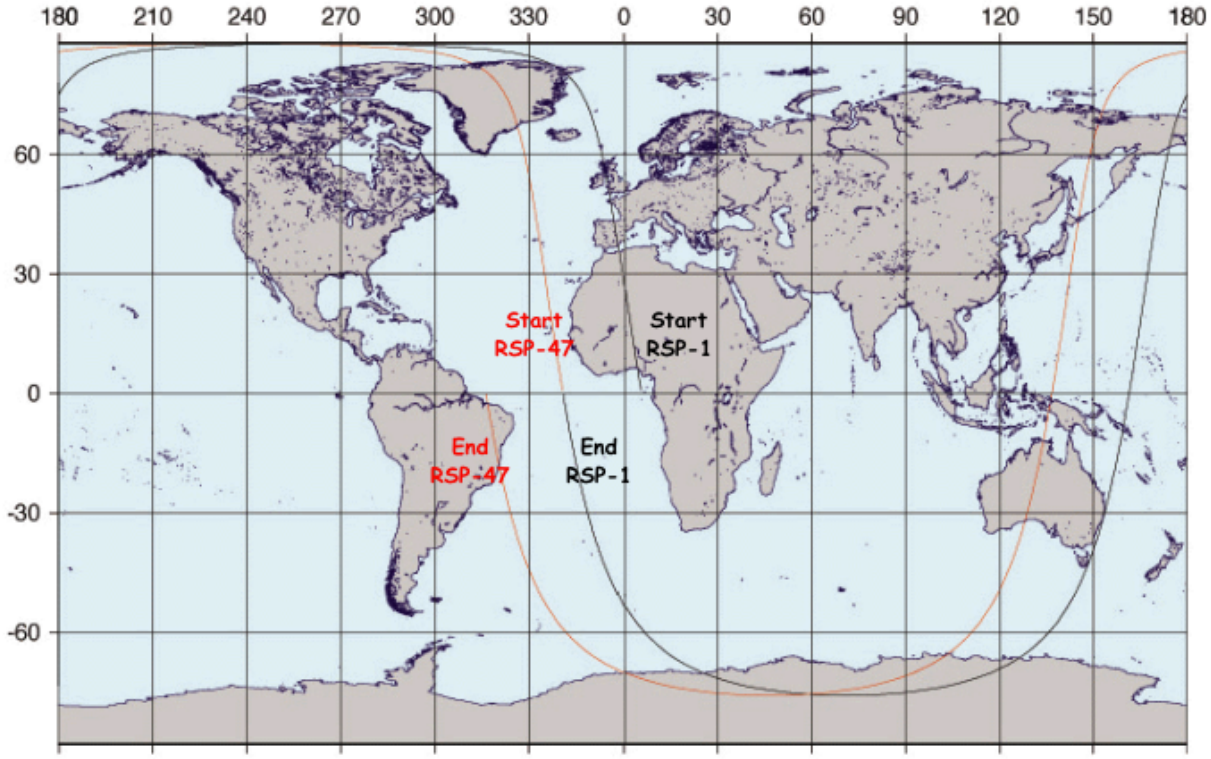
RSP - the orbit Reference System for Planning

RSP - an orbit-based system based on the actual footprint of the observation swath will to be used within the K&C Initiative for pass identification



671 ALOS orbits within a 46-day cycle.

• A RSP pass is defined to start at the Equator in ascending mode, resulting in a "jump" in the numbering (n+46) with every ascending equator crosssing (CAUTION!)

RSP request form
Work sheet “Summary”

Advanced Land Observing Satellite

6th K&C Science meeting, Feb 28 – Mar 3, 2005

Summary of K&C PALSAR data requested from JAXA EORC by
Ernst Ramberg

Fill in the requested information in the empty boxes

Product Leader:	Ernst Ramberg
Affiliation	Hokkaido University
Country	Fiji
K&C Theme	Forest

Ascending mode (HH or HH+HV 41.5°)

Total #scenes	Total #passes	Average pass (km)	Data (Gbyte)
2679	261	719	69

Descending mode ScanSAR

Total #scenes	Total #passes	Average pass (km)	Data (Gbyte)
1081	136	2706	231

Ascending mode HH 41.5° & HH+HV 41.5°

Prototype area 1:	Banten, west Java
PALSAR polygon(s)	B3
Proc. level *1: SLP / GRP	
ORP-GEO / ORP-NER / NOS	SLP
Media (FTP or S-DLT)	FTP

Ascending subtotals 1

#scenes/coverage		#pass/cov	Mbyte/cov
306		27	600
#cov	#scenes	#passes	Tot Gbyte
8	2451	216	67.2

Satellite cycles during which data are requested (mark below with 'I')

Year	2006												2007												2008											
Month	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1
Cycle#	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26													
Req.*1					I	I				I			I	I				I			I	I														

