

ALOS KYOTO & CARBON INITIATIVE

SCIENCE TEAM NEWSLETTER

NO. 2 (MAY 2007)

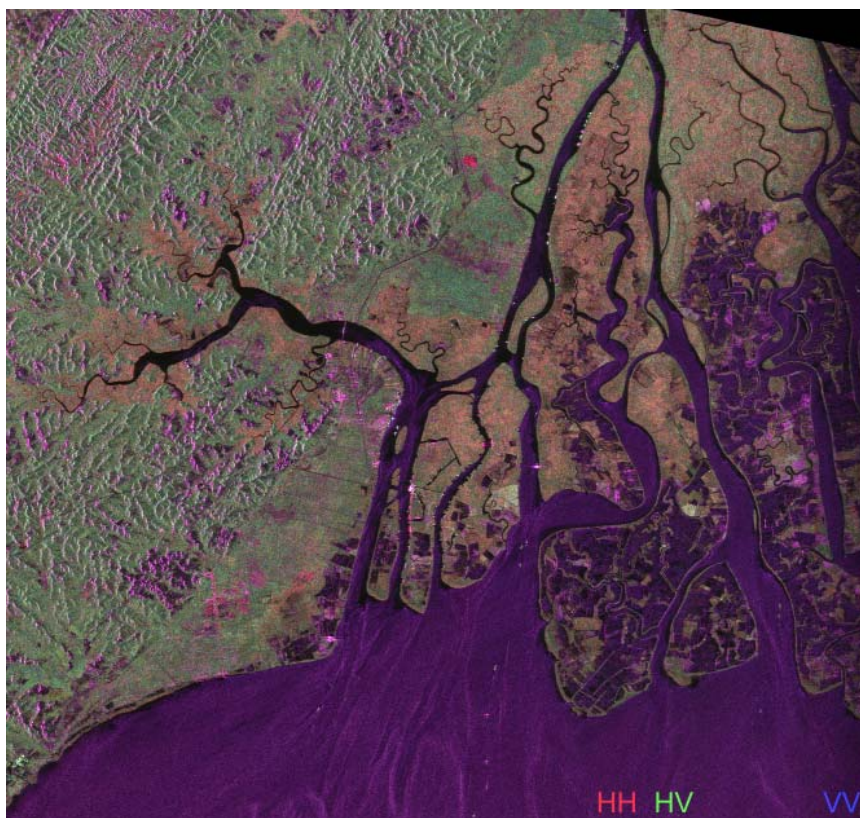


Dear K&C Science Team members.

ALOS has now been operational since late October and has completed almost 5 cycles of the global observation strategy. Large amounts of data in Fine-beam HH, ScanSAR and Polarimetric modes have been collected. I am also pleased that the strip processing has commenced at EORC and that products are now being delivered to the science team. We have furthermore a science team meeting coming up in less than two weeks time and I would in this Newsletter like to take the opportunity to mention a few issues for you to note.

*Greetings,
Ake Rosenqvist*

Image of the Month



PALSAR polarimetric(PLR) data, acquired on March 7th, 2007, showing the mouth of the Mahakam river in east Kalimantan. The scene is rich in thematic contents, and forest (green) non-forest (purple) and mangroves (brown) can be distinguished. Severely depleted mangroves are visible in the right hand side of the image.

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K&C Science Team meeting #8

As you all are aware, the 8th K&C Science Team meeting is scheduled for (**Mon-Wed**) **June 11-13, 2007** at JAXA Tsukuba Space Center.

The objectives of the meeting are to clarify any remaining data issues regarding processing levels, formats and on-line transfer, and to provide JAXA with an update of the plans for your projects. The agenda is being made available on-line at the K&C home page at http://www.eorc.jaxa.jp/ALOS/kyoto/kyoto_index.htm

Product descriptions and work schedules

Regardless of whether or not you will participate at the meeting, Shimada-san has specifically asked for a concise status update from each Science Team member, for each of the products you are to generate (check your contract with JAXA is you are not sure):

Product name:

Description:

PALSAR mode:

Observation cycles;

Production schedule:

Estimated date of delivery:

For those of you who will attend K&C#8, please be sure to include this information in your presentations. For those of you who are absent, please provide me with a brief written report (as a Powerpoint presentation or as a Word document) *if possible* prior to June 11 so that I can present it at the meeting. If that is too short notice, no later than June 30. Please.

