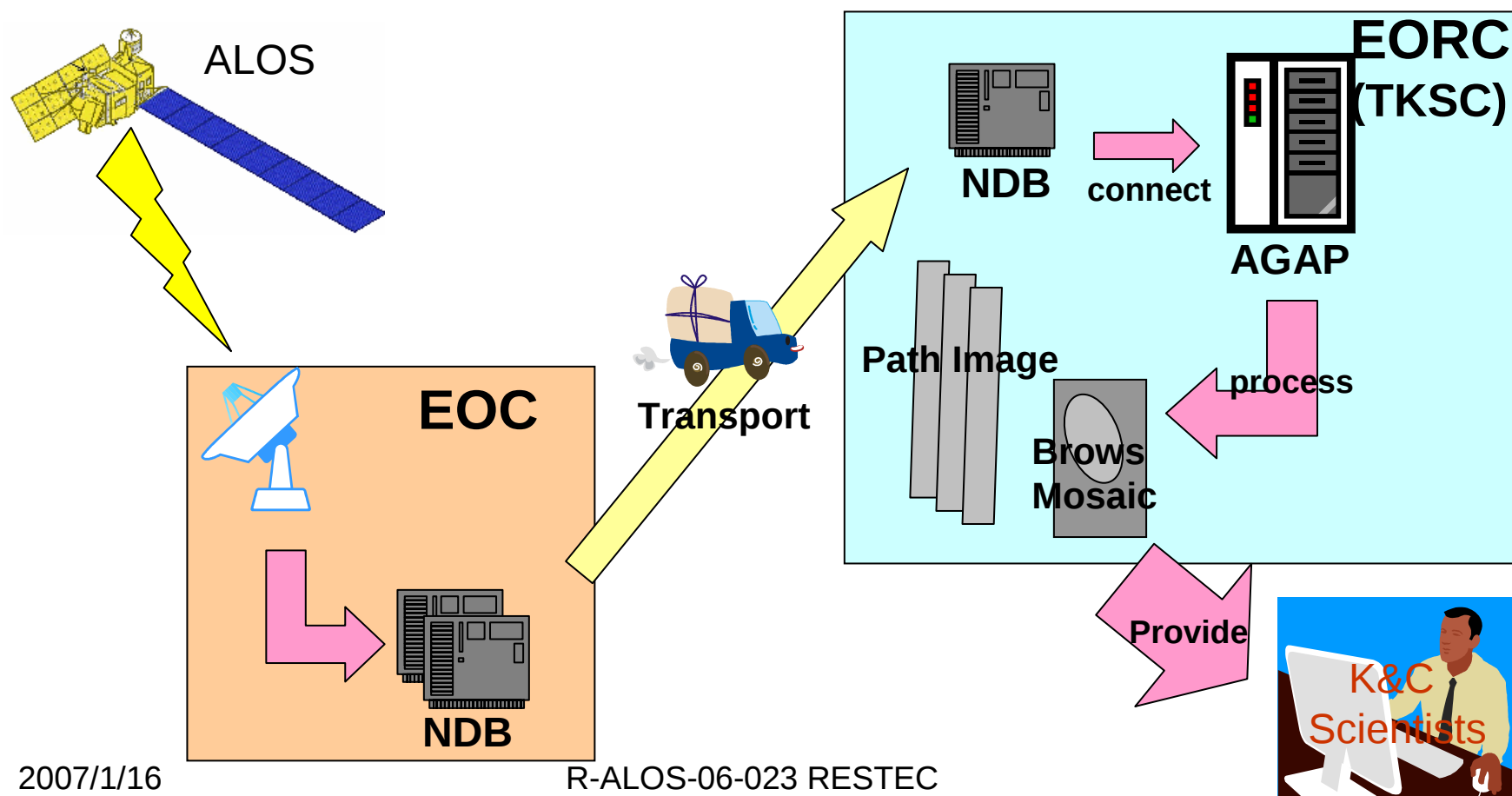


PALSAR K&C data products

January 16, 2007

RESTEC

PALSAR Data Processing System Overview



Outline of Provision data

- Sensor Operation mode
 - ☆ FBS
 - ☆ FBD
 - ☆ WB (Scan SAR)
- Provision Media & Timing
 - ☆ FTP (Whenever the product is made)
 - ☆ SDLT (Whole Half or One cycle)

FBS (Fine Beam Single Pol.)

- Polarization : HH
- Off Nadir Angle: 34.3(deg)
- Product
 - ☆SLP : 50m Slant Range Path image
 - ☆GRP : 50m Ground Range Path Image
 - ☆ORP : 50m Ortho Rectified Path image

FBS Sample Data (RSP404 HH)



FBD (Fine Beam Dual Pol.)