Prototype area 2:	Iceland
PALSAR polygon(s)	D2
Proc. level *1: SLP / GRP	
ORP-GEO / ORP-NER / NOS	SLP
Media (FTP or S-DLT)	FTP

Ascending subtotals 2

#scenes/coverage		#pass/cov	Mbyte/cov
76		13	149
#cov	#scenes	#passes	Tot Gbyte
3	229	43	2.2

Satellite cycles during which data are requested (mark below with 'I')

Year	2006												2007												2008											
Month	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1
Cycle#	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26													
Req.*1						I				I												I														

Prototype area 3:	
PALSAR polygon(s)	
Proc. level *1: SLP / GRP	
ORP-GEO / ORP-NER / NOS	
Media (FTP or S-DLT)	

Ascending subtotals 3

#scenes/coverage		#pass/cov	Mbyte/cov
0		0	0
#cov	#scenes	#passes	Tot Gbyte
0	0	0	0.0

Satellite cycles during which data are requested (mark below with 'I')

Year	2006												2007												2008											
Month	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1
Cycle#	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26													
Req.*1																																				

Descending mode ScanSAR

ScanSAR prototype area 1:	Banten, west Java
PALSAR polygon(s)	Scan_B3
Proc. level *1: SLP / GRP	
ORP-GEO / ORP-NER / NOS	GRP
Media (FTP or S-DLT)	S-DLT

Descending subtotals 1

#scenes/coverage		#pass/cov	Mbyte/cov
29		8	714
#cov	#scenes	#passes	Tot Gbyte
8	229	64	45.7

Satellite cycles during which data are requested (mark below with 'I')

Year	2006												2007												2008											
Month	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1
Cycle#	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26													
Req.*1								I	I	I	I	I	I	I	I	I																					

ScanSAR prototype area 2:	Congo basin
PALSAR polygon(s)	Scan_E2
Proc. level *1: SLP / GRP	
ORP-GEO / ORP-NER / NOS	GRP
Media (FTP or S-DLT)	S-DLT

Descending subtotals 2

#scenes/coverage		#pass/cov	Mbyte/cov
91		8	4.480
#cov	#scenes	#passes	Tot Gbyte
9	823	72	185.1

Satellite cycles during which data are requested (mark below with 'I')

Year	2006												2007												2008											
Month	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1
Cycle#	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26													
Req.*1														I	I	I	I	I	I	I	I	I														

ScanSAR prototype area 3:	
PALSAR polygon(s)	
Proc. level *1: SLP / GRP	
ORP-GEO / ORP-NER / NOS	
Media (FTP or S-DLT)	

Descending subtotals 3

#scenes/coverage		#pass/cov	Mbyte/cov
0		0	0
#cov	#scenes	#passes	Tot Gbyte
0	0	0	0.0

Satellite cycles during which data are requested (mark below with 'I')

Year	2006												2007												2008											
Month	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1	L2	L	2	3	4	5	6	7	8	9	L0	L1
Cycle#	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26													
Req.*1																																				

RSP request form
Work sheet “ScanSAR”

Advanced Land Observing Satellite

6th K&C Science meeting, Feb 28 - Mar 3, 2005

Product Leader:	
Prototype area:	

Descending mode
ScanSAR
ScanSAR Prototype Area 3

Fill in required latitude information for each RSP pass covering the Prototype Area(s).

Total #scenes	Total #passes	Max pass [km]	Average pass [km]
0	0	0	0

RSP #	88	85	82	79	76	73	70	67	64	61	58	55	52	49	46	43	40	37	34	31	28	25	22	19	16	13	10	7	4	1	#scenes	#passes	Max [km]
N-Lat [XX x deg.]																																	
S-Lat [YY x deg.]																																	
Segment length [deg.]	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	#scenes	#passes	Max [km]
# scenes (/band)	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	0	0

RSP #	178	175	172	169	166	163	160	157	154	151	148	145	142	139	136	133	130	127	124	121	118	115	112	109	106	103	100	97	94	91	#scenes	#passes	Max [km]
N-Lat [XX x deg.]																																	
S-Lat [YY x deg.]																																	
Segment length [deg.]	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	#scenes	#passes	Max [km]
# scenes (/band)	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	0	0

RSP #	268	265	262	259	256	253	250	247	244	241	238	235	232	229	226	223	220	217	214	211	208	205	202	199	196	193	190	187	184	181	#scenes	#passes	Max [km]
N-Lat [XX x deg.]																																	
S-Lat [YY x deg.]																																	
Segment length [deg.]	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	#scenes	#passes	Max [km]
# scenes (/band)	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	0	0

RSP #	358	355	352	349	346	343	340	337	334	331	328	325	322	319	316	313	310	307	304	301	298	295	292	289	286	283	280	277	274	271	#scenes	#passes	Max [km]
N-Lat [XX x deg.]																																	
S-Lat [YY x deg.]																																	
Segment length [deg.]	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	#scenes	#passes	Max [km]
# scenes (/band)	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	0	0