NOTE: In your planning, please recall that **final delivery** of **all products** you are contracted to generate should be completed **no later than January 2009**, i.e. when your K&C agreements with will JAXA expire.

Data processing and dissemination

Strip data processing for the K&C team got started at EORC in May and data are now being processed on a daily basis according to the RSP processing requests you all have provided. There is presently quite a backlog of data requests from cycles 8-10 and it will take some time before all requests have been completed.

For those of you who have requested on-line delivery by FTP/ASPERA, Mukaida-san has prepared user accounts and personal directories, from which you will be able to download the data. In case you have signed up for on-line delivery (specified in your processing request sheet) but haven't heard from Mukaida-san yet, please let him know asap (akira@restec.or.jp).

Check your directories on a regular basis, as no announcements are sent out when new data are added.

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For those of you who have no data on-line yet, or if you who have requested data delivery by media (INPE, Horizon, UCSB), a temp directory has been created from which you can download some actual strip data. We have put both FBS and ScanSAR strips there for you, both slant range and ground range.

Using ASPERA:

<http://janus.eorc.jaxa.jp/DL/user/?B=/hidden/temp>

Using FTP:

<ftp://ftp.eorc.jaxa.jp/pub/ALOS/KC/hidden/temp>

Please download these data, or your own data if available. Compare download options using both FTP and ASPERA, check the whether information contents of ancillary files are understandable and sufficient for your needs, whether you can open the image files, image quality, etc.

We will have an open floor discussion session on data issues at the June science team meeting and your feed-back is very important here. Even for those of you unable to attend, this is your chance to let us know if anything doesn't seem to work alright.

Status of the PALSAR Observation strategy

As mentioned above, we have now almost completed 5 full 46-day cycles since ALOS entered its operational phase in October last year. The first cycle (cycle 7) was “open”, meaning that no regional-scale coverages were acquired, while cycles 8-9 were dedicated to obtaining a global base-line coverage for InSAR at Fine-Beam Single-pol (HH). We have now almost reached the end of cycle 11, which together with cycle 10 were devoted to regional-scale Pol-InSAR acquisitions

By June 7, we will have entered cycle 12 of the ALOS global observation strategy, and we will have 3 consecutive cycles in Dual-pol mode. This is the main observation period for the K&C, from which most of you have requested data

Cycle #	Start date	PALSAR	
		Ascending	Descending
1	24-Jan-06		
2	4-Mar-06	Commissioning	Commissioning
3	19-Apr-06		
4	4-Jun-06		
5	20-Jul-06	Cal / Val	Cal / Val
6	4-Sep-06		
7	20-Oct-06	Any mode	ScanSAR HH
8	5-Dec-06	HH 34.3°	ScanSAR HH
9	20-Jan-07	HH 34.3°	ScanSAR HH
10	7-Mar-07	POL 21.5°	ScanSAR HH
11	22-Apr-07	POL 21.5°	ScanSAR HH
12	7-Jun-07	HH+HV 34.3°	ScanSAR HH
13	23-Jul-07	HH+HV 34.3°	ScanSAR HH
14	7-Sep-07	HH+HV 34.3°	ScanSAR HH
15	23-Oct-07	Any mode	ScanSAR HH
16	8-Dec-07	HH 34.3°	ScanSAR HH
17	23-Jan-08	HH 34.3°	ScanSAR HH
18	9-Mar-08	HH 34.3°	ScanSAR HH
19	24-Apr-08	HH+HV 34.3°	ScanSAR HH
20	9-Jun-08	HH+HV 34.3°	ScanSAR HH
21	25-Jul-08	HH+HV 34.3°	ScanSAR HH
22	9-Sep-08	HH+HV 34.3°	ScanSAR HH
23	25-Oct-08	Any mode	ScanSAR HH
24	10-Dec-08	HH 34.3°	ScanSAR HH
25	25-Jan-09	HH 34.3°	ScanSAR HH
26	12-Mar-09	POL 21.5°	ScanSAR HH
27	27-Apr-09	POL 21.5°	ScanSAR HH
28	12-Jun-09	HH+HV 34.3°	ScanSAR HH
29	28-Jul-09	HH+HV 34.3°	ScanSAR HH
30	12-Sep-09	HH+HV 34.3°	ScanSAR HH

Default modes in the PALSAR observation strategy

In descending mode, the default sensor mode is always ScanSAR. Observations are primarily undertaken according to the K&C plan for seasonal monitoring of wetlands.

