

JAXA's new plan for creation of the 4D high resolution L-SAR mosaic dataset for monitoring the forest carbon changes using the JERS-1 to ALOS

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Jan, 20 2009

Product generations on showing the global time dependent high resolution SAR based information

:Slow change of biomass and quick change of deforestation monitoring

Ortho-rectified and slope corrected high resolution global mosaics and the related forestry data (gamma-naught data/classification/biomass)

Resolution: 10m or higher/TBD m for higher product

Latitude: +- 60 degrees

Coordinate: Equal lat/lon

Sensor: JERS-1 SAR/ALOS-PALSAR

Reprocessing all the EORC/JAXA SAR archives

Observation Dates: 1994-1996-1998~2007,2008,2009 (dual seasons)

Goal: 1st phase (March/e/2010), 2nd phase (Aug/e/2010)

Products 1: Mosaic dataset (10m or higher)

Gap reduction: stitching method (Shimada et al., 2002, 2010)

HH®-HV(G)-HH/HV(B)

pixel spacing 10m

original data 2 look slant range data

ortho rectification: interpolation minimized to 1 time

Product2: Forest classification (10m or lower)

- SAR based classification combined with the ground truth data and optical sensor data

- JAXA's algorithm (preesan, Longepe, Isoguchi)

- + E-cognition+Restec people

Product3 : Biomass change

Product4: Deforestation monitoring for Brazil, Indonesia and Africa

Processor: Plan : 600T byte HD and 32 CPUs intel based machine (soon...)

L0 Data: convert all 3000 SDLT -> LT04

Reprocess all the necessity data

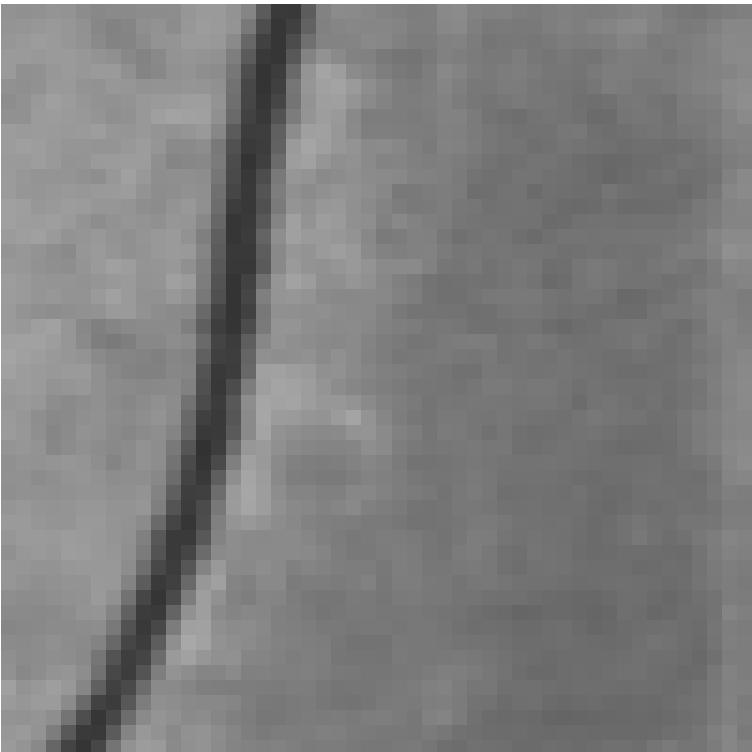
SAR processor: Sigma-SAR (latest version) :

Imaging
Mosaicking

Processing routines are introduced in the JSATR-journal, and prepared for the other journals