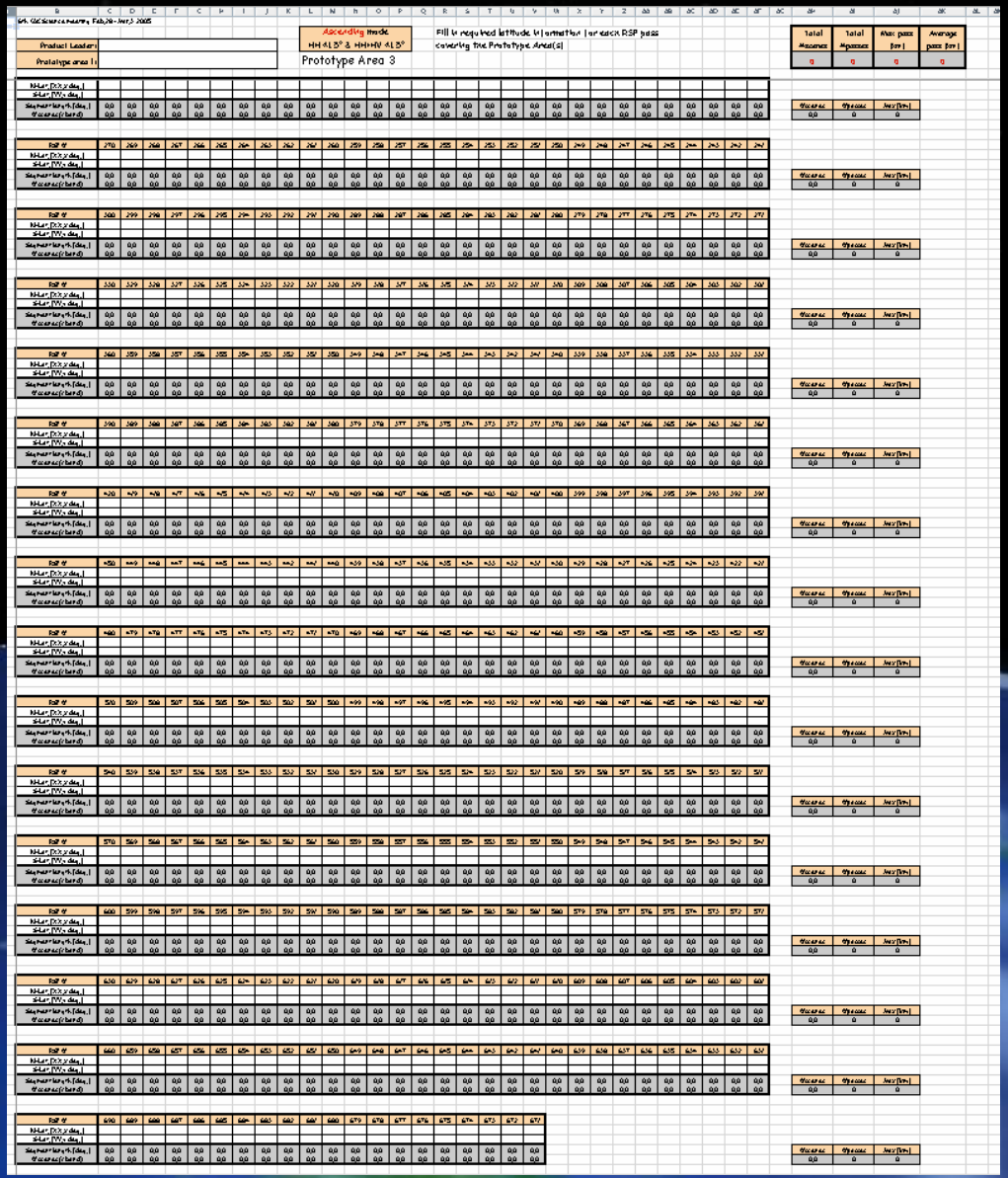
RSP #	448	445	442	439	436	433	430	427	424	421	418	415	412	409	406	403	400	397	394	391	388	385	382	379	376	373	370	367	364	361	#scenes	#passes	Max [km]
N-Lat [XX x deg.]																																	
S-Lat [YY x deg.]																																	
Segment length [deg.]	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	#scenes	#passes	Max [km]
# scenes (/band)	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	0	0

RSP #	538	535	532	529	526	523	520	517	514	511	508	505	502	499	496	493	490	487	484	481	478	475	472	469	466	463	460	457	454	451	#scenes	#passes	Max [km]
N-Lat [XX x deg.]																																	
S-Lat [YY x deg.]																																	
Segment length [deg.]	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	#scenes	#passes	Max [km]
# scenes (/band)	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	0	0

