

ALOS-2 BOS Update

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Summary of KC#22 (Feb 2016) recommendations to the ALOS-2 BOS and JAXA responses



ALOS-2 BOS

LOS

- 26 14-day cycles per year
- Systematic observation patterns repeted on an annual basis
- BOS initiated August 2014
- We are now in Year 3, cycle 66
- Changes to BOS proposed by K&C to JAXA for 2016 and onwards.
- Year 4 (from Aug 2017)

| | | Cycle | start | end | Desc | Asc |
|--------|------|-------|-----------|-----------|------------------|-----------------|
| | | 53 | 18-Jul-16 | 31-Jul-16 | WB 100m | DP(6) 10m 32.5° |
| | | 54 | 01-Aug-16 | 14-Aug-16 | Glacier S DP(6)L | WB S Pole |
| | | 55 | 15-Aug-16 | 28-Aug-16 | Glacier S DP(6)L | WB N&S Poles |
| | | 56 | 29-Aug-16 | 11-Sep-16 | WB 100m | DP(7) 10m 36.2° |
| | | 57 | 12-Sep-16 | 25-Sep-16 | Glacier S DP(6)L | DP(5) 10m 28.2° |
| | 2016 | 58 | 26-Sep-16 | 09-Oct-16 | VWB Sub-Arctic | DP(6) 10m 32.5° |
| | 2016 | 59 | 10-Oct-16 | 23-Oct-16 | WB 100m | Recovery |
| | | 60 | 24-Oct-16 | 06-Nov-16 | SP(6) 3m 29.1° | Recovery |
| | | 61 | 07-Nov-16 | 20-Nov-16 | SP(7) 3m 32.4° | DP(7) 10m 36.2° |
| | | 62 | 21-Nov-16 | 04-Dec-16 | WB 100m | DP(5) 10m 28.2° |
| | | 63 | 05-Dec-16 | 18-Dec-16 | SP(8) 3m 35.4° | DP(6) 10m 32.5° |
| | | 64 | 19-Dec-16 | 01-Jan-17 | SP(9) 3m 38.2° | WB N&S Poles |
| | | 65 | 02-Jan-17 | 15-Jan-17 | WB 100m | WB N Pole |
| Voor 2 | | 66 | 16-Jan-17 | 29-Jan-17 | Recovery | DP(7) 10m 36.2° |
| rear 5 | | 67 | 30-Jan-17 | 12-Feb-17 | VWB Sub-Arctic | DP(5) 10m 28.2° |
| | | 68 | 13-Feb-17 | 26-Feb-17 | WB 100m | DP(6) 10m 32.5° |
| | | 69 | 27-Feb-17 | 12-Mar-17 | DP(5) 10m 28.2° | Glacier N DP(6) |
| | | 70 | 13-Mar-17 | 26-Mar-17 | DP(5) 10m 28.2° | Glacier N DP(6) |
| | | 71 | 27-Mar-17 | 09-Apr-17 | WB 100m | QP(6) 6m 32.7° |
| | | 72 | 10-Apr-17 | 23-Apr-17 | DP(6) 10m 32.5° | QP(5) 6m 30.4° |
| | | 73 | 24-Apr-17 | 07-May-17 | DP(6) 10m 32.5° | QP(4) 6m 28.0° |
| | | 74 | 08-May-17 | 21-May-17 | WB 100m | QP(3) 6m 25.0° |
| | | 75 | 22-May-17 | 04-Jun-17 | DP(7) 10m 36.2° | QP(7) 6m 34.9° |
| | | 76 | 05-Jun-17 | 18-Jun-17 | DP(7) 10m 36.2° | Recovery |
| | 2017 | 77 | 19-Jun-17 | 02-Jul-17 | WB 100m | DP(7) 10m 36.2° |
| | 2017 | 78 | 03-Jul-17 | 16-Jul-17 | | DP(5) 10m 28.2° |
| | | 79 | 17-Jul-17 | 30-Jul-17 | WB 100m | DP(6) 10m 32.5° |
| | | 80 | 31-Jul-17 | 13-Aug-17 | Glacier S DP(6)L | WB S Pole |
| | | 81 | 14-Aug-17 | 27-Aug-17 | Glacier S DP(6)L | WB N&S Poles |
| | | 82 | 28-Aug-17 | 10-Sep-17 | WB 100m | DP(7) 10m 36.2° |
| | | 83 | 11-Sep-17 | 24-Sep-17 | Glacier S DP(6)L | DP(5) 10m 28.2° |
| | | 84 | 25-Sep-17 | 08-Oct-17 | | DP(6) 10m 32.5° |
| Vear 4 | | 85 | 09-Oct-17 | 22-Oct-17 | WB 100m | Recovery |
| | | 86 | 23-Oct-17 | 05-Nov-17 | SP(6) 3m 29.1° | Recovery |
| | | 87 | 06-Nov-17 | 19-Nov-17 | SP(7) 3m 32.4° | DP(7) 10m 36.2° |
| | | 88 | 20-Nov-17 | 03-Dec-17 | WB 100m | DP(5) 10m 28.2° |
| | | 89 | 04-Dec-17 | 17-Dec-17 | SP(8) 3m 35.4° | DP(6) 10m 32.5° |
| | | 90 | 18-Dec-17 | 31-Dec-17 | SP(9) 3m 38.2° | WB N&S Poles |

