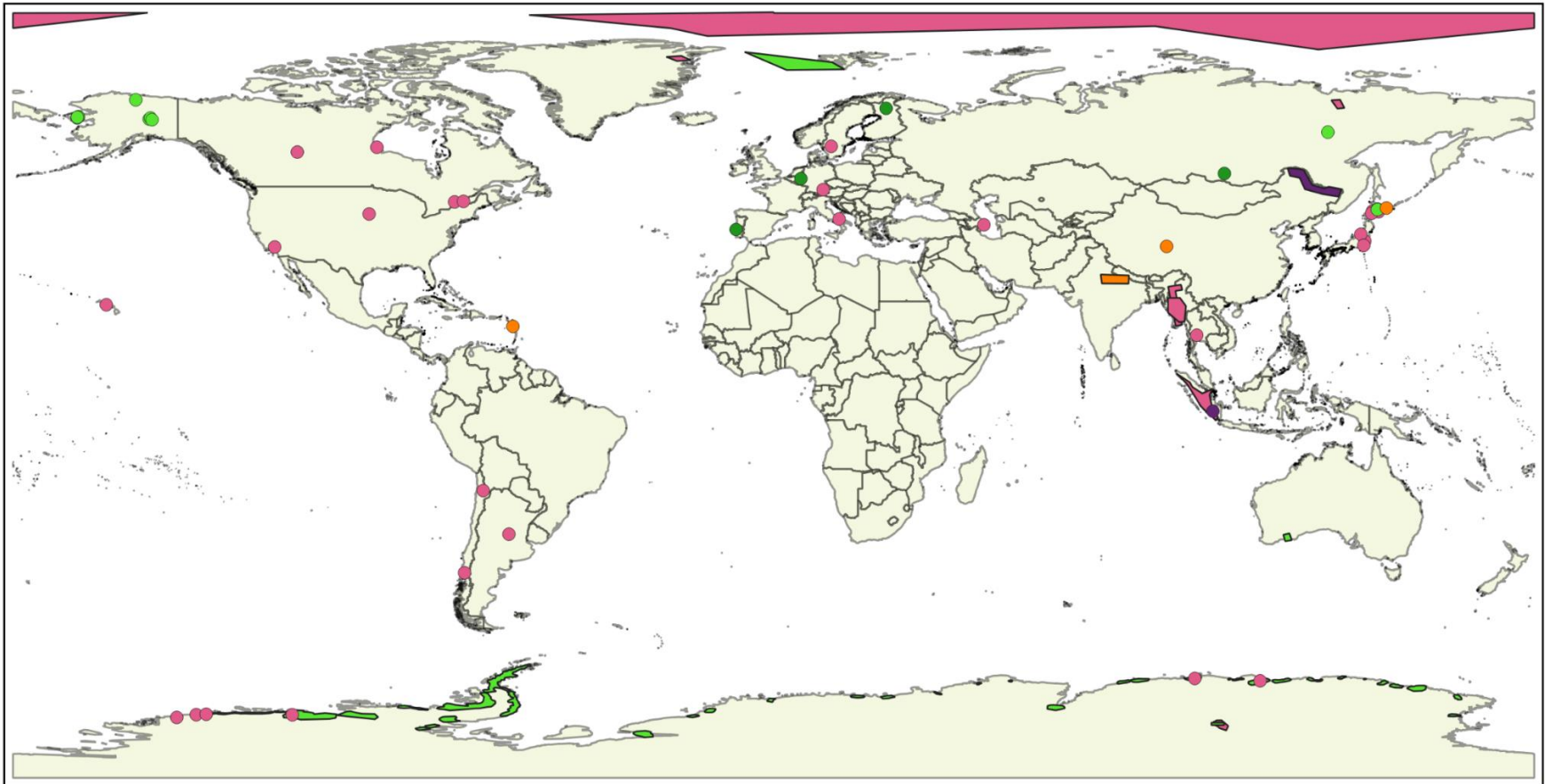
Supersites (PI)

PI Supersites

Temporal repeat: When observation requests do not conflict with the BOS

GSD/Mode: based on the PI requests

- : Polar research and Snow
- : Disaster
- : Hydrology and Agriculture
- : Land use and Forestry
- : ALOS-4 CVST



Supersites (CEOS)

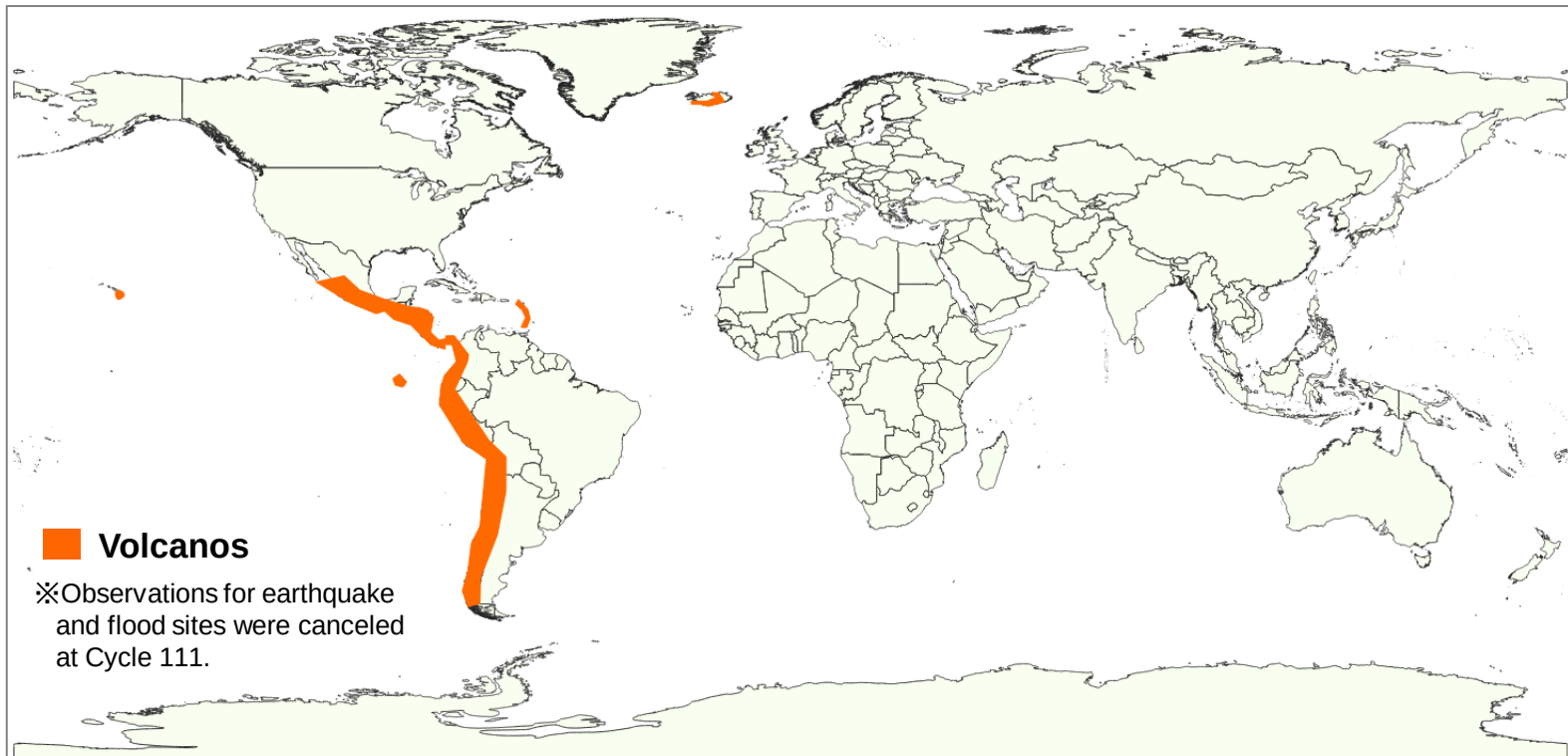
CEOS Supersites

Temporal repeat: When observation requests match the BOS

GSD: 10 m (off-nadir 28.2° – 36.2°)
& 100 m (off-nadir 26.2° – 41.8°)

Mode: Stripmap Dual-pol (HH+HV/28MHz) & ScanSAR 350km (HH+HV/14MHz)

B



Reference:

**Basic Observation Scenario (Global) and Supersites
in the past.**

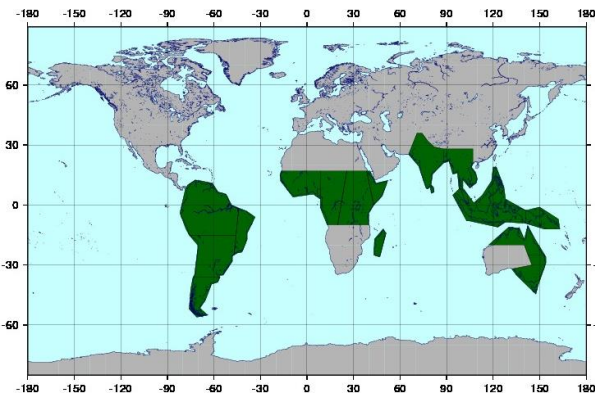
Basic Observation Scenario (Global)

Global land areas – VHR baseline mapping (until Cycle 64)

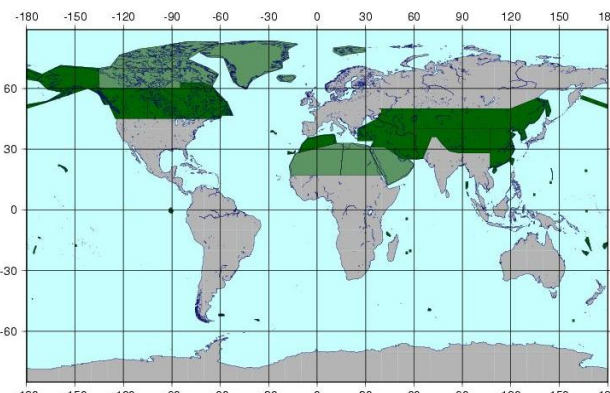
Temporal repeat: **Descending 1 cov / 3 years**

GSD: **3 m (off-nadir 29.1° - 38.2°)**

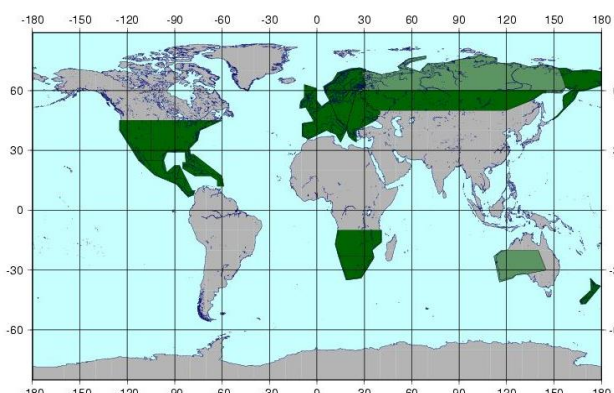
Mode: **Stripmap Single-pol (HH/84MHz)**



1st year



2nd year



3rd year

■ High priority
■ Low priority

* 3 years required to cover the global land areas in 3m mode.