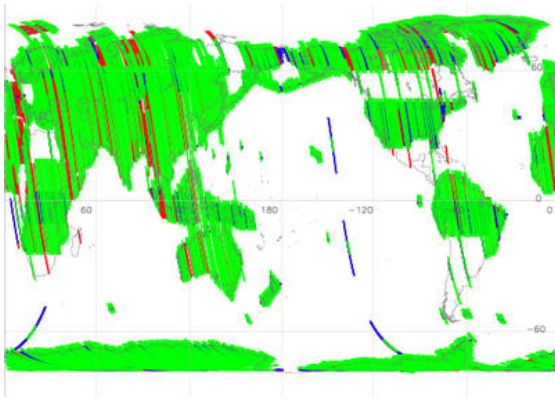
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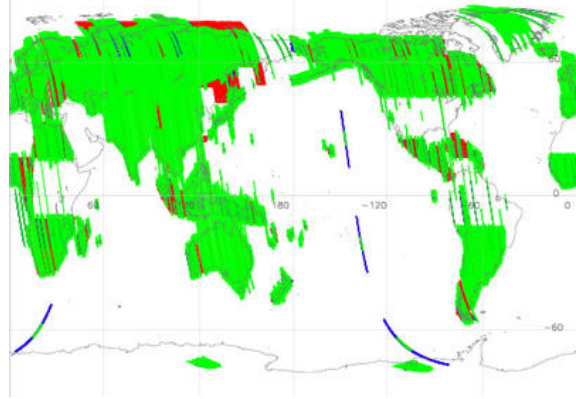
The maps below show the PALSAR acquisition status for cycles 8 -11 in ascending and descending mode (Green - paths confirmed acquired; Red – requested, but not scheduled; Blue – scheduled, but acquisition status not yet available).

You can check the status yourselves using the AGAP View Port at <http://www.eorc.jaxa.jp/ALOS/opn/>