RSP #	628	625	622	619	616	613	610	607	604	601	598	595	592	589	586	583	580	577	574	571	568	565	562	559	556	553	550	547	544	541	#scenes	#passes	Max [km]
N-Lat [XX x deg.]																																	
S-Lat [YY x deg.]																																	
Segment length [deg.]	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	#scenes	#passes	Max [km]
# scenes (/band)	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	0	0

RSP #	670	667	664	661	658	655	652	649	646	643	640	637	634	631	#scenes	#passes	Max [km]
N-Lat [XX x deg.]																	
S-Lat [YY x deg.]																	
Segment length [deg.]	00	00	00	00	00	00	00	00	00	00	00	00	00	00	#scenes	#passes	Max [km]
# scenes (/band)	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	0	0

RSP request form
Work sheet “Ascending”



Compilation of the RSP requests

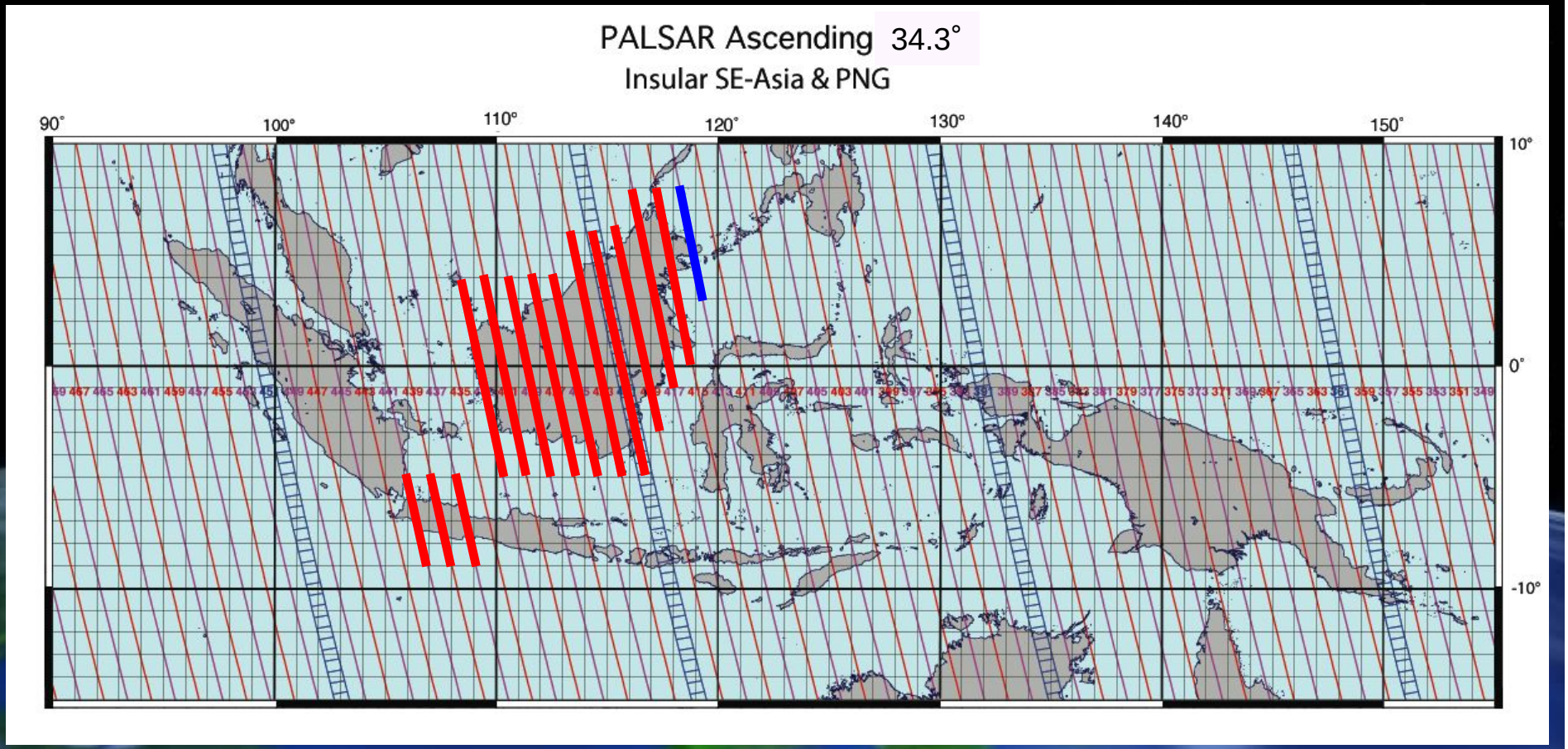
- Delineate your Prototype Area(s) on the RSP (orbit) map

- Identify RSP passes to be processed by JAXA EORC by indicating in the Excel sheet for each Prototype Area:
  1. RSP#
  2. Latitude of northern limit of the RSP pass
  3. Latitude of southern limit of the RSP pass

  - Multiple prototype areas acquired/requested during the same 46-day cycles may be added together on one Excel work sheet
  - Areas acquired during different cycles - separate work sheets.