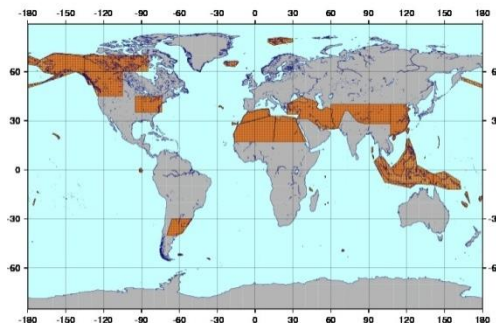
Basic Observation Scenario (Global)

Global land areas – Quad-polarimetric baseline (Until Cycle75)

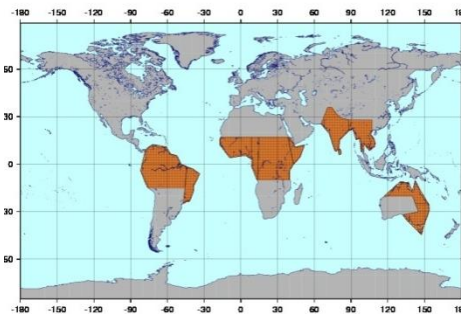
Temporal repeat: Ascending 1 cov/ 5 years

GSD: 6 m (off-nadir 25.0° - 34.9°)

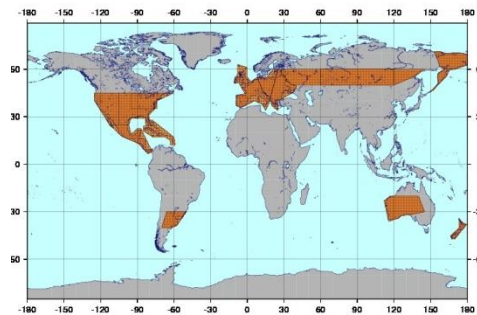
Mode: Stripmap Quad-pol (HH+HV+VV+VH/42MHz)



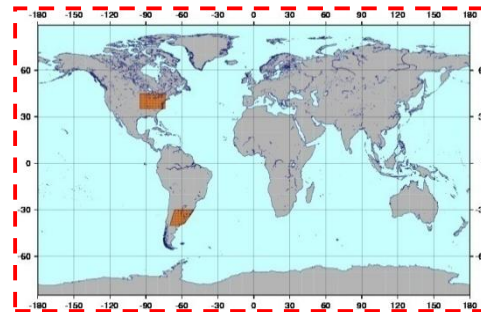
1st year



2nd year



3rd year



The above area : 2 cov/3years

* 5 years required to cover the global land areas in 6m QP mode, however the observation have finished at 3rd year.

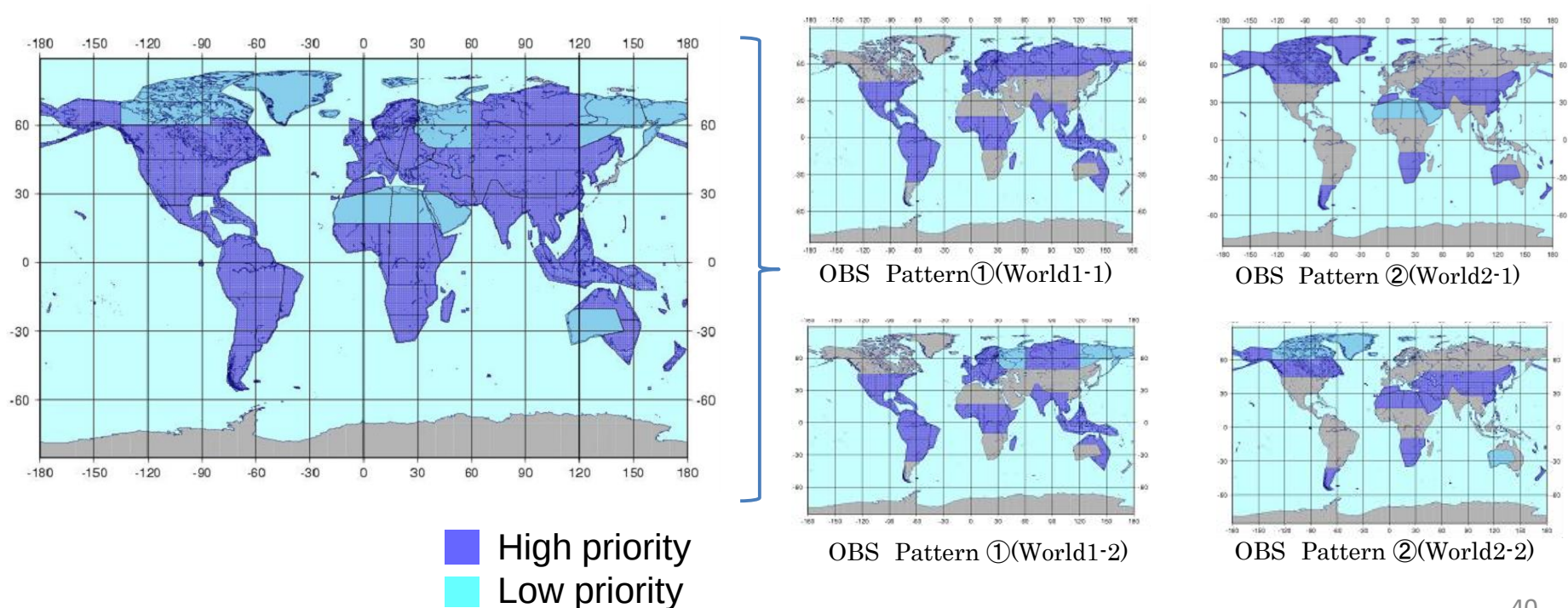
Basic Observation Scenario (Global)

Global land areas – baseline mapping (1st – 3rd year)

Temporal repeat: Ascending 2 cov/year

GSD: 10 m (off-nadir 28.2° -36.2°)

Mode: Stripmap Dual-pol (HH+HV/28MHz)



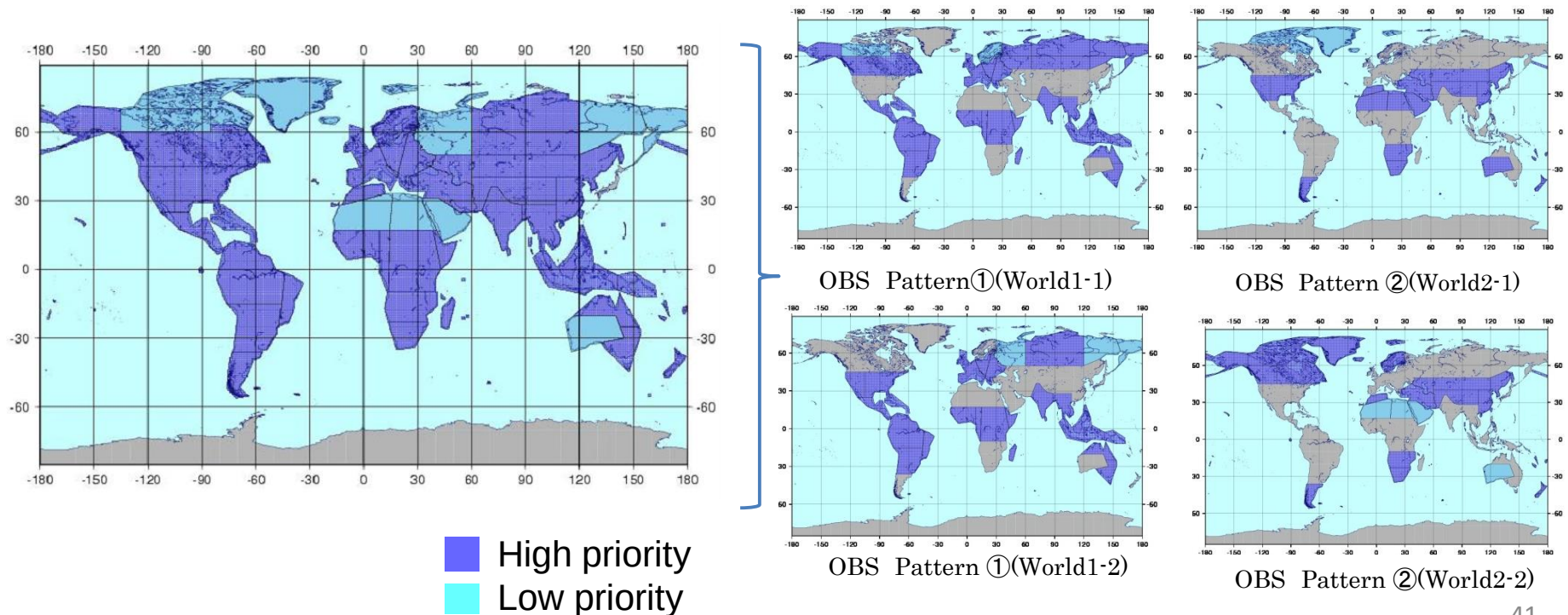
Basic Observation Scenario (Global)

Global land areas – baseline mapping (Cycle 80 - 90)

Temporal repeat: *Ascending 2 cov/year*

GSD: *10 m (off-nadir 28.2° - 36.2°)*

Mode: *Stripmap Dual-pol (HH+HV/28MHz)*



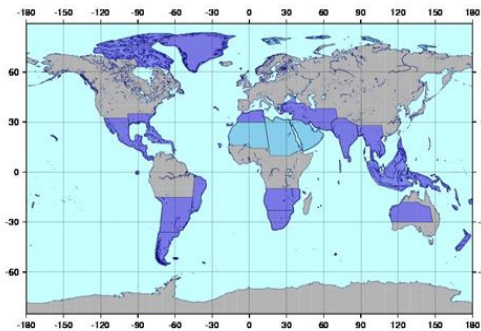
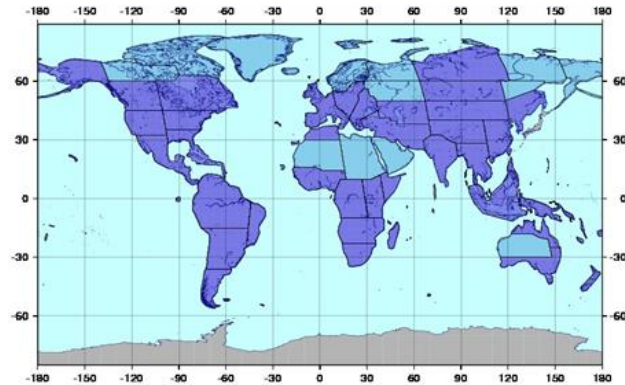
Basic Observation Scenario (Global)

Global land areas – baseline mapping (Cycle 91-98)

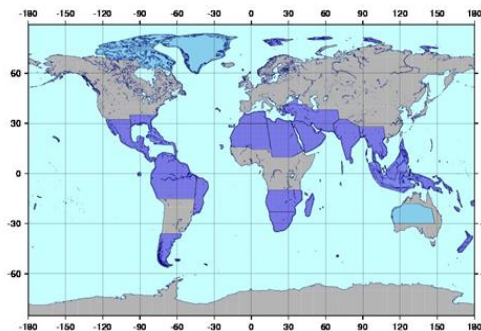
Temporal repeat: *Ascending* 2 cov/year - 4 cov/year

GSD: 10 m (off-nadir 28.2° - 36.2°)

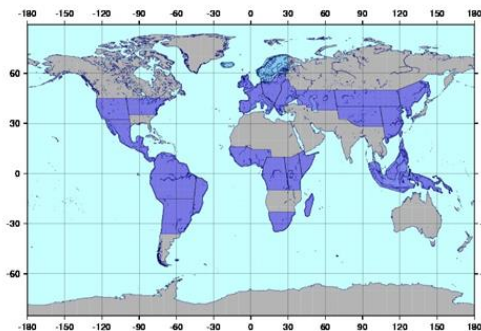
Mode: *Stripmap* Dual-pol (HH+HV/28MHz)