- Polarization : HH&HV
- Off Nadir Angle: 34.3(deg)
- Product
 - ☆SLP : 50m Slant Range Path image
 - ☆GRP : 50m Ground Range Path Image
 - ☆ORP : 50m Ortho Rectified Path image

FBD Sample Data (RSP100 HH)



FBD Sample Data (RSP100 HV)



WB (Wide Beam)

- Polarization : HH
- Scan No. : 5 scans
- Burst Mode: Short (WB1) and Long (WB2)
- Product
 - ☆SLP : 100m Slant Range Path image
 - ☆GRP : 100m Ground Range Path Image

WB Sample Image (RSP430 Short mode 5beam)



Common Data Spec.

- Provision File

- ① Image Date (** = Polarization)

- ☆SLP : sar.Q16_64_**

- ☆GLP : sar.Q16_64_g_range_**

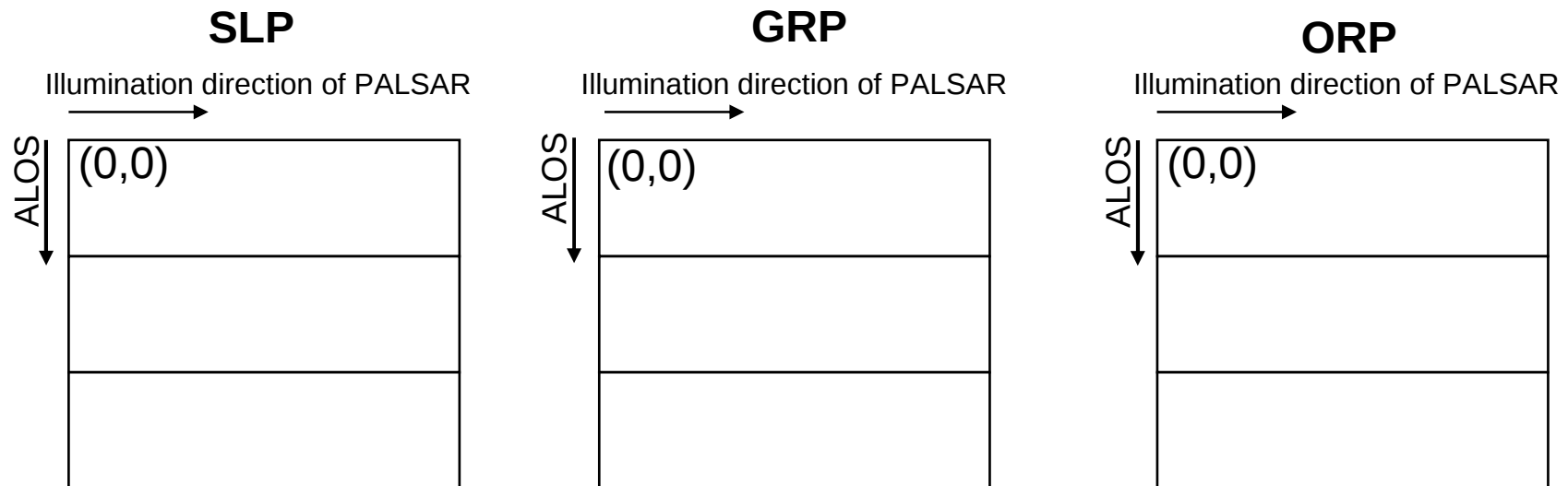
- ☆ORP : sar.Q16_64_ac_g_**_path

- ② Header File

- ③ Thumbnail Image Data

Image Date Format

- Data Format : 16bit unsigned short integer
- Byte Order : Little Endian
- Data meanings : Amplitude



Header File Format

- File Name :
RSP~~AAA~~_BBB~~YYYYMMDD~~mmm~~OOO~~HH~~t~~_p~~ddddnnnsss-zz~~_NNN_HDR
~~AAA~~ : RSP Number, ~~BBB~~ : Processing level of the image.
~~YYYYMMDD~~ : Observation day with UT
~~mmm~~ : Sensor Operation Mode, ~~OOO~~ : Off Nadir Angle
~~HH~~ : Polarization, ~~t~~ : Sub-beam ID
~~pddddnnnsss-zz~~ : Downlink Segment Number
~~NNN~~ : Serial Number
- Data Format : ASCII
- Information
 - ☆ Product Information
 - ☆ Path Information
 - ☆ Processing Information
 - ☆ Geodetic Information
 - ☆ Source DEM Data Information
 - ☆ Format Information
 - ☆ System Information

Thumbnail Image File

- Data Format : 8 bit jpeg Format
- Image Date (** =Polarization)
 - ☆SLP : sar.Q16_64_**.jpg
 - ☆GLP : sar.Q16_64_g_range_**.jpg
 - ☆ORP : sar.Q16_64_ac_g_**_path.jpg

SLP Thumbnail Image (WB1)