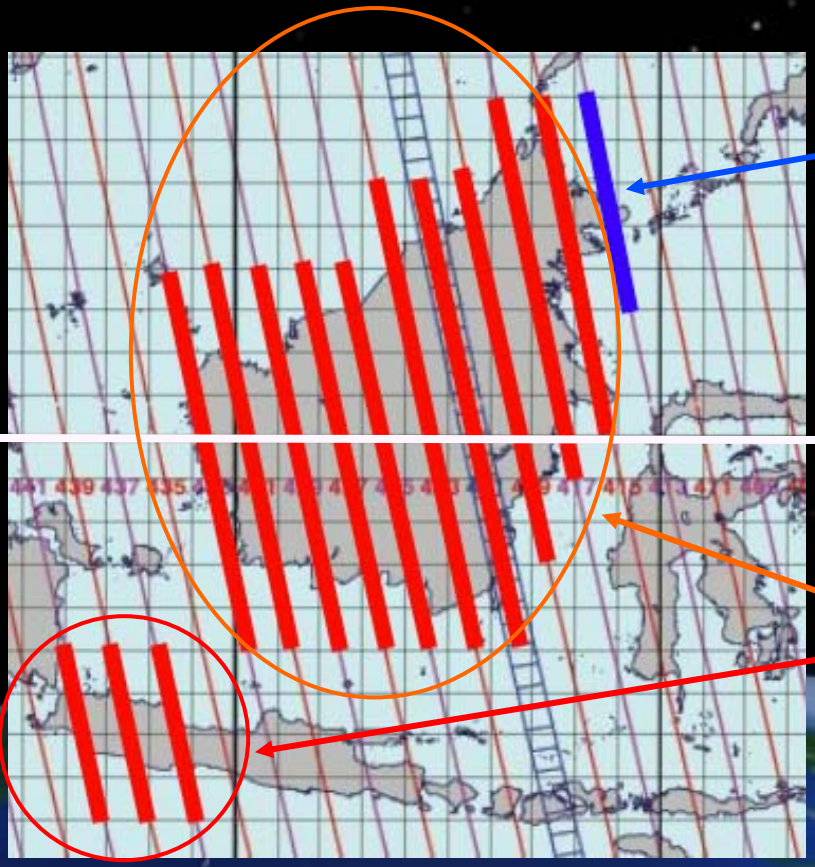
Caution with Prototype Areas which span over several polygons, that are acquired during different satellite cycles: request needs to be divided into separate work sheets.

Identifying the Prototype Areas on the RSP map



Example: Passes required to cover Borneo and western Java

Identifying RSP passes



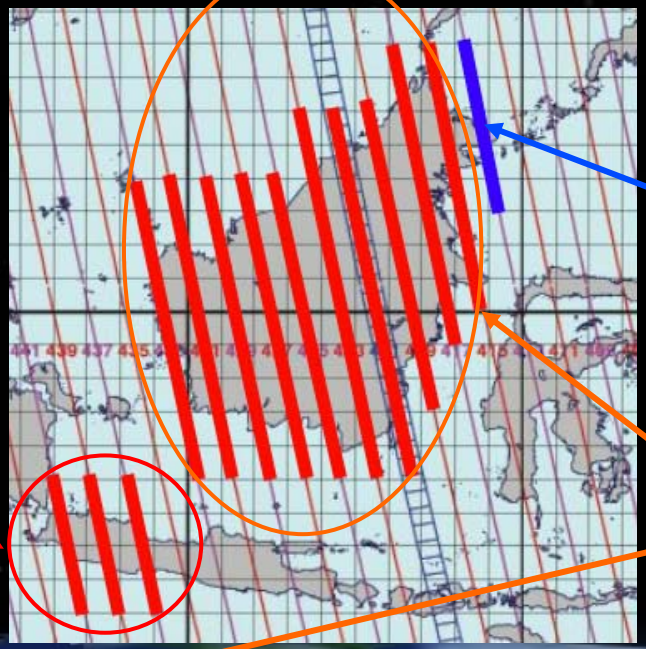
Pass entirely in the N. Hemisphere (RSP# changes)

Passes partly or entirely in the S. Hemisphere (no RSP# change)

Caution 1: RSP numbers change (+46) at the Equator (ascending).
--> Data segments *starting on, or crossing over* the Equator - keep southern hemisphere RSP#.
Note: Only every 2nd pass plotted on RSP map.