WorldA

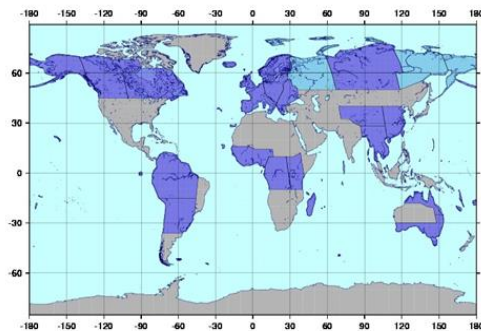


WorldB

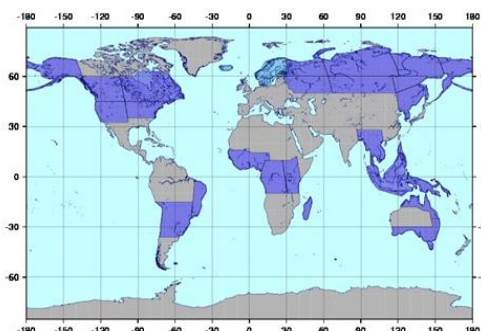


WorldC

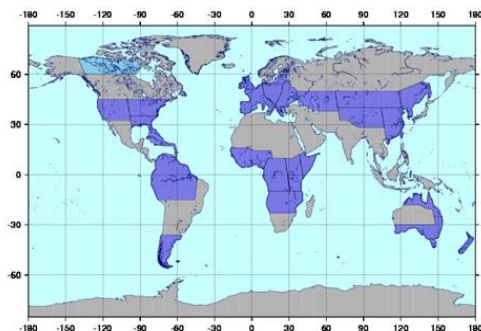
■ High priority
■ Low priority



WorldD



WorldE



WorldF

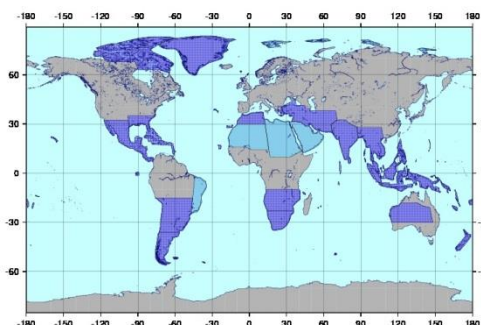
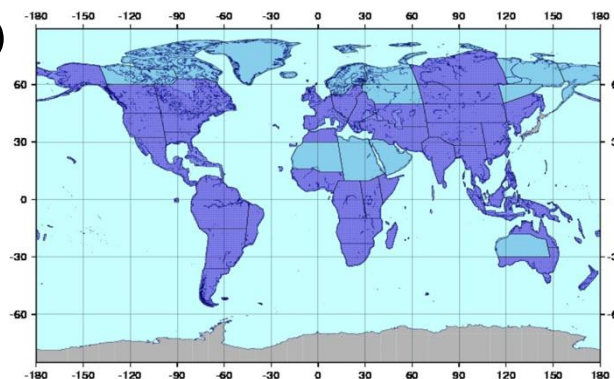
Basic Observation Scenario (Global)

Global land areas – baseline mapping (Cycle 99-124)

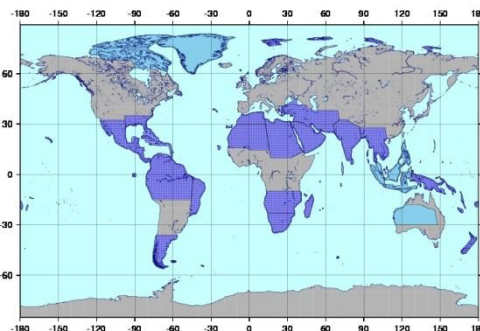
Temporal repeat: *Ascending* 2 cov/year - 4 cov/year

GSD: 10 m (off-nadir 28.2° - 36.2°)

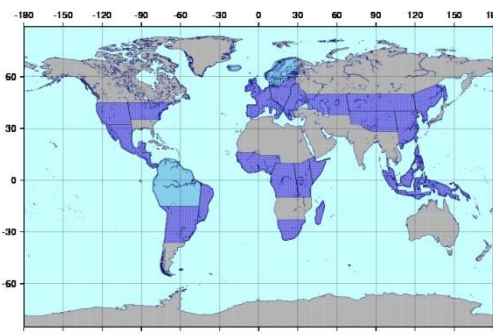
Mode: *Stripmap* Dual-pol (HH+HV/28MHz)



WorldA

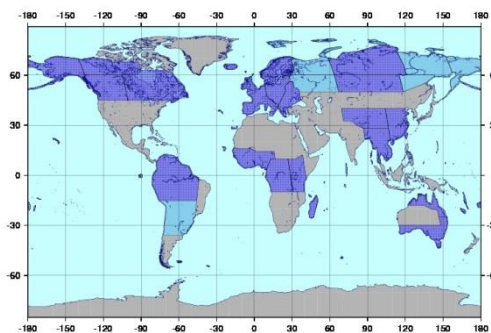


WorldB

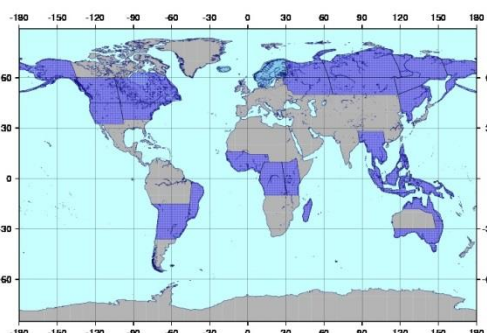


WorldC

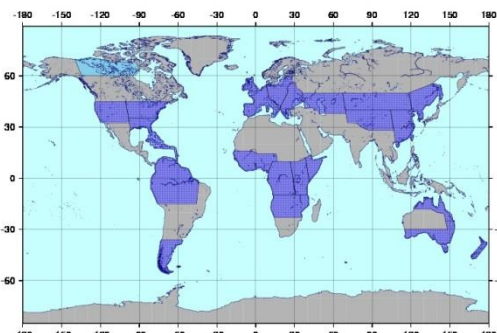
■ High priority
■ Low priority



WorldD



WorldE



WorldF

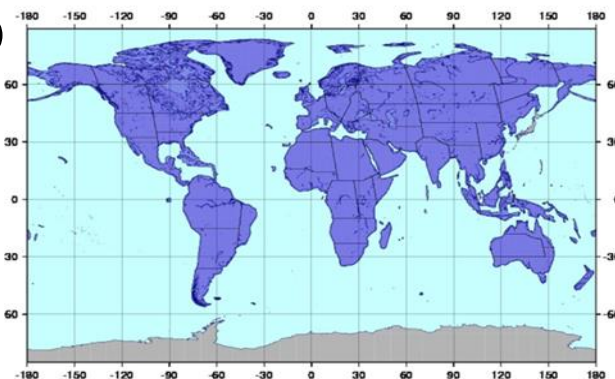
4-2 Basic Observation Scenario (Global)

Global land areas – baseline mapping (Cycle125-150)

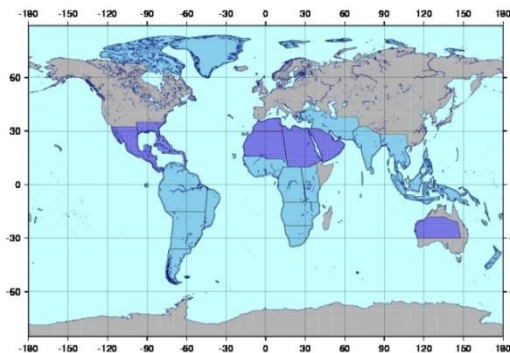
Temporal repeat: Ascending 1 cov/year

GSD: 10 m (off-nadir 28.2° - 36.2°)

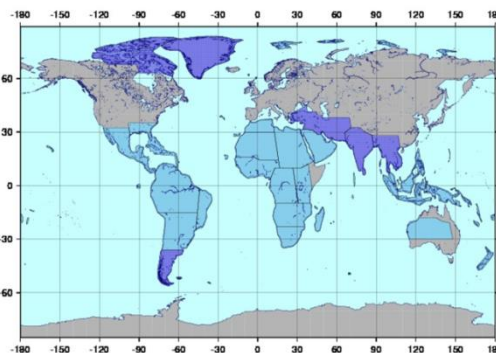
Mode: Stripmap Dual-pol (HH+HV/28MHz)



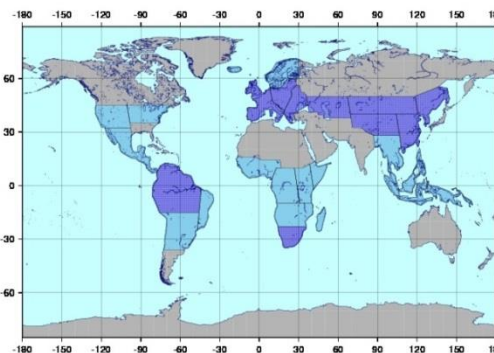
B



WorldA

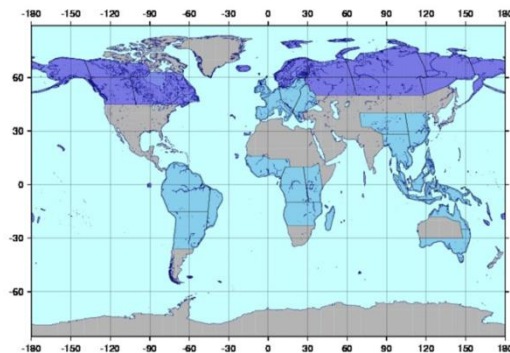


WorldB

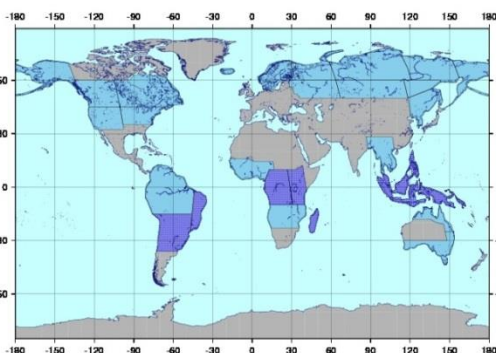


WorldC

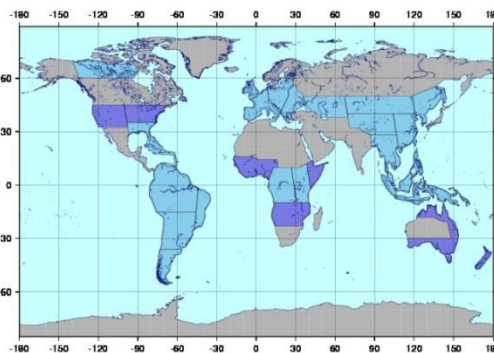
High priority
Low priority



WorldD



WorldE



WorldF

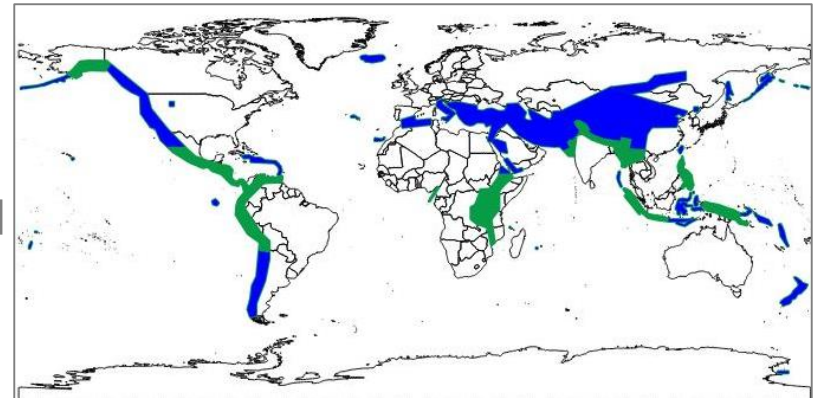
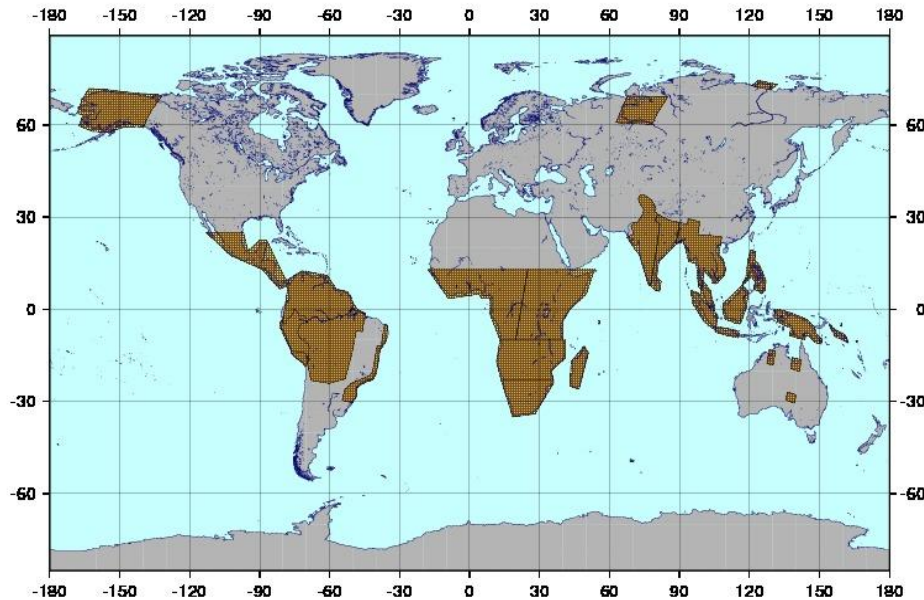
Basic Observation Scenario (Global)