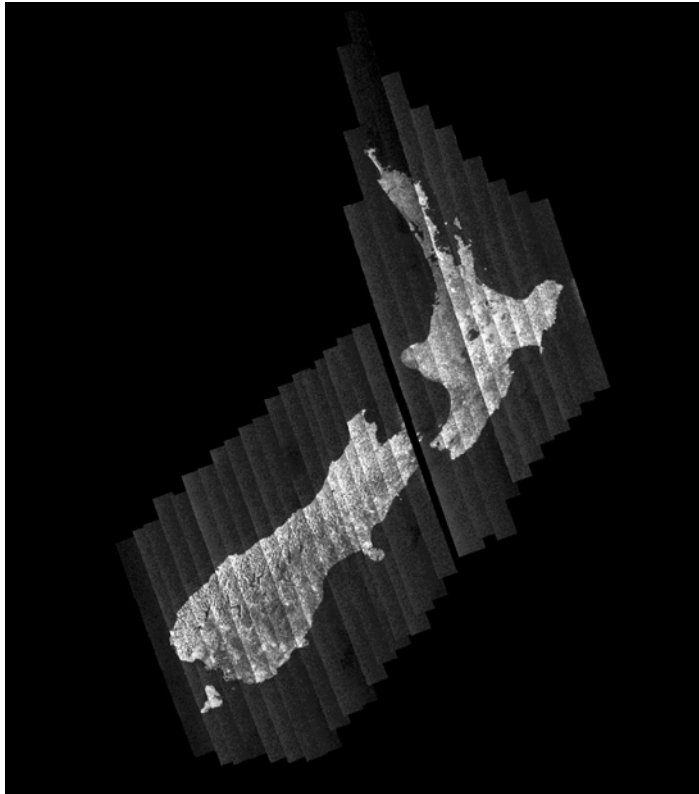
ORP Thumbnail Image (FBS)



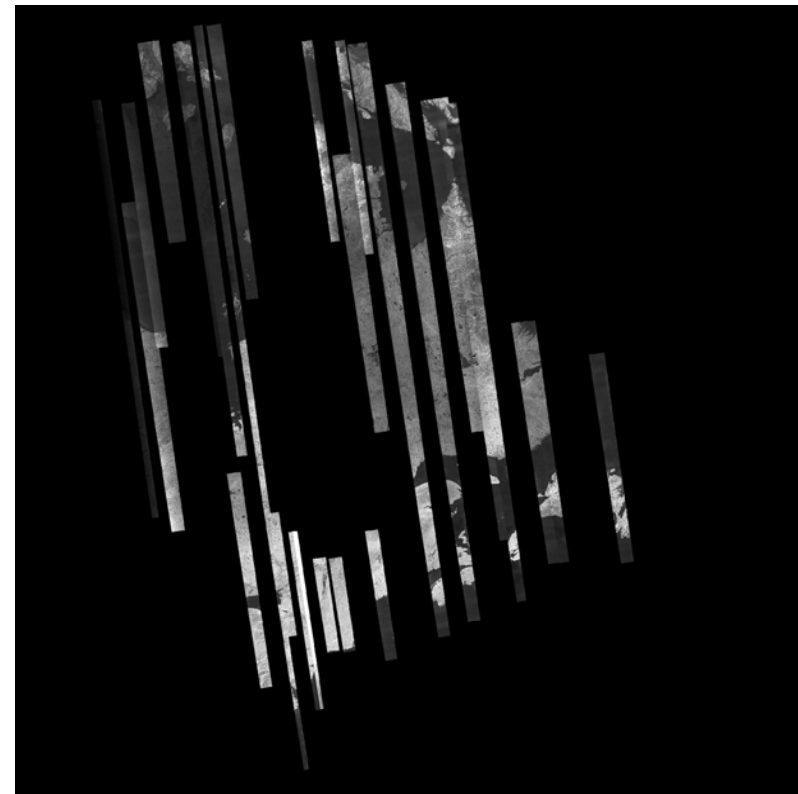
Browse Mosaic

- Process Timing : Each cycle
- Unit of Process : Each Continent
(Europe, Asia, Siberia, North America, South America, Africa, Australia, Antarctica, Islands and Others)
- Mode : FBS 34.3(deg), FBD 34.3(deg), WB1 5beam
- Pixel spacing : 2000m
- Provision: WEB

Sample Browse Mosaic



New Zealand FBS 41.5 HH



North America FBS 34.3 HH

Browse Mosaic Schedule

	...	-2 weeks	-1 weeks	target Week	+1 week	+2 weeks	+3 weeks	+4 weeks	+5 weeks	+6 weeks	+7 weeks	+8 weeks	+9 weeks	+10 weeks
Procedure				target observation day										
Registering Observation Request	▽ before target cycle													
Transmitting Weekly Observation Request	Thursday ▼													
Receiving answer to Observation Request		Thursday ▼												
Receiving Observation Plan			the day before ▼											
Receiving Observation Result				▼ after receiving data										
Buffering PALSAR Level 0 data				▼ after processing to level 0 data										
Copying PALSAR Level 0 data				▼ after buffering										
Transporting a Transportable Device				▼ 2 or 3 times a week (Monday, Wednesday, Friday)										
Processing to Level 1.0 and Browse				↔ 2 days										
					Repeat 1 Cycle (6.5 week)									
Processing to Browse Mosaic											2.5 weeks			
Transmitting the Browse Mosaic to Web Server														▼