K&C Initiative An international science collaboration led by JAXA

PALSAR-2 BOS – Top: Year 1 (Aug 2014–Jul 2015); bottom: Year 2 (Aug 2015–Jul 2016)

ALOS

| ■1半日 | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|---|--|--|---|-----------------------------------|---|--|--|--|---|--------------------|--|---|--|---|--|---|---|--|---------------------------------|----------------------------------|---|--------------------------------|---|
| E 🛱 | 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 |
| 年 | | | | | | 2014年 | | | | | | | | | | | | | 2015年 | | | | | | | |
| 回帰開始日 | 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 |
| = | 地設 湿地・伐採 | 南城 Super Site | 地設 湿地・伐採 | 南城 Super Site | N 65以上 490km | 地殼 湿地·伐採 | 全球3n | n (1/3) | 地殻 湿地・伐採 | 全球3n | n (1/3) | 地設 湿地・伐採 | | N 65131_E 490km | 地殼 湿地・伐採 | 地殻 (14-day | ·森林 /InSAR) | 地殼 湿地・伐採 | 地殻・ (14-day | 森林 InSAR) | 地殻 湿地・伐採 | 地截 (14-day | ◆森林 y InSAR) | 地設 湿地・伐採 | N 65 (3)_E 490km | 地設 湿地・伐採 |
| ディング | W2 | | W2 | | V2(2)R | W2 | U2 (6)R | U2 | W2 | U2 (8)R | U2 (9)R | W2 | | V2(2)R | W2 | F2 (5)R | F2 (5)R | W2 | F2 (6)R | F2 (6)R | W2 | F2 (7)R | F2 (7)R | W2 | V2(2)R | W2 |
| | (2) | F2(6)L | (2) | F2(6)L | | (2) | (O)IV | (I)IX | (2) | (O)IX | (o)it | (2/1) | 1 | | 12/11 | (O)IX | (o)// | 2/12 | (O/IC | CONT | (2) | (I)IX | (I)K | (2) | | 12/11 |
| | 地殼 | 極域 | Wor | /ld 1-1(1 | 0m) | | | Wo | rld 2-1(1) | 0m) | 極域 | 北極域 | Wor | ld 1-2(1 | 0m) | Greenland Super Site | Greenland Super Site | | ポラリメ | トリ観測 | 8m (1/5) | | | Wor | ld 2-2(1 | 0m) |
| ティング | W2 | W2(2)R | F2 | F2 | F2 | | | F2 | F2 | F2 | W2(2)R | W2(2)R | F2 | F2 | F2 | | | FP | FP | FP | FP | FP | | F2 | F2 | F2 |
| | (2)R | W2(2)L | (7)R | (5)R | (6)R | | | (7)R | (5)R | (6)R | W2(2)L | | (7)R | (5)R | (6)R | F2(6)R | F2(6)R | (6)R | (5)R | (4)R | (3)R | (7)R | | (7)R | (5)R | (6)R |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ■2年目 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ■2年目 回帰 | 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 |
| ■2年目 回帰 年 | 28 | 29 | 30 | 31 | 32 | 33 2015年 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 2016年 | 47 | 48 | 49 | 50 | 51 | 52 | 53 |
| ■2年目 回帰 年 回帰開始日 | 28 | 29 08/17 | 30 08/31 | 31 09/14 | 32 09/28 | 33 2015年 10/12 | 34 | 35 | 36 | 37 | 38 | 39 01/04 | 40 | 41 02/01 | 42 02/15 | 43 | 44 03/14 | 45 | 46 2016年 04/11 | 47 04/25 | 48 | 49 05/23 | 50 | 51 06/20 | 52 | 53 |
| ■2年目 回帰 年 回帰開始日 | 28 08/03 闻印成 Super Site | 29 08/17 南城 Super Site | 30 08/31 地設 湿地·伐採 | 31 09/14 南城 Super Site | 32 09/28 N 6513L± 490km | 33 2015年 10/12 地殻 湿地·伐採 | 34 10/26 全球3n | 35 11/09 n (2/3) | 36 11/23 地設 湿地·伐採 | 37 12/07 全球3n | 38 12/21 n (2/3) | 39 01/04 地設 湿地·伐採 | 40 01/18 | 41 02/01 N 65131_L 490km | 42 02/15 地設 湿地·伐採 | 43 02/29 地殻 | 44 03/14 •森林 | 45 03/28 地設 湿地·伐採 | 46 2016年 04/11 地殻・ | 47 04/25 森林 | 48 05/09 地設 混地·伐採 | ⁴⁹ 05/23 地殻 | 50 06/06 •森林 | 51 06/20 地設 混地·伐採 | 52 | 53 07/18 地設 湿地·伐採 |