Adding desired passes to the Excel RSP table

Advanced Land Observing Satellite



RSP 437-442

RSP 459-460

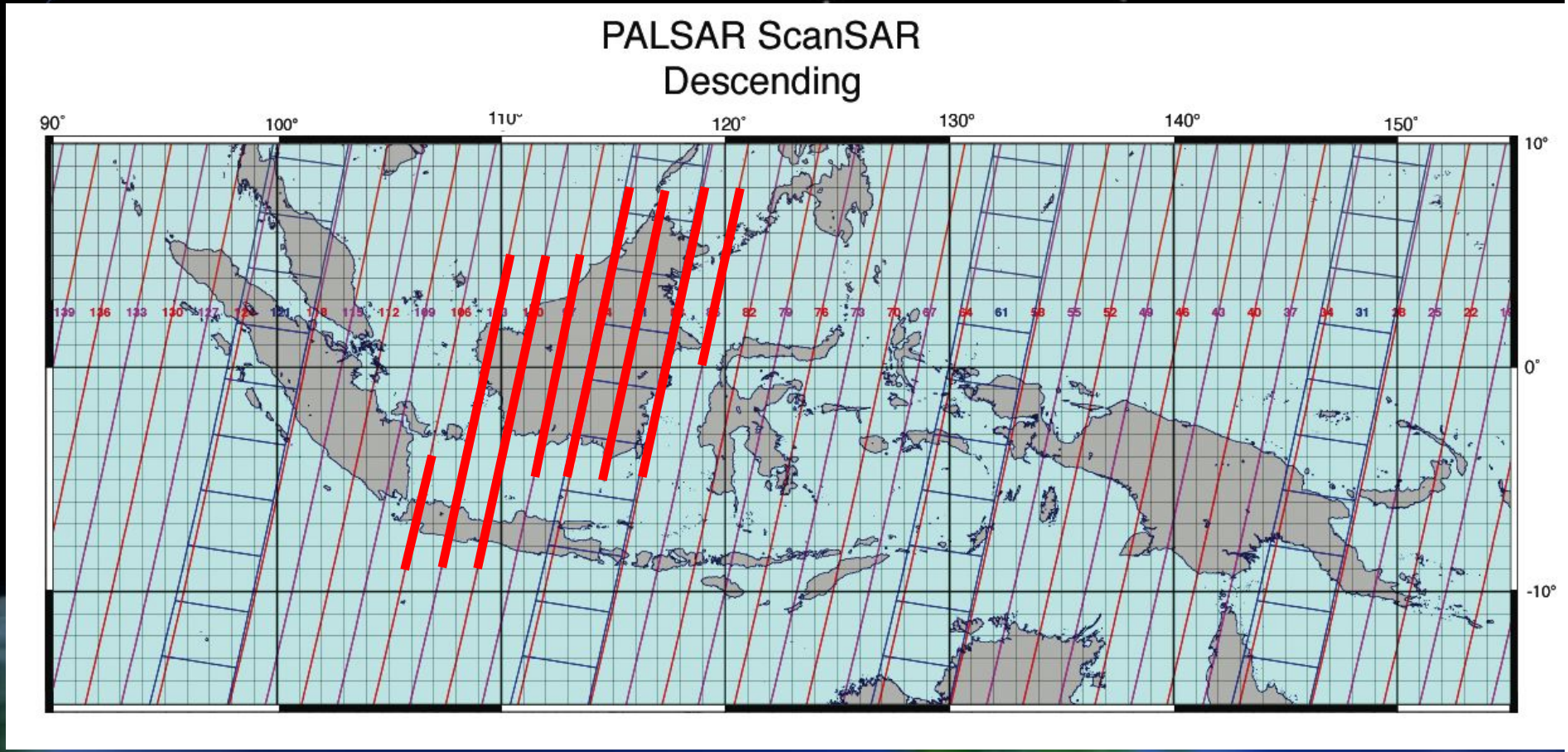
RSP 415-433

RSP #	420	419	418	417	416	415	414	413	412	411	410	409	408	407	406	405	404	403	402	401	400	399	398	397	396	395	394	393	392	391
N-Lat. [XX.x deg.]	6.0	6.0	8.0	8.0	8.0	8.0																								
S-Lat. [YY.y deg.]	-3.0	-3.0	-1.0	-1.0	0.0	0.0																								
Segment length [deg.]	9.0	9.0	9.0	9.0	8.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
# scenes (/band)	14.3	14.3	14.3	14.3	12.7	12.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RSP #	450	449	448	447	446	445	444	443	442	441	440	439	438	437	436	435	434	433	432	431	430	429	428	427	426	425	424	423	422	421
N-Lat. [XX.x deg.]									-5.0	-5.0	-5.0	-5.0	-5.0	-5.0				4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	6.0	6.0	6.0	6.0
S-Lat. [YY.y deg.]									-9.0	-9.0	-9.0	-9.0	-9.0	-9.0				-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0
Segment length [deg.]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	4.0	4.0	4.0	4.0	4.0	0.0	0.0	0.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	11.0	11.0	11.0	11.0
# scenes (/band)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	6.3	6.3	6.3	6.3	6.3	0.0	0.0	0.0	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	17.5	17.5	17.5	17.5