Wetlands & Rapid deforestation monitoring (Cycle80-90)

Temporal repeat: Descending 9 cov/year

GSD: 100 m (off-nadir 26.2° - 41.8°)

Mode: ScanSAR 350km Dual-pol (HH+HV/14MHz)



The green area of 'The past of Crustal Deformation Area' is included In the Wetlands & Rapid deforestation monitoring Area

Wetlands & Rapid deforestation monitoring Area

Basic Observation Scenario (Global)

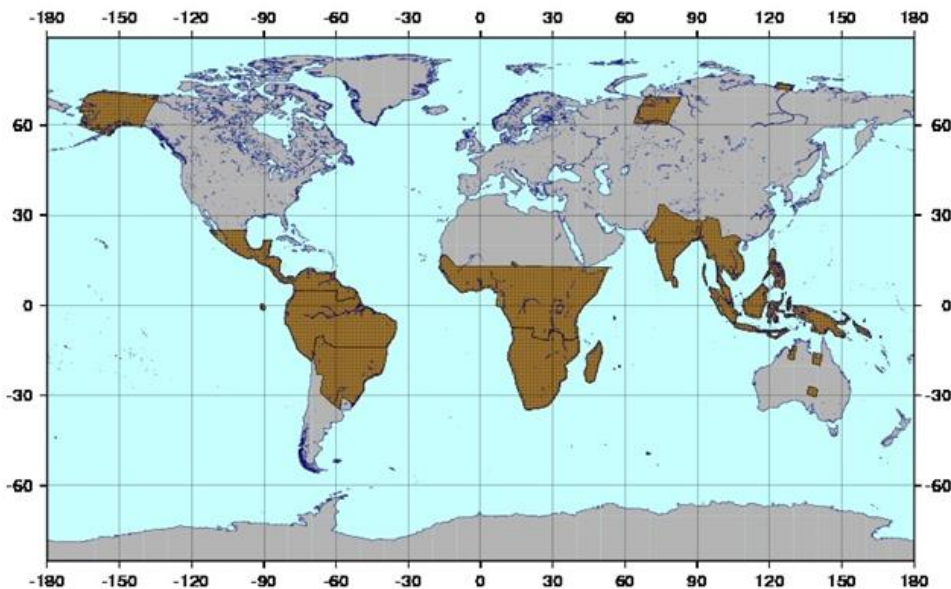
Wetlands & Rapid deforestation monitoring (Cycle 91-137)

Temporal repeat: Descending 9 cov/year

GSD: 100 m (off-nadir 26.2° - 41.8°)

Mode: ScanSAR 350km Dual-pol (HH+HV/14MHz)

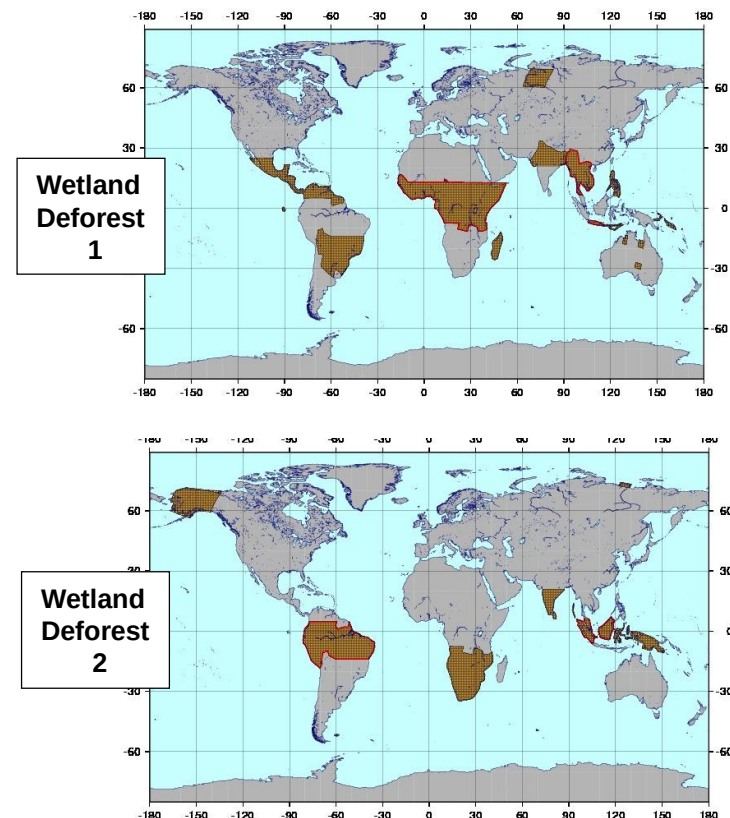
: High priority



Wetlands & Rapid deforestation monitoring Area

The observation area is divided into "Wetland Deforest 1" and "Wetland Deforest 2".

*The overlap areas between "Wetland Deforest" and "Crustal Deformation" are observed in ScanSAR (HH+HV) mode at the Cycle of Wetland Deforest.



Basic Observation Scenario (Global)

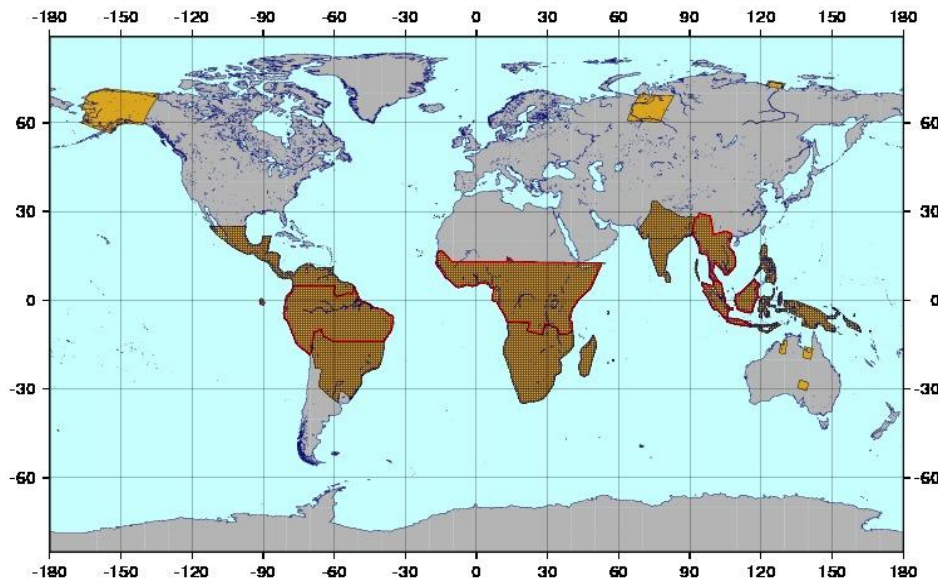
Wetlands & Rapid deforestation monitoring (Cycle 138-163)

Temporal repeat: Descending 9 cov/year (Alaska & Siberia: 6 cov/year)

GSD: 100 m (off-nadir 26.2° - 41.8°)

Mode: ScanSAR 350km Dual-pol (HH+HV/14MHz)

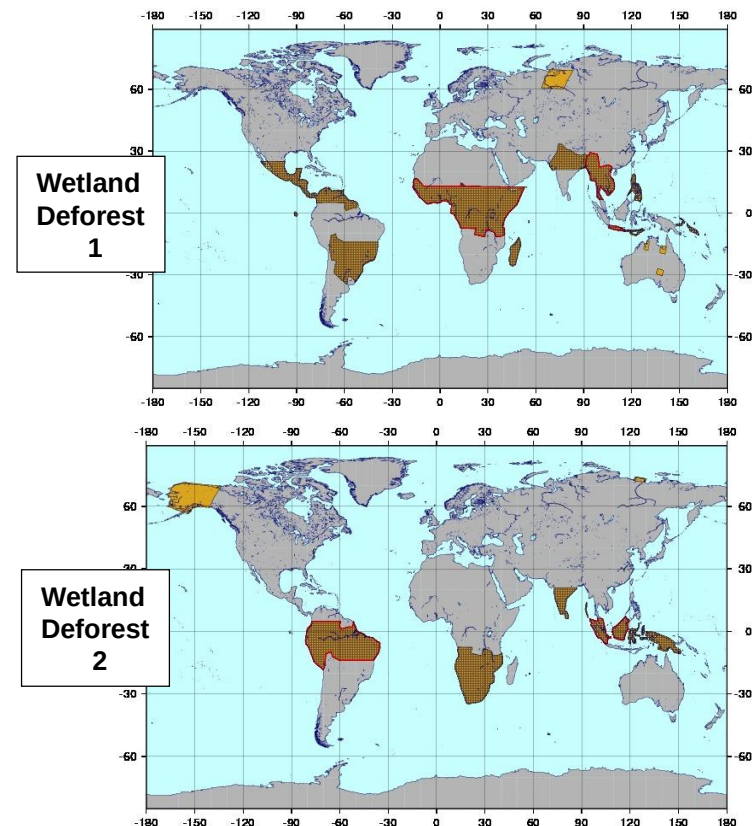
□ : High priority
■ : Middle priority
■ : Low priority



Wetlands & Rapid deforestation monitoring Area

The observation area is divided into "Wetland Deforest 1" and "Wetland Deforest 2".

*The overlap areas between "Wetland Deforest" and "Crustal Deformation" are observed in ScanSAR (HH+HV) mode at the Cycle of Wetland Deforest.