| ■2年目 回帰 年 回帰開始日 ディセン ディング | 28 08/03 南坡 SuperSite | 29 08/17 南坡 Super Site | 30 08/31 地設 湿地・伐採 W2 | 31 09/14 南城 Super Site | 32 09/28 N 6513L <u>L</u> 490km V2(2)R | 33 2015年 10/12 地殻 湿地·伐採 W2 | 34 10/28 全球3n U2 | 35 11/09 n (2/3) U2 | 36 11/23 地設 湿地·伐採 W2 | 37 12/07 全球3n U2 | 38 12/21 n (2/3) U2 | 39 01/04 地設 湿地·伐採 W2 | 40 | 41 02/01 N 6513L± 490km V2(2)R | 42 02/15 地設 湿地-伐採 W2 | 43 02/29 地殻 F2 | 44 03/14 ・森林 F2 | 45 03/28 地設 湿地・仗採 W2 | 46 2016年 04/11 地殻・ F2 | 47 04/25 森林 F2 | 48 05/09 地設 湿地·伐採 W2 | 49 05/23 地殻 F2 | 50 05/06 •森林 F2 | 51 06/20 地設 湿地·伐採 W2 | 52 | 53 07/18 地設 湿地·伐採 W2 |
| ■2年目 回帰 回帰開始日 ディセン ディング | 28 08/03 南城 Super Site F2(6)L | 29 08/17 南坡 Super Site F2(6)L | 30 08/31 地設 遐地·伐採 W2 (2)R | 31 09/14 南城 Super Site F2(6)L | 32 09/28 N 6513L <u>F</u> 490km V2(2)R | 33 2015年 10/12 地設 湿地・伐梁 W2 (2)R | 34 10/26 全球3n U2 (6)R | 35 11/09 n (2/3) U2 (7)R | 36 11/23 地設 湿地·伐採 W2 (2)R | 37 12/07 全球3n U2 (8)R | 38 12/21 n (2/3) U2 (9)R | 39 01/04 地設 週地-位採 W2 (2)R | 40 | 41 02/01 N 65以上 490km V2(2) R | 42 02/15 地設 湿地・仗採 W2 (2)R | 43 02/29 地殻 F2 (5)R | 44 03/14 ・森林 F2 (6)R | 45 03/28 地設 湿地・伐採 W2 (2)R | 46 2016年 04/11 地殻・ F2 (7)R | 47 04/25 森林 F2 (5)R | 48 05/09 地設 湿地・伐採 W2 (2)R | 49 05/23 地殻 F2 (6)R | 50 05/06 ・森林 F2 (7)R | 51 06/20 地設 湿地-伐採 W2 (2)R | 52 | 53 07/18 地設 湿地・伐採 W2 (2)R |
| ■2年目 回帰 日 同帰開始日 ディセン ディング | 28 08/03 南城 Super Site F2(6)L 北極域 | 29 08/17 南坡 Super Site F2(6)L 極域 | 30 08/31 地設 湿地-伐採 (2)R Wor | 31 09/14 南坡 Super Site F2(6)L 1d 1-1(10 | 32 09/28 N 65 kJ.L 490km V2(2)R)m) | 33 2015年 10/12 地設 温地・伐梁 W2 (2)R | 34 10/26 全球3n U2 (6)R | 35 11/09 n (2/3) U2 (7)R Wor | 36 11/23 地設 湿地-伐採 (2)R rld 2-1(10 | 37 12/07 全球3n U2 (8)R 0m) | 38 12/21 n (2/3) U2 (9)R 極域 | 39 01/04 地設 溜地-位採 W2 (2)R 南極域 | 40 01/18 Wor | 41 02/01 N 6513L± 490km V2(2)R 1d 1-2(1) | 42 02/15 地設 湿地・仗採 (2)R 0m) | 43 02/29 地殻 F2 (5)R Greenland Super Site | 44 03/14 •森林 F2 (6)R Greenland Super Site | 45 03/28 地設 溜地・伐採 (2)R | 46 2016年 04/11 地殻・ F2 (7)R ポラリメ | 47 04/25 森林 F2 (5)R | 48 05/09 地設 湿地-伐採 (2)R 3m (2/5) | 49 05/23 地殻 F2 (6)R | 50 06/06 ・森林 F2 (7)R | 51 06/20 地設 湿地-伐採 (2)R Wor | 52 07/04 1d 2-2(1) | 53 07/18 地設 湿地・伐採 (2)R 0m) |
| ■2年目 回帰 年 同帰開始日 ディセン ディング アセン ディング | 28 08/03 南城 Super Site F2(6)L 北極域 W2(2)R | 29 08/17 南坡 Super Site F2(6)L 極域 W2(2)R | 30 08/31 地設 湿地-伐採 (2)R Wor F2 | 31 09/14 南坡 Super Site F2(6)L 1d 1-1(1(| 32 09/28 N 65131_± 490km V2(2)R V2(2)R Dm) | 33 2015年 10/12 地設 湿地·伐採 W2 (2)R | 34 10/28 全球3n U2 (6)R | 35 11/09 m (2/3) U2 (7)R Wor F2 | 36 11/23 地設 湿地・伐採 (2)R rld 2-1(10 F2 | 37 12/07 全球3n U2 (8)R 0m) | 38 12/21 n (2/3) U2 (9)R 極域 W2(2)R | 39 01/04 地設 温地·伐琛 (2)R 南極域 W2(2)L | 40 01/18 Wor | 41 02/01 N 6513L± 490km V2(2)R rld 1-2(11 | 42 02/15 地段 湿地·伐採 (2)R 0m) F2 | 43 02/29 地殻 F2 (5)R Greenland Super Site | 44 03/14 •森林 F2 (6)R Greenland Super Site | 45 03/28 地設 湿地·伐採 W2 (2)R | 46 2016年 04/11 地殻・ F2 (7)R ポラリメ | 47 04/25 ·森林 F2 (5)R トリ観測(| 48 05/09 地設 湿地-伐採 (2)R 3m (2/5) FP | 49 05/23 地殻 F2 (6)R | 50 05/05 ·森林 F2 (7)R | 51 06/20 地段 潮地·伐採 (2)R Wor F2 | 52 07/04 1d 2-2(1) F2 | 53 07/18 地設 環地・伐採 (2)R 0m) F2 |