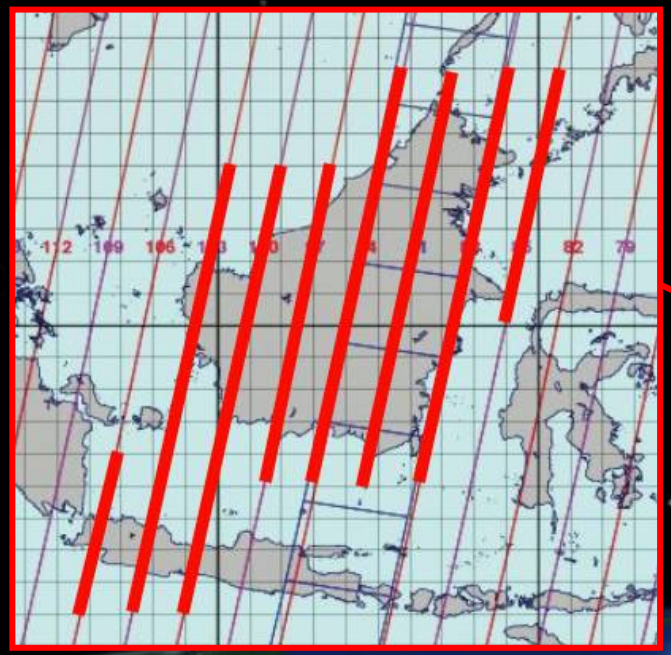
RSP #	480	479	478	477	476	475	474	473	472	471	470	469	468	467	466	465	464	463	462	461	460	459	458	457	456	455	454	453	452	451
N-Lat. [XX.x deg.]																					8.0	8.0								
S-Lat. [YY.y deg.]																					3.0	3.0								
Segment length [deg.]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
# scenes (/band)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

ScanSAR



Note 1: No RSP number change for descending passes.
Note 2: Every 3rd pass acquired in ScanSAR mode (= plotted on RSP map).

Making the ScanSAR request



RSP#
85, 88, 91,
94, 97, 100,
103, 106

6th K&C Science meeting, Feb.28 - Mar.3, 2005

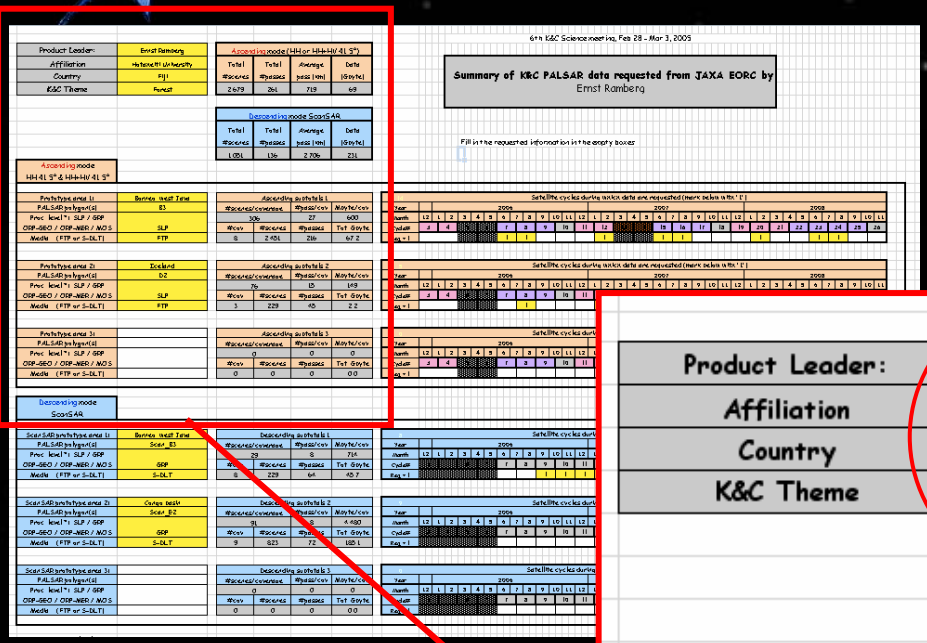
Descending mode
ScanSAR

Product Leader:	Ernst Ramberg
Prototype area:	Borneo & West Java

RSP #	88	85	82	79	76	73	70	67	64	61	58	55	52	49	46	43	40	37	34	31	28	25	22	19	16	13	10	7	4	1
N-Lat. [XX.x deg.]	8.0	8.0																												
S-Lat. [YY.y deg.]	-5.0	0.0																												
Segment length [deg.]	13.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
# scenes (/band)	4.1	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RSP #	178	175	172	169	166	163	160	157	154	151	148	145	142	139	136	133	130	127	124	121	118	115	112	109	106	103	100	97	94	91
N-Lat. [XX.x deg.]																									-4.0	5.0	5.0	5.0	8.0	8.0
S-Lat. [YY.y deg.]																									-9.0	-9.0	-9.0	-5.0	-5.0	-5.0
Segment length [deg.]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	14.0	14.0	10.0	13.0	13.0
# scenes (/band)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	4.4	4.4	3.2	4.1	4.1