C

C

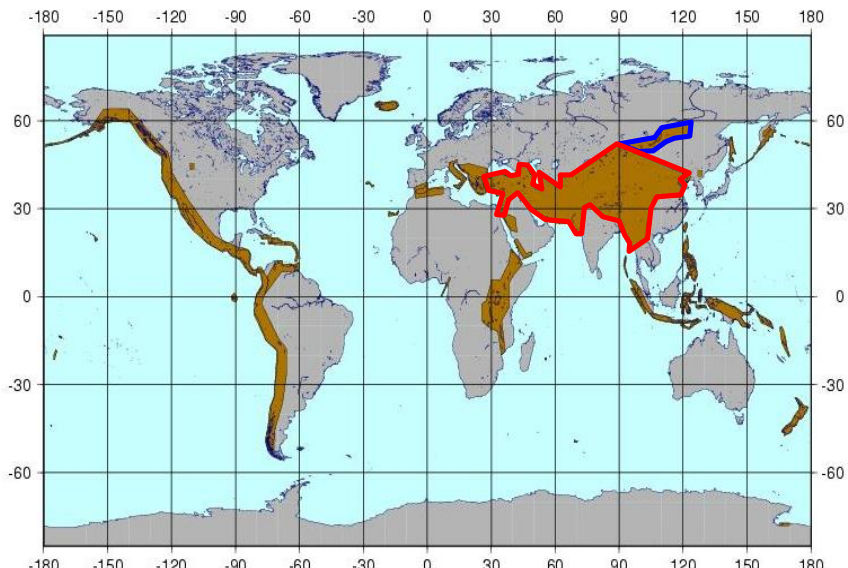
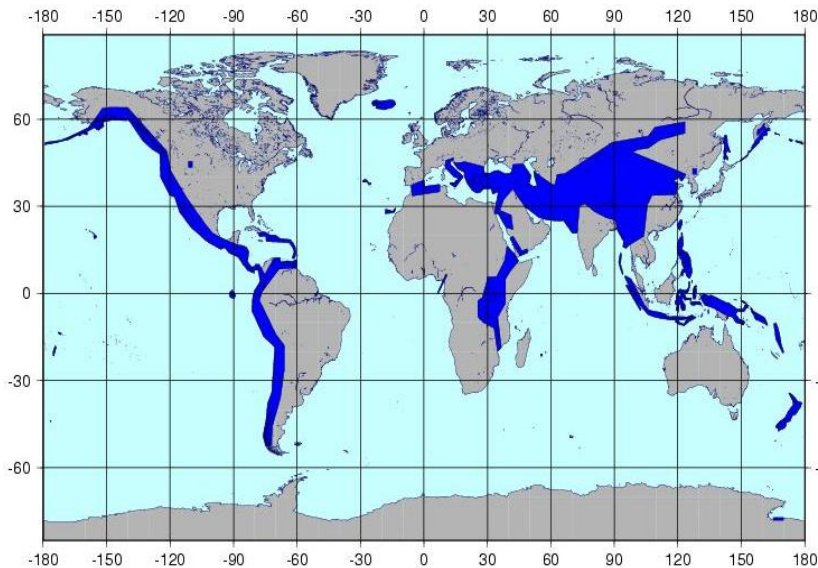
Basic Observation Scenario (Global)

Crustal Deformation (1st – 3rd year)

Temporal repeat: Ascending 2-6 cov/year & Descending 9 cov/year

GSD: 10 m (off-nadir $28.2^\circ - 36.2^\circ$)
& 100 m (off-nadir $26.2^\circ - 41.8^\circ$)

Mode: Stripmap Dual-pol (HH+HV/28MHz)
& ScanSAR 350km (HH+HV/14MHz)



* Red Area(K1) 7 cov./1 year, Blue Area(K46) 2 cov./1 year

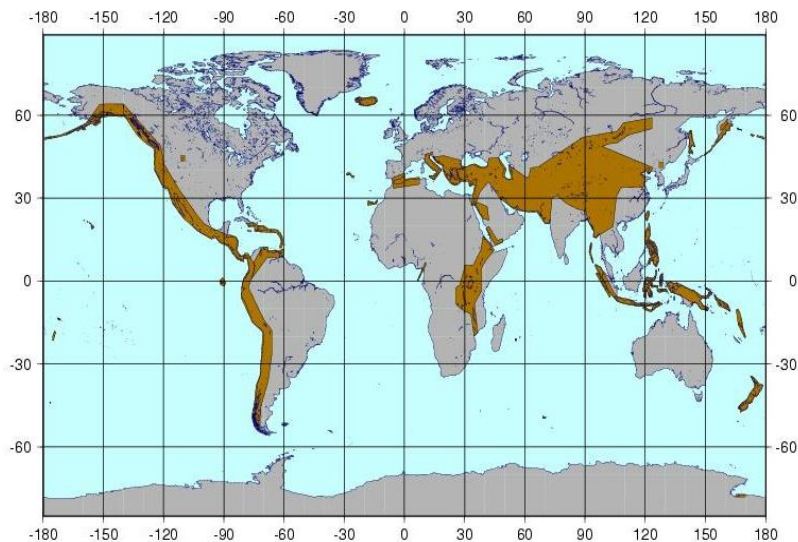
Basic Observation Scenario (Global)

Crustal Deformation (Cycle80-90)

Temporal repeat: Ascending 1cov/year, Descending 6 cov/year

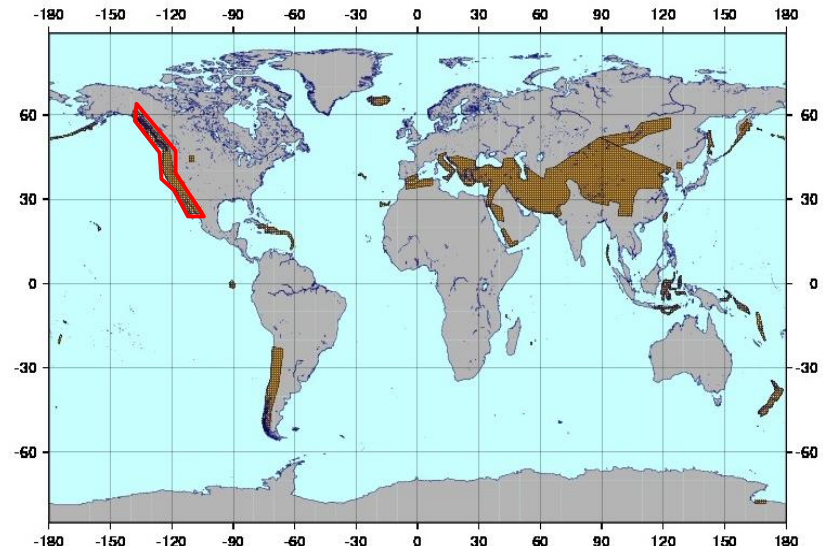
GSD: 100 m (off-nadir 26.2° – 41.8°)

Mode: ScanSAR 350km (HH/14MHz)



ScanSAR 350km (HH) : 1 cov/year

Ascending



ScanSAR 350km (HH) : 6cov/year

*The red area observed the low priority when observing Wetlands & Rapid deforestation monitoring Area

Descending

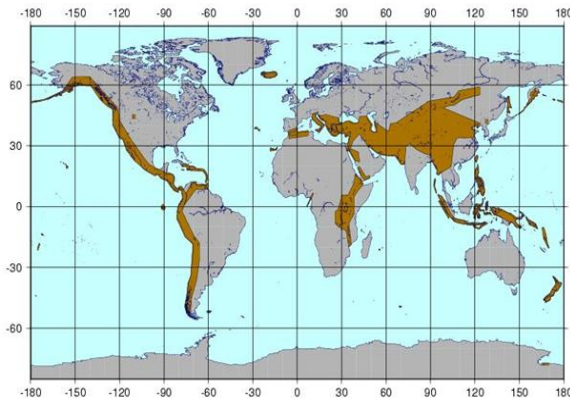
Basic Observation Scenario (Global)

Crustal Deformation (Cycle 91-124)

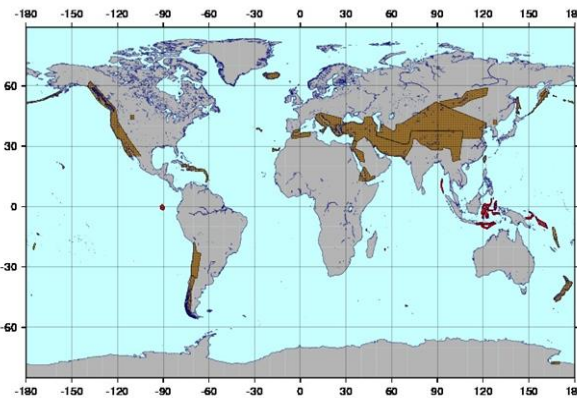
Temporal repeat: Ascending 1 cov/year, Descending 4 cov/year

GSD: 100 m (off-nadir 26.2° – 41.8°)

Mode: ScanSAR 350km (HH/14MHz)

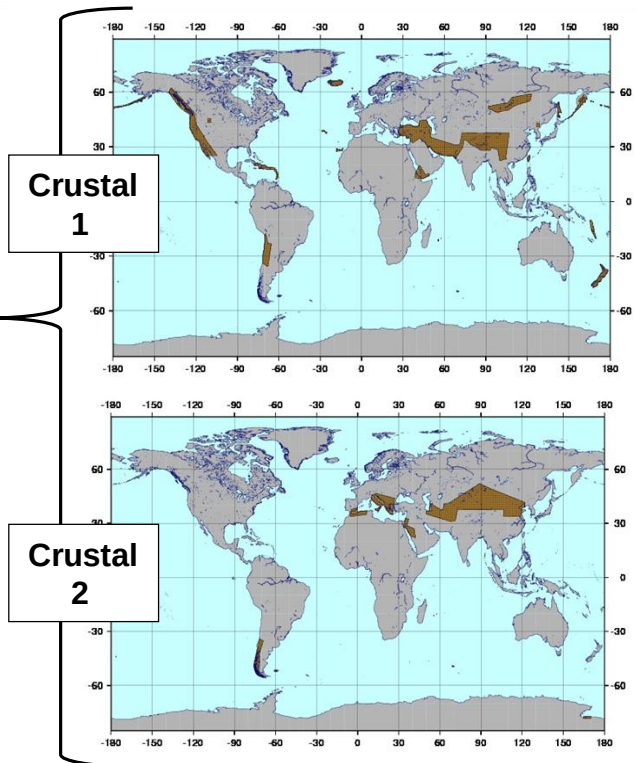


Ascending: 1cov/year



Descending: 4cov/year

The observation area is divided into "Crustal 1" and "Crustal 2".
*The red area is observed in ScanSAR (HH+HV) mode at the Cycle of Wetland Deforest.



4-5 Basic Observation Scenario (Global)

Crustal Deformation (Cycle 125-137)

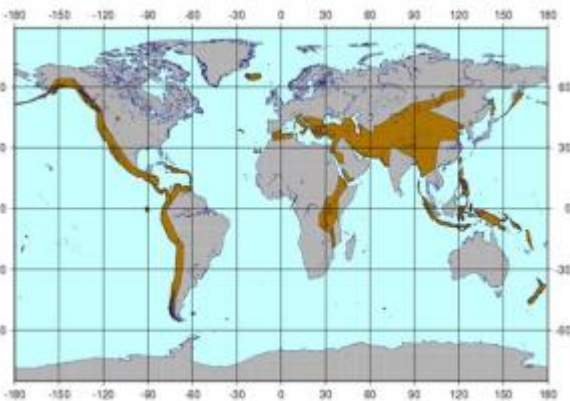
Temporal repeat: Ascending 1 cov/year, Descending 4 cov/year

GSD: 100 m (off-nadir 26.2° – 41.8°)

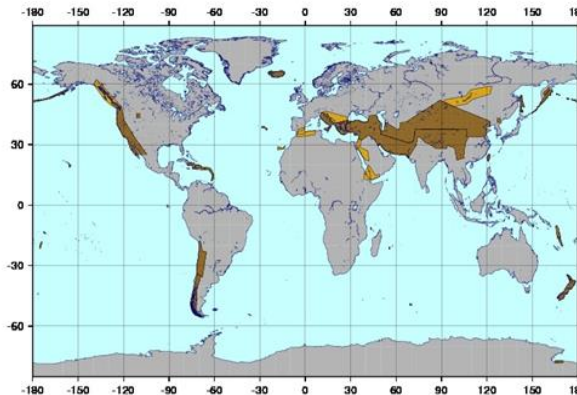
Mode: ScanSAR 350km (HH/14MHz)

■ High priority
■ Low priority

B

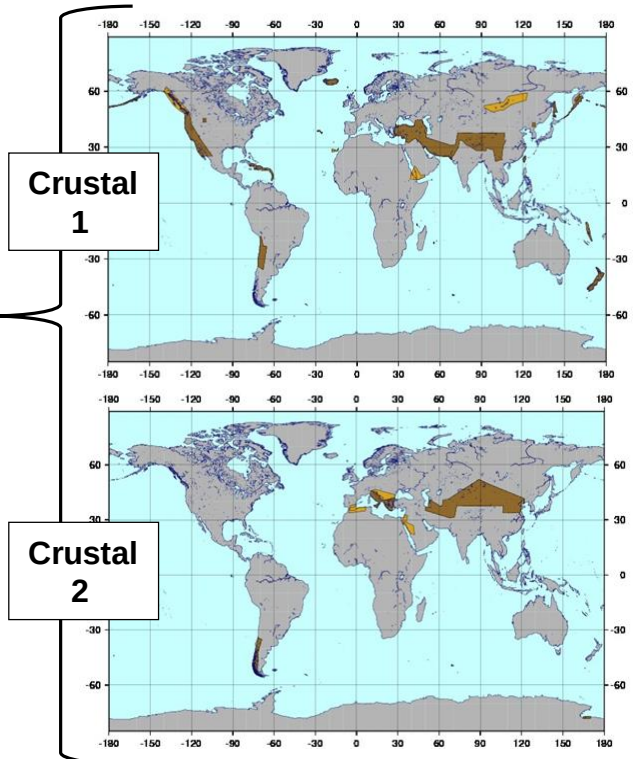


Ascending: 1cov/year



Descending: 4cov/year

The observation area is divided into "Crustal 1" and "Crustal 2".
*The red area is observed in ScanSAR (HH+HV) mode at the Cycle of Wetland Deforest.