| 白宇 | W2右(No.2)HH+HV | 白宇 | :U2右:3m (No.6-9) |
|-----|------------------|----|---------------------|
| 黒字 | W2右(No.2)HH | 黑字 | :U2左:3m (No.6-9) |
| 黑字 | W2左(No.2) | | |
| | | 白字 | :F2右:10m (No.6-9) |
| 白字 | V2右(No.2)【490km】 | 黑字 | :F2左:10m (No.6-9) |
| | | | |
| フリー | :リカバリ観測のための回帰 | 白字 | :FP右:6m (No.6-9) |
| | | | |
| | | 黒字 | :F2(HH)右:10m (No.6) |
| | | 黒字 | :F2(HH)左: (No.6) |

KC#22 recommendations – Summary

- Comment: 10m FBD and ScanSAR (ALOS-1 heritage modes) of KEY IMPORTANCE for JAXA observations for (i) Crustal Deformation, (ii) Global forests, (iii) Wetlands, (iv) Deforestation (JICA-JAXA). Strong recommedation to reduce acquisition load and focus on these two key modes from Year 4.
- Recommedation to discontinue:
 - Stop 3m Ultra-Fine mode observations from year 4. One global 3-year coverage completed
 - Stop Full-pol 6m mode observations from year 4. Incomplete coverage. Questionable science value..
 - Stop ScanSAR 490km (V2) over sub-Arctic. Coverage successfully completed during first 2 years.
 - Stop ScanSAR 350km (W2) over Arctic/Antarctic sea ice. Coverage successfully completed.

• FB 10m:

LOS

- Add 1 FB 10m coverages (3 cycles) in ascending mode from Year 3
- Remove Forest polygons from Descending 10m FB coverage (leaving crustal def.)
- HH-polarisation sufficient for Greenland and Antarctica Super Sites. Change from HH+HV \rightarrow HH
- Boreal areas sensitive to freeze (fall) conditions. Change WORLD boreal acq. To summer (May-Aug)

ScanSAR W2:

- Divide ScanSAR descending into 2 groups (Crustal def+JICA and Deforestation + wetland inundation), acquired during different cycles from Year 4 (possible when 3m observations finished)
- Crustal deformation observations sufficient at single-pol (HH)
- South and eastern part of Brazil missing in recent ScanSAR polygon revision. Corrected KMLs attached.



Detailed comments and recommendations



Global 10 m, HH/HV pol.

ALOS

Beam F2-5,6,7 Ascending, Right (**Global land observation**)



K&C comments

- 10m FBD mode of KEY IMPORTANCE (ALOS-1 heritage mode)
- Big difference between ALOS-1 and ALOS-2. Low acquisition success rate of great concern to K&C team
- Strongly recommend to reduce pressure on resources (memory, downlink) by pruning the BOS to improve acquisition success rate
- Boreal areas sensitive to freeze (fall) conditions. Change boreal acq. To summer (May-Aug) time window

InSAR 10 m, HH/HV pol.

ALOS

Beam F2-5,6,7 Descending, Right (**Deformation, Forest**)



K&C comments

- Change of descending beam mode order (5-5-6-6-7-7 → 5-6-7).
- Move Forest coverage from descending (leaving only crustal deformation) to ascending
- Current coverage over Siberia and Alaska (K&C request) sufficient.
 Siberia and Alaska polygons can be removed from Year 4.

JAXA response

- Accepted as recommended
- Only crustal deformation remaining in Desc
- K&C Forest moved to Ascending

3 m resolution, HH pol.