Fill in the Summary page



Product Leader:	Ernst Ramberg
Affiliation	Hotaheiti University
Country	Fiji
K&C Theme	Forest

Ascending mode (HH or HH+HV 41.5°)			
Total #scenes	Total #passes	Average pass [km]	Data [Gbyte]
2,679	261	719	69

Descending mode ScanSAR			
Total #scenes	Total #passes	Average pass [km]	Data [Gbyte]
1,051	136	2,706	231

Ascending mode
HH 41.5° & HH+HV 41.5°

Prototype area 1:	Borneo, west Java
PALSAR polygon(s)	B3
Proc. level *: SLP / GRP	
ORP-GEO / ORP-MER / MOS	SLP
Media (FTP or S-DLT)	FTP

Ascending subtotals 1			
#scenes/coverage		#pass/cov	Mbyte/cov.
306		27	600
#cov	#scenes	#passes	Tot. Gbyte
8	2,451	216	67.2

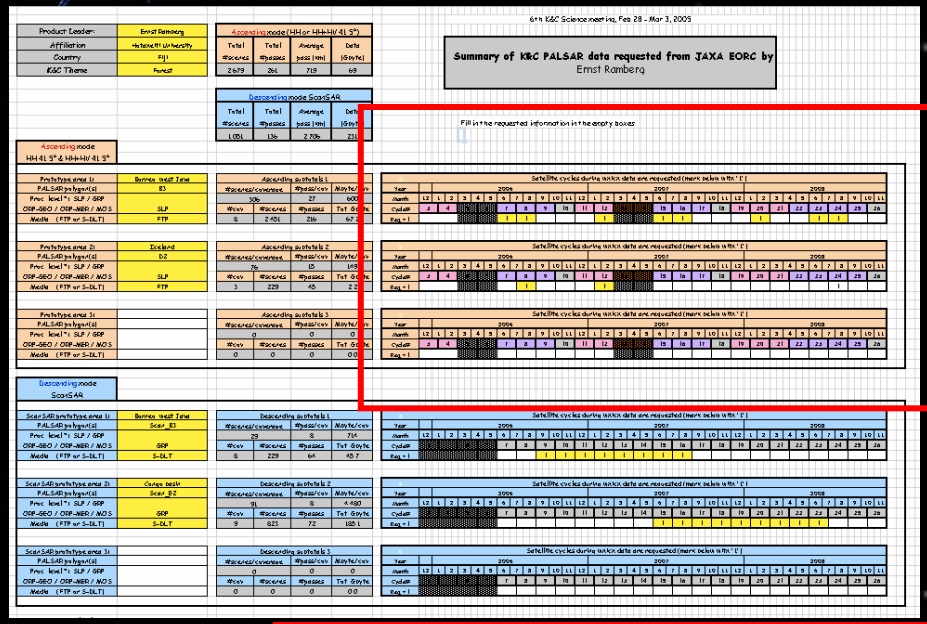
Prototype area 2:	Iceland
PALSAR polygon(s)	D2
Proc. level *: SLP / GRP	
ORP-GEO / ORP-MER / MOS	SLP
Media (FTP or S-DLT)	FTP

Ascending subtotals 2			
#scenes/coverage		#pass/cov	Mbyte/cov.
76		15	149
#cov	#scenes	#passes	Tot. Gbyte
3	229	45	2.2

Top box:
- Personal info

For each request:
- Polygon codes
- Proc. level and
- Media prefs.

Fill in the Summary page



For each Prototype Area:
Indicate the corresponding satellite cycle numbers (based on the modified version of the processing requests prepared at KC#5)

Satellite cycles during which data are requested (mark below with "1")

Year	2006												2007												2008										
Month	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
Cycle#	3	4					7	8	9	10	11		12						15	16	17	18	19			20	21	22			23	24	25	26		
Req. = 1							1	1					1						1	1						1					1	1				

Satellite cycles during which data are requested (mark below with "1")

Year	2006												2007												2008										
Month	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
Cycle#	3	4					7	8	9	10	11		12						15	16	17	18	19			20	21	22			23	24	25	26		
Req. = 1								1					1																		1					

Satellite cycles during which data are requested (mark below with "1")

Year	2006												2007												2008										
Month	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11
Cycle#	3	4					7	8	9	10	11		12						15	16	17	18	19			20	21	22			23	24	25	26		
Req. = 1																																				