4-5 Basic Observation Scenario (Global)

Crustal Deformation (Cycle 138-150)

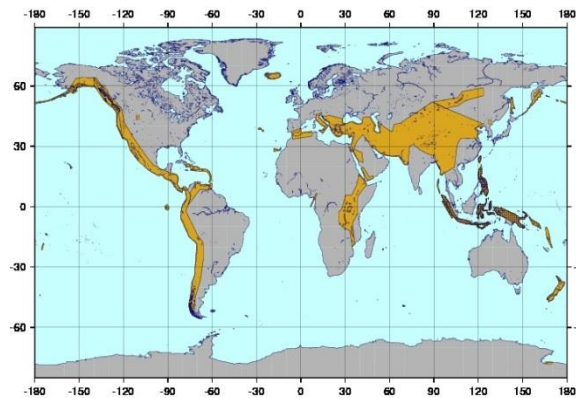
Temporal repeat: Ascending 1 cov/year, Descending 4 cov/year

GSD: 100 m (off-nadir $26.2^\circ - 41.8^\circ$)

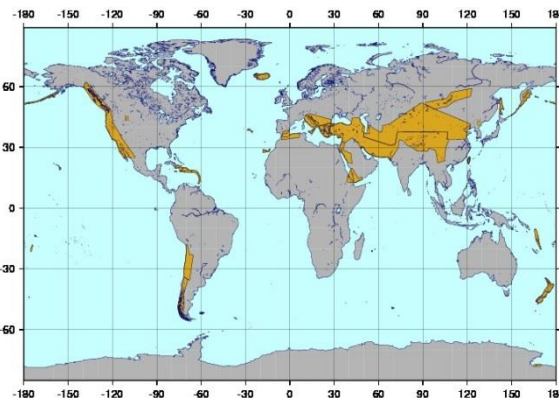
Mode: ScanSAR 350km (HH/14MHz)

■ High priority
■ Low priority

C



Ascending: 1cov/year

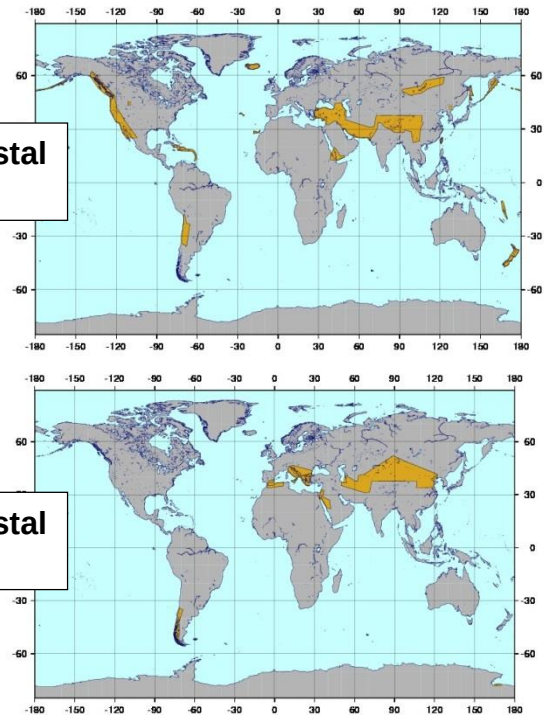


Descending: 4cov/year

The observation area is divided into "Crustal 1" and "Crustal 2".
*The red area is observed in ScanSAR (HH+HV) mode at the Cycle of Wetland Deforest.

Crustal 1

Crustal 2



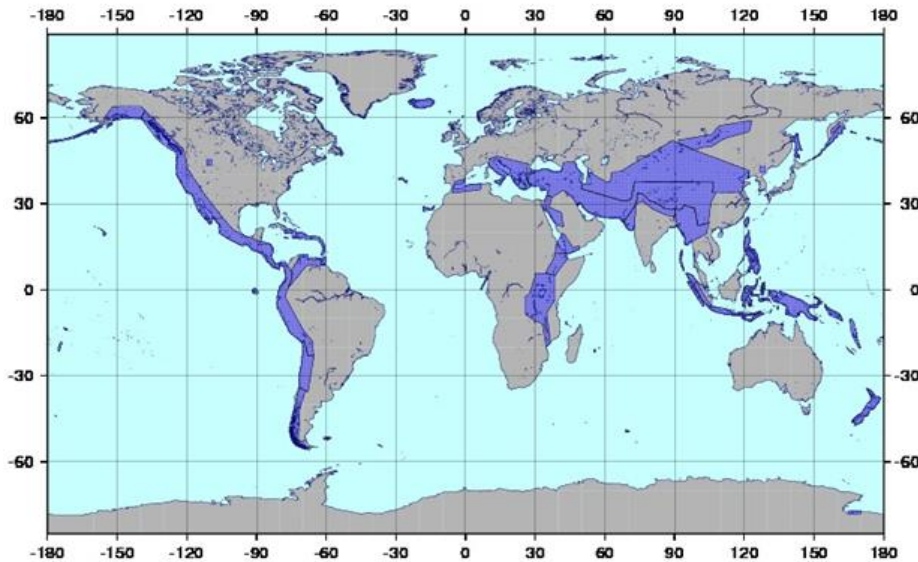
Basic Observation Scenario (Global)

Crustal Deformation (Cycle 91-137)

Temporal repeat: Descending 1 cov/year

GSD: 10 m (off-nadir $28.2^\circ - 36.2^\circ$)

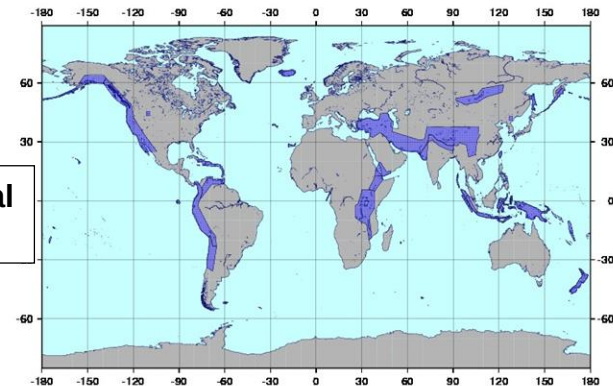
Mode: Stripmap Dual-pol (HH+HV/28MHz)



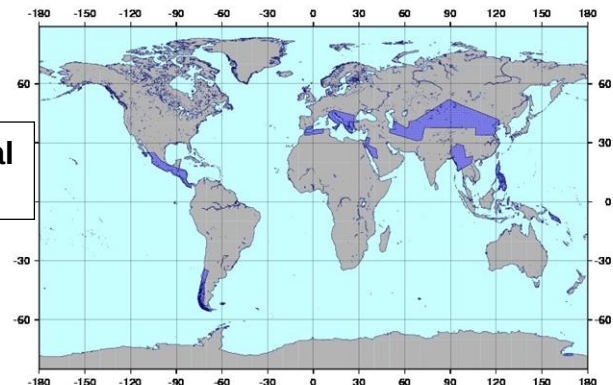
Crustal 10m

The observation area is divided into "Crustal 1" and "Crustal 2".

Crustal 1



Crustal 2



Basic Observation Scenario (Global)

Crustal Deformation (Cycle 138-150)

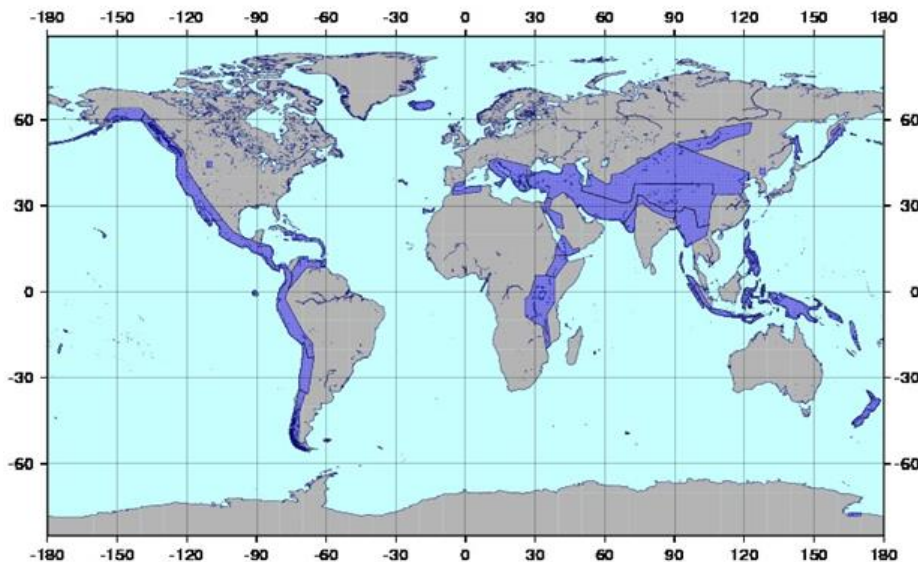
Temporal repeat: Descending 1 cov/year

GSD: 10 m (off-nadir $28.2^\circ - 36.2^\circ$)

Mode: Stripmap Dual-pol (HH+HV/28MHz)

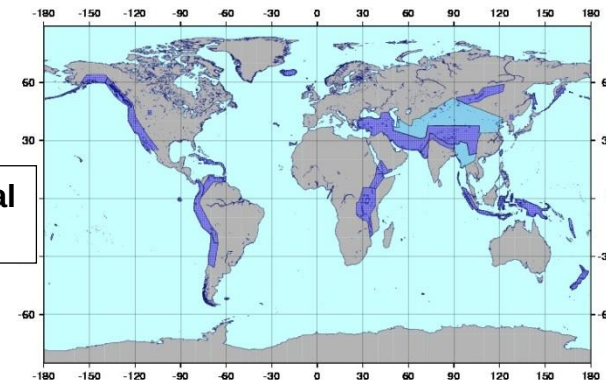
■ High priority
■ Low priority

C

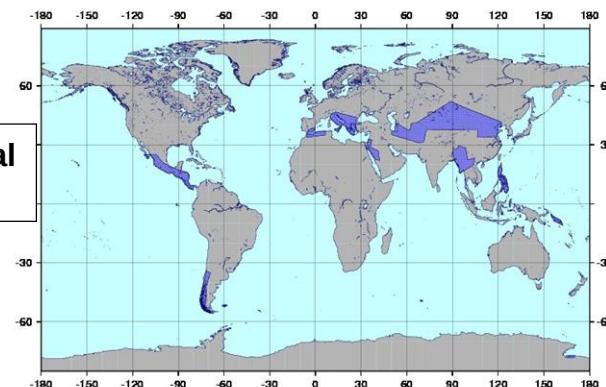


Crustal 10m

Crustal 1



Crustal 2



The observation area is divided into "Crustal 1" and "Crustal 2".