ALOS





K&C Comments

- 3-year coverage in 3m Ultra-Fine successfully completed.
- Recommedation to discontinue 3m observations from year 4
 - to reduce resource conflicts with ascending 10m FBD
 - to allow improved W2 mode coverage

JAXA response

• Accepted as recommended

6 m resolution, Full pol.

ALOS

Beam FP6-3,4,5,6,7 Ascending, Right (**1 global coverage in 5 years**)



K&C comments

- 2 out of 5-year coverage in 6m Full-Pol mode sufficient
 - Key areas (C Africa, S America, SE Asia, Alaska) already covered
 - FP acquisition success rate low
 - Pol-InSAR not possible
 - March-June unsuitable time window
 - FP coverage once in 5 years of questionable scientific value (consider instead local Pol-InSAR acquisitions. Consult with CVST team)
- Recommedation to stop 6m FP observations from 2017 and replace FP cycles with 10m FBD. Two coverages (much needed!) can be accommodated with minor adjustments.

JAXA response

Not accepted

ScanSAR (forest/wetland) Descending

Revision C

ALOS



K&C comments

- ScanSAR (W2) mode of KEY IMPORTANCE (ALOS-1 heritage mode) for wetlands and deforestation monitoring.
- Low success rates of great concern
- South and east Brazil (Pantanal and Atlantic forest) inadvertedly omitted in ScanSAR polygon update. (corrected kml attached).
- India (K&C request origin) no longer priority for K&C
- ScanSAR for crustal deformation sufficuent at single-pol (HH) only
- Extreme long passes over Africa cause resource conflicts and gaps. Recommend separate ScanSAR obervatons into 2 groups at different cycles:
 - (1) Deforestation & wetlands
 - (2) Crustal deformation (HH only) & JICA regions (south Africa, India)

Antarctica/Greenland 10 m, HH/HV pol.

LOS

Beam F2(6) Antarctica: Descending, Left Greenland: Ascending, Right





K&C comments

- HH-polarisation sufficient. Change from HH+HV → HH
- Add Antarctica glacier obs cycles 58, 85, etc (cycles open after suggested discontinuation of ScanSAR V2 490 over sub-Arctic)

Boreal and sub-Arctic

ALOS

- Temporal repeat: 3 cov/year
- GSD: 100 m (offnadir 34.9°-51.5°)
- Direction: descending
- Mode: ScanSAR 490km (HH+HV/14MHz)



K&C comments

- 2-year coverage in ScanSAR V2 mode successfully completed.
- Requests for ScanSAR V2 coverage over boreal/sub-Artic originates from K&C team. Sufficient data over the region has been collected
- Recommedation to discontinue V2 observations as soon as possible to reduce resource conflicts with ascending 10m FBD

JAXA response

Accepted as recommended

Global ScanSAR, HH/HV

ALOS

Beam W2 Ascending, Right/Left (**Arctic/Antarctic**)



K&C comments

- Arctic and Antarctic successfully covered by ScanSAR during first 2 years
- Recommend to discontinue Arctic and Antarctic ScanSAR observations.

JAXA response

Not accepted

Proposed at KC#22 (Feb 2016):

ALOS

Top: Year 3 (Aug 2015–Jul 2016); bottom: Year 4 (Aug 2016–Jul 2017)