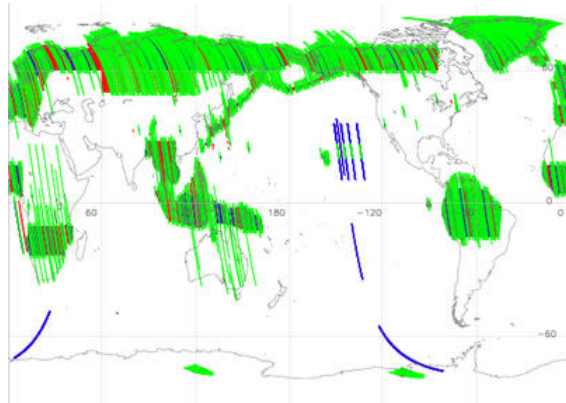
**Cycle 8 Ascending
FBS-HH**



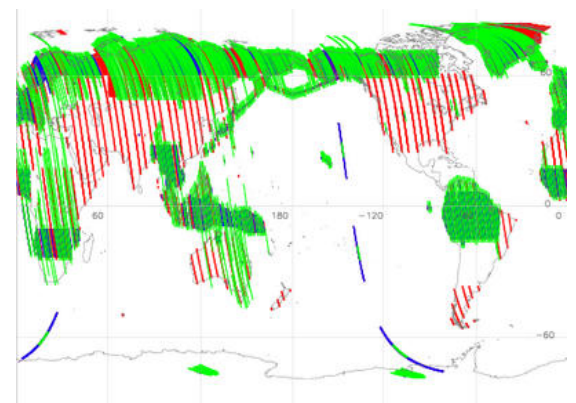
**Cycle 9 Ascending
FBS-HH**



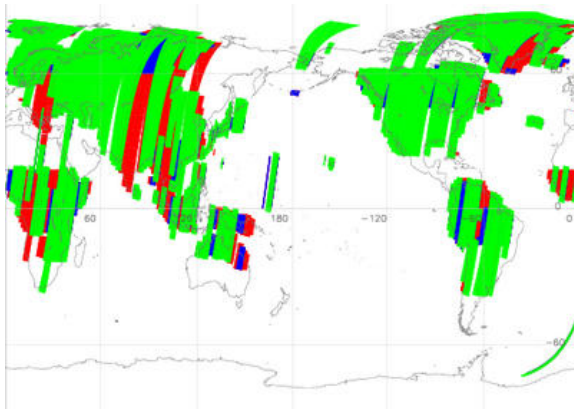
**Cycle 10 Ascending
Polarimetric**



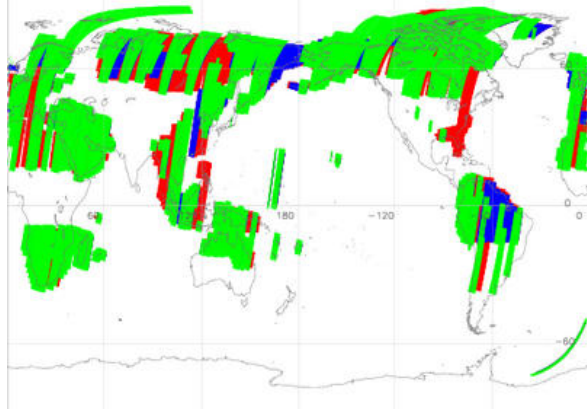
**Cycle 11 Ascending (not yet completed)
Polarimetric**



**Cycle 8 Descending
ScanSAR**



**Cycle 9 Descending
ScanSAR**

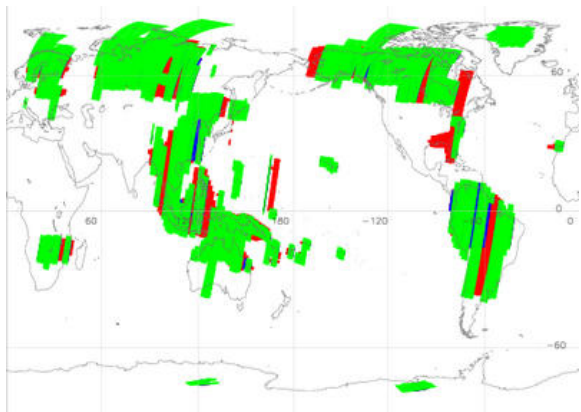


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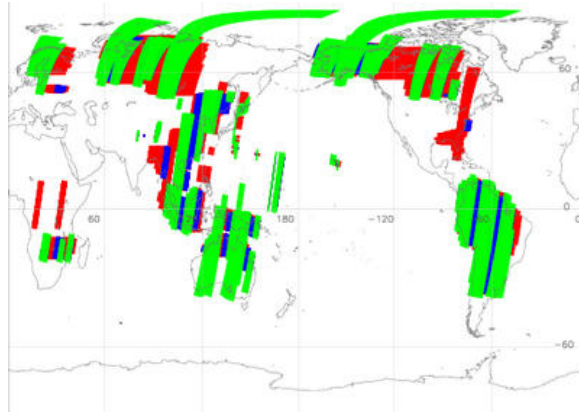
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Cycle 10 Descending
ScanSAR



Cycle 11 Descending (not yet completed)
ScanSAR



Event schedule

The following table outlines events which are of relevance to the K&C science team. If you have any events to add, or if you require any further information, please contact the relevant Theme Coordinator or Ake Rosenqvist.