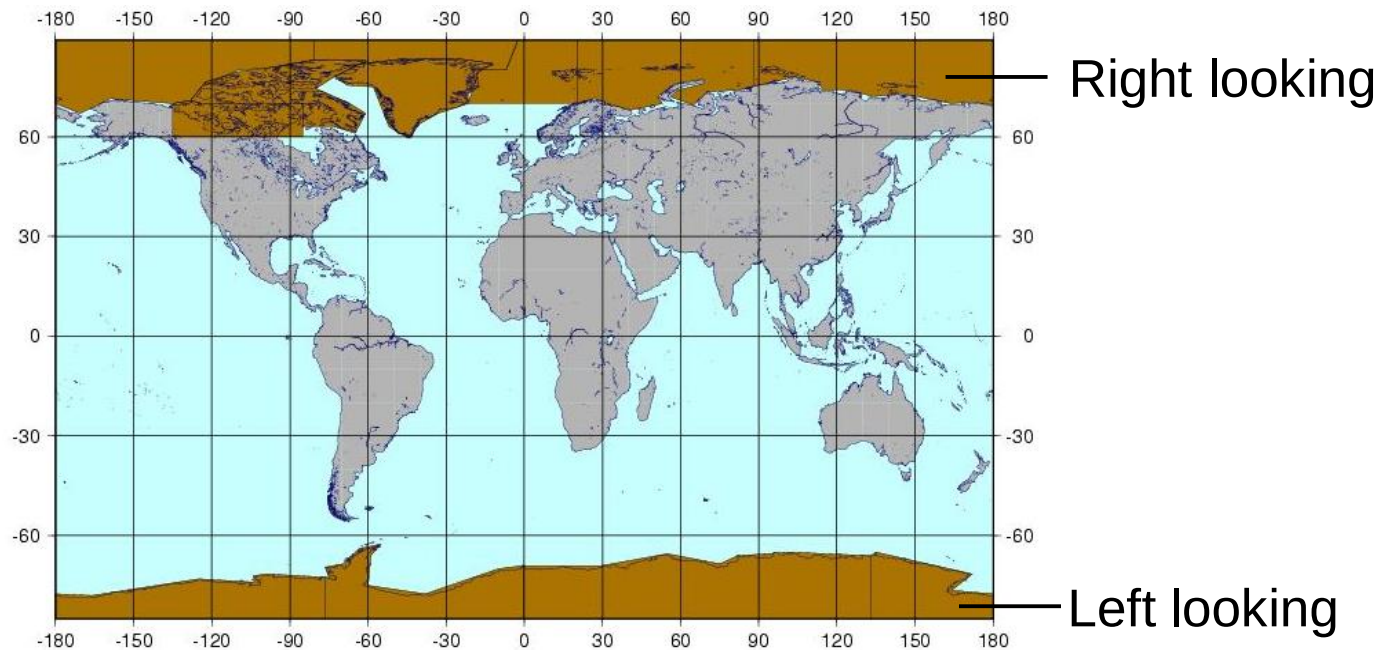
Basic Observation Scenario (Global)

Polar Ice

Temporal repeat: **Ascending 3 cov/year** (Cycle:91~137)

GSD: **100 m** (off-nadir $26.2^\circ - 41.8^\circ$)

Mode: **ScanSAR 350km** (HH+HV/14MHz)



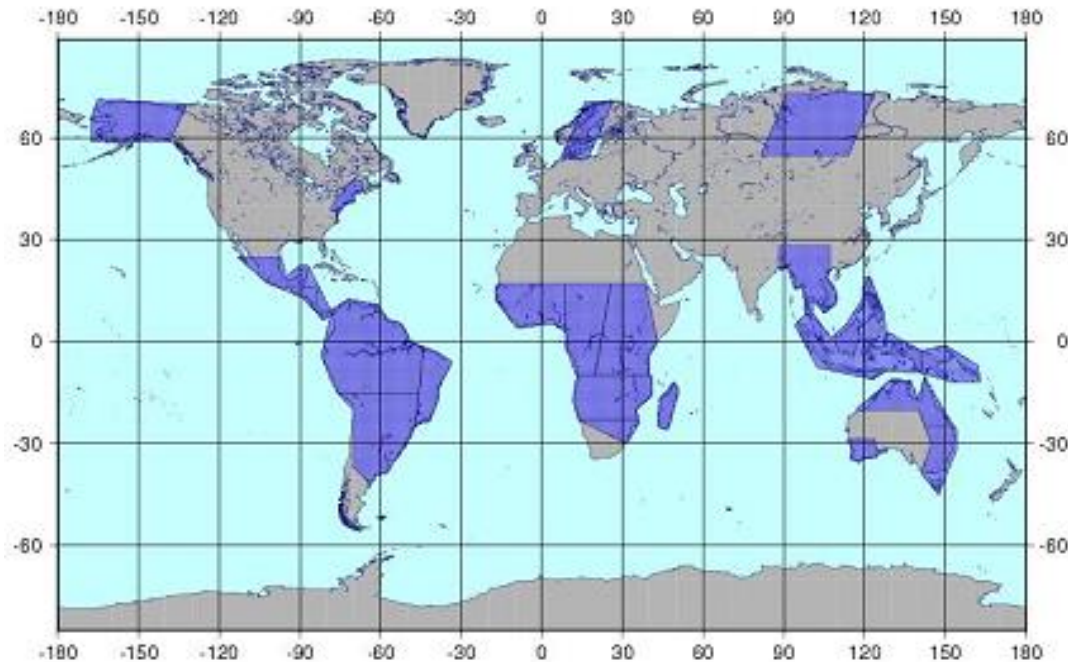
Basic Observation Scenario (Global)

Forest monitoring (Until Cycle76)

Temporal repeat: Descending 3-6 cov/year

GSD: 10 m (off-nadir 28.2° - 36.2°)

Mode: Stripmap Dual-pol (HH+HV/28MHz)



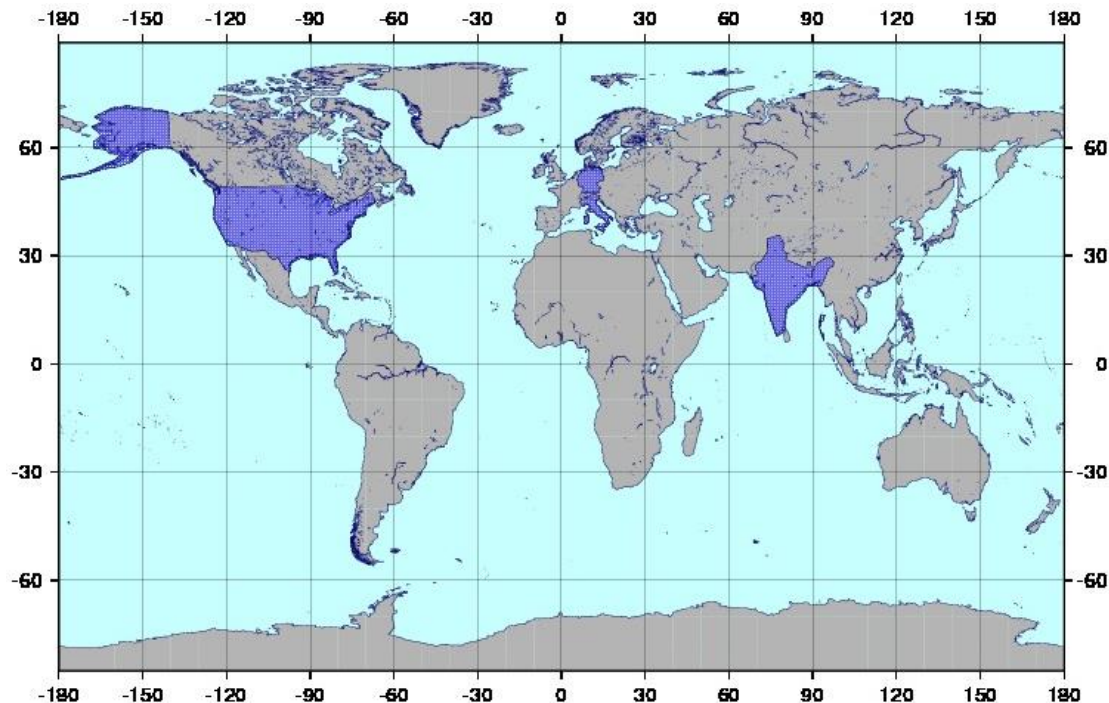
Supersites 10m (JAXA)

10m Supersites (Cycle86-89)

Temporal repeat: Descending 1 cov/year

GSD: 10 m (off-nadir 28.2° – 36.2°)

Mode: Stripmap Dual-pol (HH+HV/28MHz)



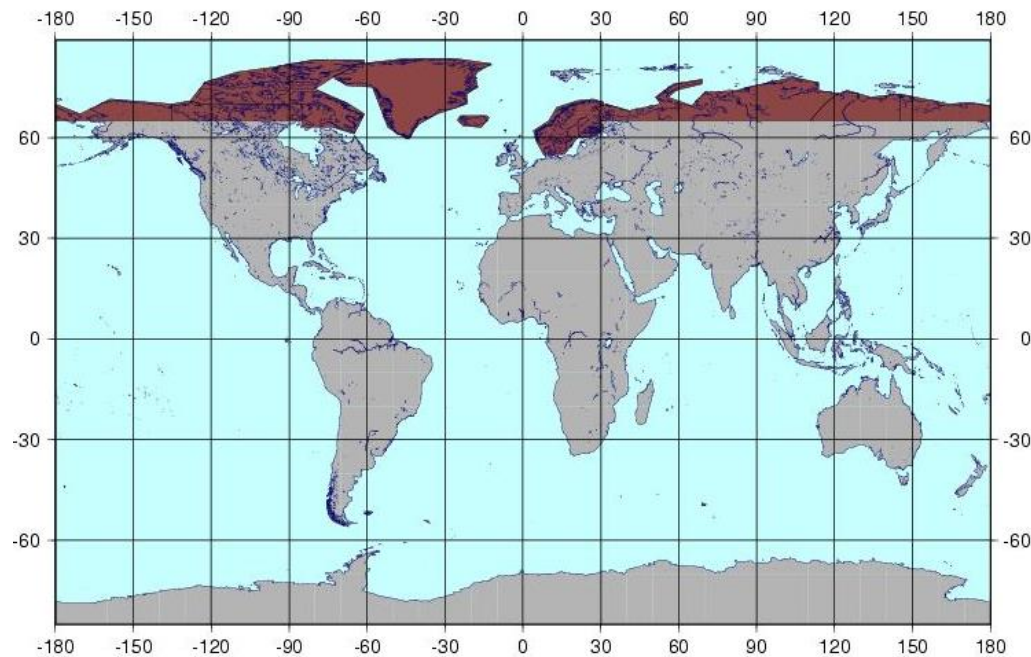
Supersites (K&C)

Boreal and sub-Arctic (until Cycle 52)