| 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 | | | | | | | |
| Date (sta | t) 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 |
| | Glacier St | Glacier SS | Crustal Wetland Deforest | Glacier SS | Glacier SS | Crustal Wetland Deforest | Global 3 | 3m (3/3) | Crustal Wetland Deforest | Global 3 | 3m (3/3) | Crustal | Wetlands Deforest | | Crustal | Wetlands Deforest | Crustal | Crustal | Wetlands Deforest | Crustal | Crustal | Wetlands Deforest | Crustal | Crustal | Wetlands Deforest | Crustal |
| Descend | 8 | | W2 | | | W2 | U2 | U2 | W2 | U2 | U2 | | | | | | F2 | | | F2 | | | F2 | | | |
| | F2(6)L | F2(6)L | (2)R | F2(6)L | F2(6)L | (2)R | (6)R | (7)R | (2)R | (8)R | (9)R | W2(2)R | W2(2)R | | W2(2)R | W2(2)R | (5)R | W2(2)R | W2(2)R | (6)R | W2(2)R | W2(2)R | (6)R | W2(2)R | W2(2)R | W2(2)R |
| | Crustal | Crustal N&S Poles | Wor | 1d 1-1 (1 | 0m) | | | Wo | rld 2-1(1 | 0m) | | Wor | ld 1-2 (1 | 0m) | Greenland Super Site | K&C Forest | | | Global FP 6m (3/5) | | | | | World | 1 2-2 (Bo | oreal) |
| Ascendi | W2(2)R | W2(2)R | F2 | F2 | F2 | | | F2 | F2 | F2 | | F2 | F2 | F2 | | F2 | F2 | F2 | FP | FP | FP | FP | FP | F2 | F2 | F2 |
| | | W2(2)L | (7)R | (5)R | (6)R | | | (7)R | (5)R | (6)R | | (7)R | (5)R | (6)R | F2(6)R | (6)R | (5)R | (7)R | (6)R | (5)R | (4)R | (3)R | (7)R | (7)R | (5)R | (6)R |
| ■4年目 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | _ | _ | _ | | | _ |
| Date (sta | t) 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 |
| | Wetands Glacier St | Crustal Glacier SS | Wetands Glacier SS | Wetlands Deforest | Crustal Glacier SS | Crustal | Wetlands Deforest | | Crustal | Wetlands Deforest | Crustal 3m IT | Crustal | Wetlands Deforest | | Crustal | Wetlands Deforest | Crustal | Crustal | Wetlands Deforest | Crustal | Crustal | Wetlands Deforest | Crustal | Crustal | Wetlands Deforest | Crustal |
| Descend | W2(2)R | W2(2)R | W2(2)R | | | | | | | | | | | | | | F2 | | | F2 | | | F2 | | | |
| | F2(6)L | F2(6)L | F2(6)L | W2(2)R | F2(6)L | W2(2)R | W2(2)R | | W2(2)R | W2(2)R | | W2(2)R | W2(2)R | | W2(2)R | W2(2)R | (5)R | W2(2)R | W2(2)R | (6)R | W2(2)R | W2(2)R | (6)R | W2(2)R | W2(2)R | W2(2)R |
| | Crustal | | World | d 1-1 (Bo | oreal) | | | Wor | rld 2-1 (1 | 10m) | | Wor | ld 1-2 (1 | 0m) | Greenland Super Site | к | &C Fore | st | | Globa | al FP 6m | (4/5) | | World | 1 2-2 (Bo | oreal) |
| Ascendi | W2(2)R | | F2 (7)R | F2 (5)R | F2 (6)R | | | F2 (7)R | F2 (5)R | F2 (6)R | | F2 (7)R | F2 (5)R | F2 (6)R | F2(6)R | F2 (6)R | F2 (7)R | F2 (5)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 |

K&C Initiative An international science collaboration led by JAXA

Accepted by JAXA:

ALOS

Top: Year 3 (Aug 2015–Jul 2016); bottom: Year 4 (Aug 2016–Jul 2017)