Dates	Event	Theme	Prio
Open	Titles/abstracts for Forest Theme topics	F	*
22-25 May 2007	AGU Joint Assembly, Acapulco, Mexico. Special session on "RS and Modeling of Hydrologic and Methane Dynamics in Natural Wetlands" http://www.agu.org/meetings/ja07	W	
June 11-13, 2007	8th K&C Science Team meeting, Tsukuba.	All	***
July 15 2007	Draft material/outline for Forest Theme Presentation at IGARSS.	F	
July 23-27, 2007	IGARSS'07, Barcelona, Spain http://www.igarss07.org/	All	
Sept. 10-17, 2007	Int'l WS on Environmental Changes and Sustainable Development in Arid and Semi-arid Regions. Inner Mongolia, China. (Philippe P. attending) http://www.iggcas.ac.cn/iw07/index.htm	D	
Sept. 17-20, 2007 (TBC)	SAR processing course at Gamma Remote Sensing, Bern, Switzerland	All	
Sept. 25-28, 2007	5th Int'l Symposium on Retrieval of Bio- and Geophysical Parameters from SAR Data for Land Applications. Bari, Italy http://www.congrex.nl/07c07/	All	
Oct 30-Nov 2, 2007	Symposium on Radio Wave Propagation and Remote Sensing, Rio de Janeiro, Brazil. (Dalton in programme committee) http://www.users.rdc.puc-rio.br/ursif	FW	
TBD	Deadlines for proposing a special session at INTECOL (20-25 July 2008, Cuiaba, Brazil) http://www.intecol.pakmultimedia.com.br/	W	
TBD	Deadline for proposing an AGU special session		
Oct/Nov, 2007	Deadline for proposing a special session at the Australasian Remote Sensing and Photogrammetry Conference (ARSPC)		
Nov 19-23, 2007	First Joint PI Symposium for ALOS Data Nodes and the ALOS Science Program International Conference Center, Kyoto, Japan	ALOS PI's	
December (TBD)	AGU Meeting (10-14 Dec 2007, San Francisco)		

Journal Special Issue on SAR & Wetlands

I am very pleased to announce that there is a special issue on *Satellite-based radar – developing tools for wetlands management*, published this month in *Aquatic Conservation: Marine and Freshwater Ecosystems* (Volume 17, 2007). The special issue is the outcome of a special session on SAR and wetlands we organized at the INTECOL Wetlands Conference in the Netherlands in 2004 (yes – it has taken a *long* time!). Guest editors are Max Finlayson, John Lowry and Ake Rosenqvist, and it features papers mainly by many members of the K&C science team:

- *Developing tools for wetland management: inventory, assessment and monitoring – gaps and the application of satellite-based radar* (Davidson and Finlayson)
- *The potential of space-borne L-band radar to support wetlands applications and the Ramsar convention* (Rosenqvist, Finlayson, Lowry and Taylor)
- *The potential for ALOS PALSAR for quantifying the biomass and structure of tropical and subtropical mangroves* (Lucas, Mitchell, Rosenqvist, Proisy, Melius and Ticehurst)
- *Satellite radar observation of tropical peat swamp forest as a tool for hydrological modelling and environmental protection* (Hoekman)
- *The issue of spatial resolution of radar imagery for recovering biophysical properties of tropical wetlands – the Pantanal case study* (Costa and Telmer)
- *Using ALOS PALSAR to conduct a global lake census and calculate carbon accumulation in global lakes and reservoirs* (Telmer and Costa)
- *Inundation patterns of the Siberian wetlands from Envisat ASAR WS data* (Bartsch, Pathe, Wagner and Scipal)
- *Linking satellite radar observations and biogeochemical models for regional mapping and modelling of methane emissions from rice paddies* (Salas, Le Toan and Li)

SAR processing course

(By Richard Lucas) Gamma Remote Sensing in conjunction with the Institute of Geography and Earth Sciences, University of Wales Aberystwyth, are offering members of the K&C Initiative, a 4 day course on the processing of ALOS PALSAR data (including K&C mosaics) in Berne, Switzerland. The preferred dates are from Monday-Thursday, September 17th - 20th, although please provide an alternative near to this date if this is more convenient. Costs of travel, accommodation and subsistence only will have to be met by those attending. Please confirm your interest to Richard Lucas by June 15th latest (following the K&C meeting in Japan). Spaces are limited to eight participants.

Who is who?

Are you finding it difficult to know who is who, and who is doing what at JAXA and RESTEC? In the next issue of the newsletter, we will provide a photo gallery of the people behind the scenes, who are doing such a great job to keep the project going!

I am looking forward to seeing many of you in Tsukuba in early June!

Ake