Temporal repeat: **Descending 3 cov/year**

GSD: **100 m (offnadir 34.9° - 51.5°)**

Mode: **ScanSAR 490km (HH+HV/14MHz)**

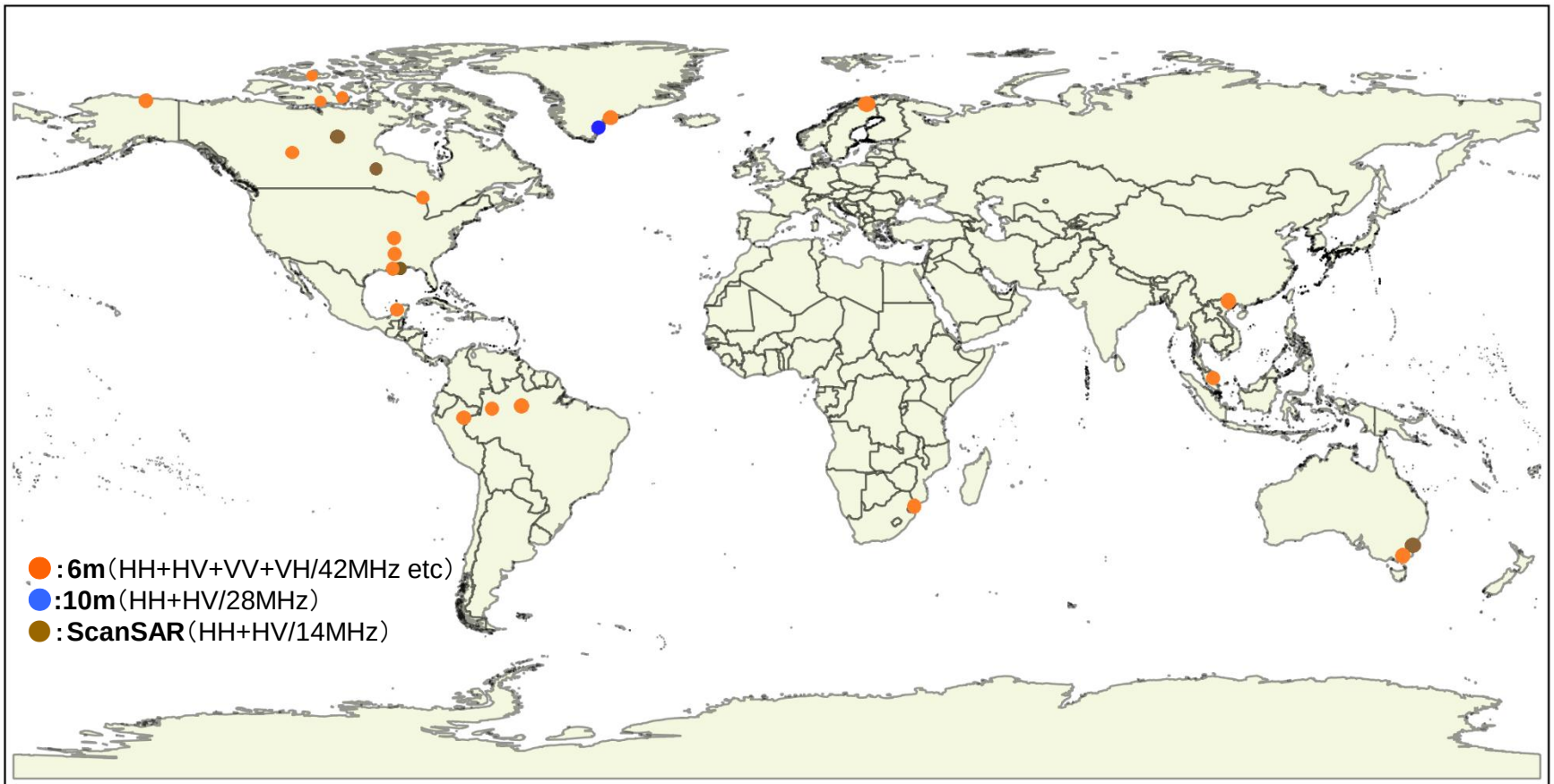


Supersites (K&C)

K&C Supersites (Cycle 157-163)

Temporal Repeat: When observation requests do not conflict with the BOS

GSD/Mode: based on the PI requests



B,C

Supersites (PI)

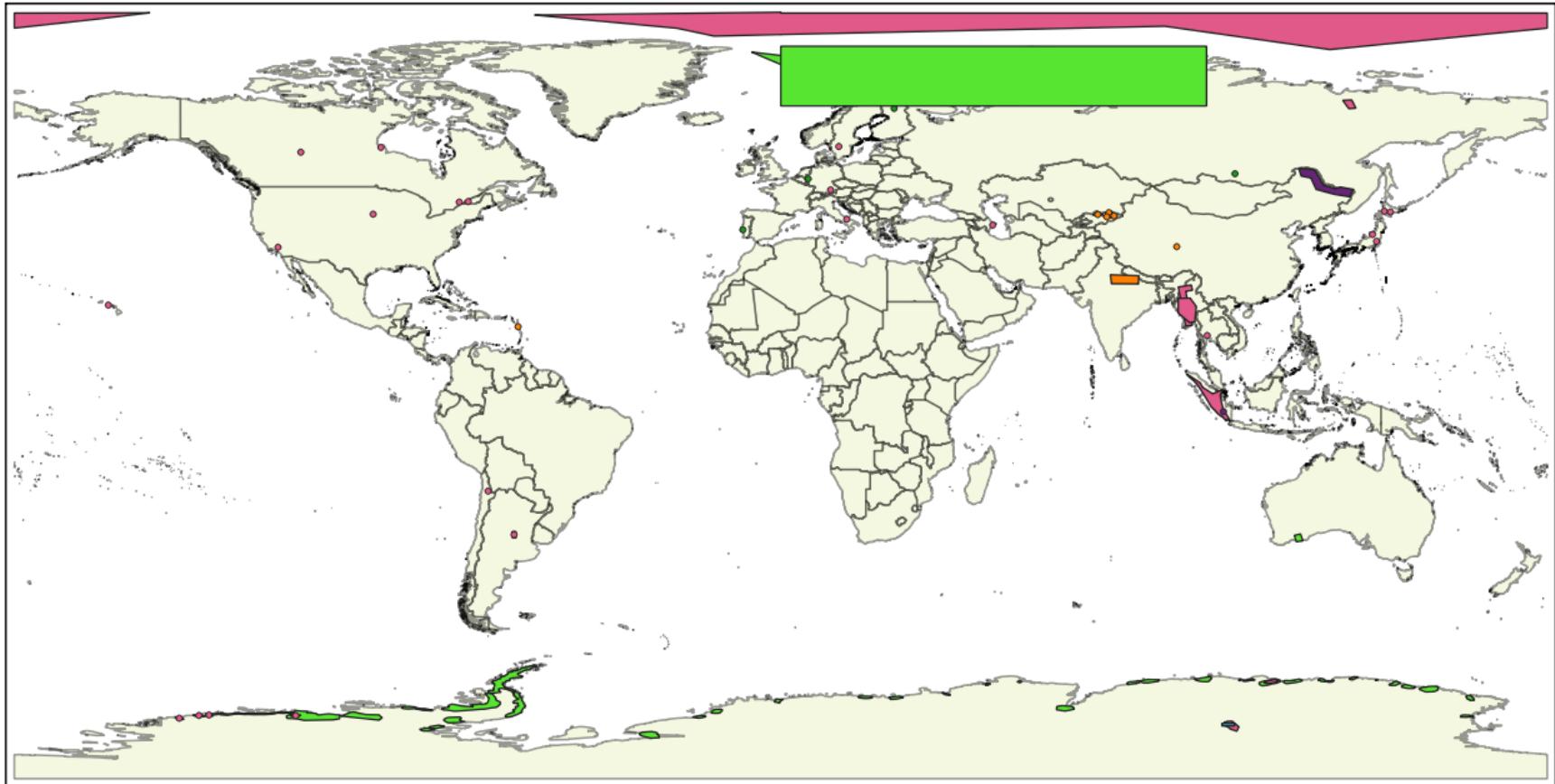
B,C,D,E

PI Supersites

Temporal repeat: When observation requests do not conflict
with the BOS

GSD/Mode: based on the PI requests

- : Polar research and Snow
- : Disaster
- : Polarimetry
- : Hydrology and Agriculture
- : Ocean
- : Land use and Forestry
- : Vegetation, forestry and wetland
- : Sensor Calibration
- : ALOS-4 CVST



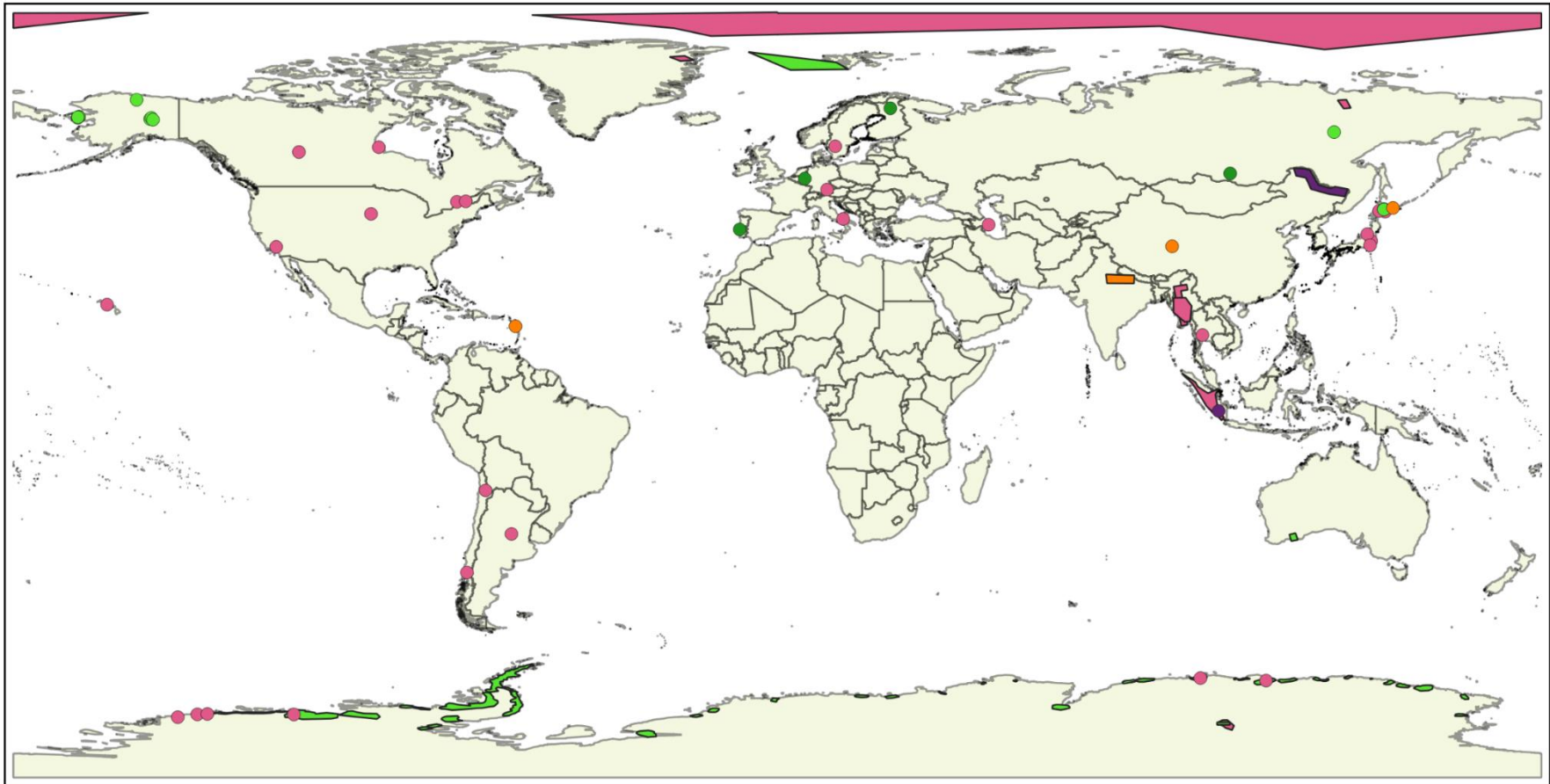
Supersites (PI)

PI Supersites

Temporal repeat: When observation requests do not conflict with the BOS

GSD/Mode: based on the PI requests

- : Polar research and Snow
- : Disaster
- : Hydrology and Agriculture
- : Land use and Forestry
- : ALOS-4 CVST



Supersites (Crustal WG)

Crustal WG Supersites (Until Cycle124)

Temporal repeat: When observation requests do not conflict with the BOS

GSD: based on the user requests

Mode: based on the user requests