| 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 | | | | | | | | | | | | | | |
| Date (start) | 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 3 | 3m (3/3) | m (3/3) Crustal Wetland Deforest | | Global 3m (3/3) | | Crustal Wetland Deforest | | Crustal Wetland Deforest | Crustal 14-day | Crustal & Forest 14-day InSAR | | Crustal 14-day | & Forest / InSAR | Crustal Wetland Deforest | Crustal 14-day | & Forest InSAR | Crustal Wetland Deforest | | Crustal Wetland Deforest |
| Concentrating | F2(6)L | F2(6)L | W2 (2)R | F2(6)L | | 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 |
| | Crustal | Crustal N&S Poles | Wor | ld 1–1 (1 | 0m) | | | Wor | ld 2-1 (1 | 10m) | N&S Poles | S Pole | Wor | d 1-2 (1 | 0m) | GR Super Site | GR Super Site | | Globa | al FP 6m | (3/5) | | | Wor | ld 2-2 (1 | 0m) |
| Ascending | W2(2)R | W2(2)R | F2 | F2 | F2 | | | F2 | F2 | F2 | W2(2)R | W2(2)L | F2 | F2 | F2 | | | FP | FP | FP | FP | FP | | F2 | F2 | F2 |
| | | W2(2)L | (/)R | (5)R | (6)R | | | (/)R | (5)R | (0)R | W2(2)L | | (/)R | (5)R | (0)R | F2(6)R | F2(6)R | (6)R | (5)R | (4)R | (3)R | (/)R | | (/)R | (5)R | (0)R |
| ■4年目 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cycle | 80 | | | | | 05 | | | | | | | | | | | | | | | | | | | | |
| | 8 | 81 | 82 | 83 | 84 | 60 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 |
| Year | 8 | 81 | 8Z | 83 | 84 | 2017 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 2018年 | 99 | 100 | 101 | 102 | 103 | 104 | 105 |
| Year Date (start) | 07/31 | 81 08/14 | 8Z 08/28 | 83 | 09/25 | 2017 10/09 | 10/23 | 87 | 11/20 | 89 | 90 | 91 01/01 | 92 | 93 | 94 | 95 | 96 | 97 | 98 2018年 04/09 | 99 04/23 | 100 05/07 | 101 | 102 06/04 | 103 06/18 | 104 07/02 | 105 07/16 |
| Year Date (start) | 07/31 Glacier Super Site | 08/14 Crustal Glacier SS | 08/28 Wetlands Deforest | 83 09/11 Glacier Super Site | 09/25 Crustal Glacier SS | 2017 10/09 Wetlands Deforest | 10/23 10/23 USA, Gern | 87 11/06 1/3m narry, Italy) | 88 11/20 Wetlands Deforest | 89 12/04 10m/3m (US, DE, IT) | 90 12/18 Crustal 3m IT | 91 01/01 Wetlands Deforest | 92 | 93 01/29 Crustal | 94 02/12 Wetlands Deforest | 95 02/26 | 96 03/12 Crustal | 97 03/26 Wetlands Deforest | 98 2018年 04/09 Crustal | 99 04/23 Crustal | 100 05/07 Wetlands Deforest | 05/21 | 102 06/04 Crustal | 103 06/18 Wetlands Deforest | 104 07/02 Crustal | 105 07/16 Wetlands Deforest |
| Year Date (start) Descending | 07/31 Glacier Super Site | 08/14 Crustal Glacier SS W2(2)R | 82 08/28 Wetlands Deforest | 83 09/11 Glacier Super Site | 09/25 Crustal Glacier SS W2(2)R | 2017 10/09 Wetlands Deforest | 10/23 10m USA, Gern F2(7)R | 87 11/06 1/3m narry, Italy) F2(5)R | 88 11/20 Wetlands Deforest | 89 12/04 10m/3m (US, DE, IT) F2(6)R | 90 12/18 Crustal 3m IT W2(2)R | 91 01/01 Wetlands Deforest | 92 | 93 01/29 Crustal W2(2)R | 94 02/12 Wetlands Deforest | 95 | 96 03/12 Crustal | 97 03/26 Wetlands Deforest | 98 2018年 04/09 Crustal W2(2)R | 99 04/23 Crustal | 100 05/07 Wetlands Deforest | 05/21 | 102 06/04 Crustal | 103 06/18 Wetlands Deforest | 104 07/02 Crustal W2(2)R | 105 07/16 Wetlands Deforest W2 |
| Year Date (start) Descending | 07/31 Glacier Super Site | 81 08/14 Crustal Glacier SS W2(2)R F2(6)L | 08/28 Wetlands Deforest W2 (2)R | 83 09/11 Glacier Super Site F2(6)L | 09/25 Crustal Glacier SS W2(2)R F2(6)L | 2017 10/09 Wetlands Deforest W2 (2)R | 10/23 10m USA, Gern F2(7)R U2(6)R | 87 11/06 1/3m narry, Italy) F2(5)R U2(7)R | 88 11/20 Wetlands Deforest W2 (2)R | 89 12/04 10m/3m (US, DE, IT) F2(6)R U2(8)R | 90 12/18 Crustal 3m IT W2(2)R U2(9)R | 91 01/01 Wetlands Deforest W2 (2)R | 92 01/15 | 93 01/29 Crustal W2(2)R | 94 02/12 Wetlands Deforest W2 (2)R | 95 | 96 03/12 Crustal F2 (5)R | 97 03/28 Wetlands Deforest W2 (2)R | 98 2018年 04/09 Crustal W2(2)R | 99 04/23 Crustal F2 (6)R | 100 05/07 Wetlands Deforest W2 (2)R | 05/21 | 102 06/04 Crustal F2 (6)R | 103 06/18 Wetlands Deforest W2 (2)R | 104 07/02 Crustal W2(2)R | 105 07/16 Wetlands Deforest W2 (2)R |
| Year Date (start) Descending | 07/31 Glacier Super Site F2(6)L Crustal | 81 08/14 Crustal Glacier SS W2(2)R F2(6)L Crustal N&S Poles | 08/28 Wetlands Deforest W2 (2)R (Bore | 83 09/11 Glacier Super Site F2(6)L World 1-1 al Eur & N | 94 09/25 Crustal Glacier SS W2(2)R F2(6)L | 2017 10/09 Wetlands Deforest W2 (2)R | 10/23 10m USA, Germ F2(7)R U2(6)R Wor | 87 11/06 1/3m nany, Italy) F2(5)R U2(7)R Id 2-1 (1 | 11/20 Wetlands Deforest W2 (2)R 0m) | 89 12/04 10m/3m (US, DE, IT) F2(6)R U2(8)R N&S Poles | 90 12/18 Crustal 3m IT W2(2)R U2(9)R S Pole | 91 01/01 Wetlands Deforest W2 (2)R Worl | 92 01/15 d 1-2 (1 | 93 01/29 Crustal W2(2)R 0m) | 94 02/12 Wetlands Deforest W2 (2)R Greenland Super Site | 95 02/26 K | 96 03/12 Crustal F2 (5)R &C Fore | 9/ 03/26 Wetlands Deforest W2 (2)R | 98 2018年 04/09 Crustal W2(2)R | 99 04/23 Crustal F2 (6)R Globa | 100 05/07 Wetlands Deforest W2 (2)R al FP 6m | 101 05/21 (4/5) | 102 06/04 Crustal F2 (6)R | 103 06/18 Wetlands Deforest W2 (2)R (Bore | 104 07/02 Crustal W2(2)R World 2-2 al Eur & N | 105 07/16 Wetlands Deforest W2 (2)R |
| Year Date (start) Descending Ascending | 07/31 Glacier Super Site F2(6)L Crustal W2 (2)R | 81 08/14 Crustal Glacier SS W2(2)R F2(6)L Crustal N&S Poles W2(2)R | 82 08/28 Wetlands Deforest W2 (2)R (Bore F2 (7)R | 83 09/11 Glacier Super Site F2(6)L World 1-1 al Eur & N F2 (5)R | 09/25 Crustal Glacier SS W2(2)R F2(6)L I-Am) F2 (6)R | 2017 2017 10/09 Wetlands Deforest W2 (2)R | 10/23 10m USA, Gern F2(7)R U2(6)R Wor F2 (7)R | 11/06 /3m narry, Italy) F2(5)R U2(7)R Id 2-1 (1 F2 (5)R | 38 11/20 Wetlands Deforest (2)R 0m) F2 (6)R | 89 12/04 10m/3m (US, DE, IT) F2(6)R U2(8)R N&S Poles W2(2)R | 90 12/18 Crustal 3m IT W2(2)R U2(9)R S Pole W2(2)L | 91 01/01 Wetlands Deforest (2)R Wor F2 (7)R | 92 01/15 d 1-2 (1 F2 (5)R | 93 01/29 Crustal W2(2)R 0m) F2 (6)R | 94 02/12 Wetlands Deforest W2 (2)R Greenland Super Site | 95 02/26 K F2 (7)R | 96 03/12 Crustal (5)R &C Fore F2 (5)R | 03/26 Wetlands Deforest W2 (2)R st F2 (6)R | 98 2018年 04/09 Crustal W2(2)R | 99 04/23 Crustal (6)R Globa | 100 05/07 Wetlands Deforest W2 (2)R al FP 6m FP (4)R | (4/5) | 102 06/04 Crustal F2 (6)R | 103 06/18 Wetlands Deforest W2 (2)R (Bore F2 (7)R | 104 07/02 Crustal W2(2)R World 2-2 al Eur & N F2 (5)R | 105 07/16 Wetlands Deforest (2)R (-Am) F2 (6)R |



An international science collaboration led by JAXA

KC#23 (Jan 2017)

New recommendation to JAXA



Current BOS for Year 4 (Aug 2016–Jul 2017)

- Global POL observations: low success rate → limited scientific value, no end users identified

| ■47年日 | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------|-----------------------|-----------------------|----------------------|-------------------------|-----------------------|----------------------|------------------|----------------------|----------------------|------------------------|------------------|----------------------|-----------|---------|-------------------------|-------|---------|----------------------|---------|---------|----------------------|-------|---------|----------------------|-------------------------|----------------------|
| 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 | | | | | | | | | | | | | |
| Date (sta | rt) 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 |
| | Glacier Super Site | Crustal Glacier SS | Wetlands Deforest | Glacier Super Site | Crustal Glacier SS | Wetlands Deforest | 10n USA, Gerr | n/3m many, Italy) | Wetlands Deforest | 10m/3m (US, DE, IT) | Crustal 3m IT | Wetlands Deforest | | Crustal | Wetlands Deforest | | Crustal | Wetlands Deforest | Crustal | Crustal | Wetlands Deforest | | Crustal | Wetlands Deforest | Crustal | Wetlands Deforest |
| Descend | ng | W2(2)R | W2 | | W2(2)R | W2 | F2(7)R | F2(5)R | W2 | F2(6)R | W2(2)R | W2 | | W2(2)R | W2 | | F2 | W2 | W2(2)R | F2 | W2 | | F2 | W2 | W2(2)R | W2 |
| | F2(6)L | F2(6)L | (2)R | F2(6)L | F2(6)L | (2)R | U2(6)R | U2(7)R | (2)R | U2(8)R | U2(9)R | (2)R | | | (2)R | | (5)R | (2)R | | (6)R | (2)R | | (6)R | (2)R | | (2)R |
| | Grustal | Crustal N&S Poles | (Bore | World 1-1 al Eur & N | l I−Am) | | Wor | 1d 2-1 (1 | 0m) | N&S Poles | S Pole | Wor | ld 1-2 (1 | 10m) | Greenland Super Site | к | &C Fore | st | | Globa | al FP 6m | (4/5) | | (Bore | World 2-2 al Eur & N | -Am) |
| Ascendir | W2 | W2(2)R | F2 | F2 | F2 | | F2 | F2 | F2 | W2(2)R | W2(2)L | F2 | F2 | F2 | | F2 | F2 | F2 | FP | FP | FP | FP | FP | F2 | F2 | F2 |
| | (2)R | W2(2)L | (7)R | (5)R | (6)R | | (7)R | (5)R | (6)R | W2(2)L | | (7)R | (5)R | (6)R | F2(6)R | (7)R | (5)R | (6)R | (6)R | (5)R | (4)R | (3)R | (7)R | (7)R | (5)R | (6)R |

KC#23 suggested alternative BOS for Year 4 (Aug 2016–Jul 2017)

- Polarimetric Super Sites, time series
- Additional 3 cycles for FBD-10m