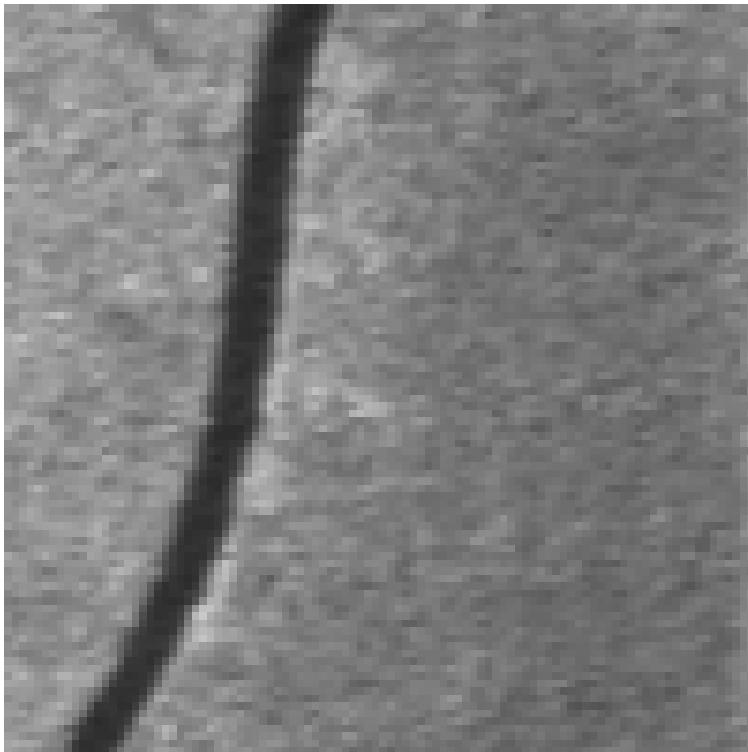
50m

解像度



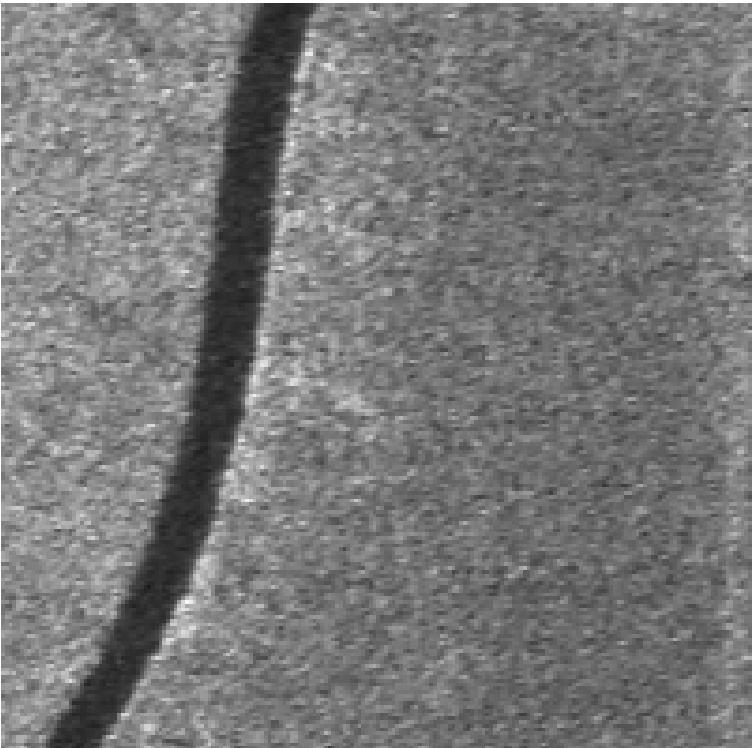
25m

解像度



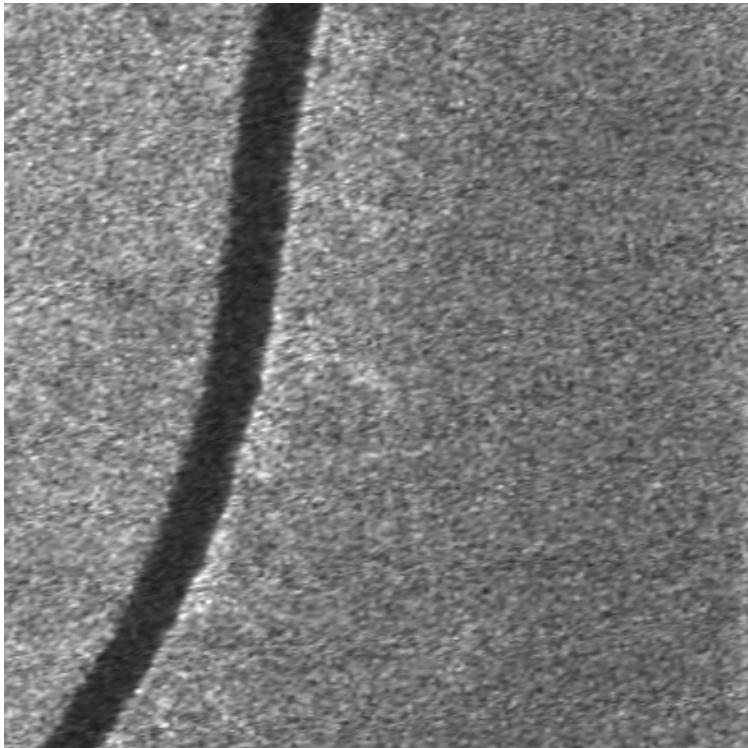
12.5m

解像度



6.25m

解像度

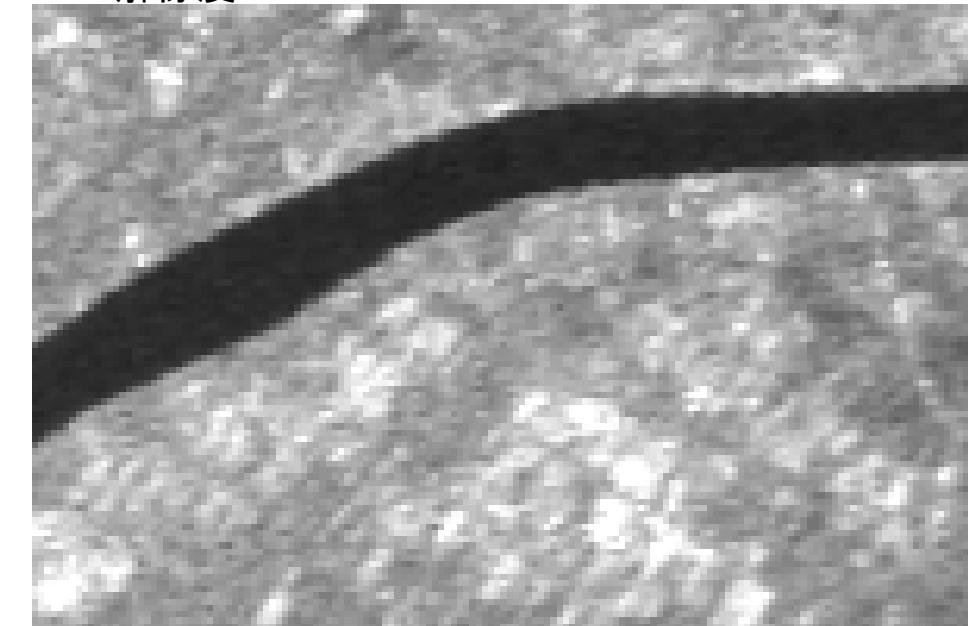


※画像は2.5km四方

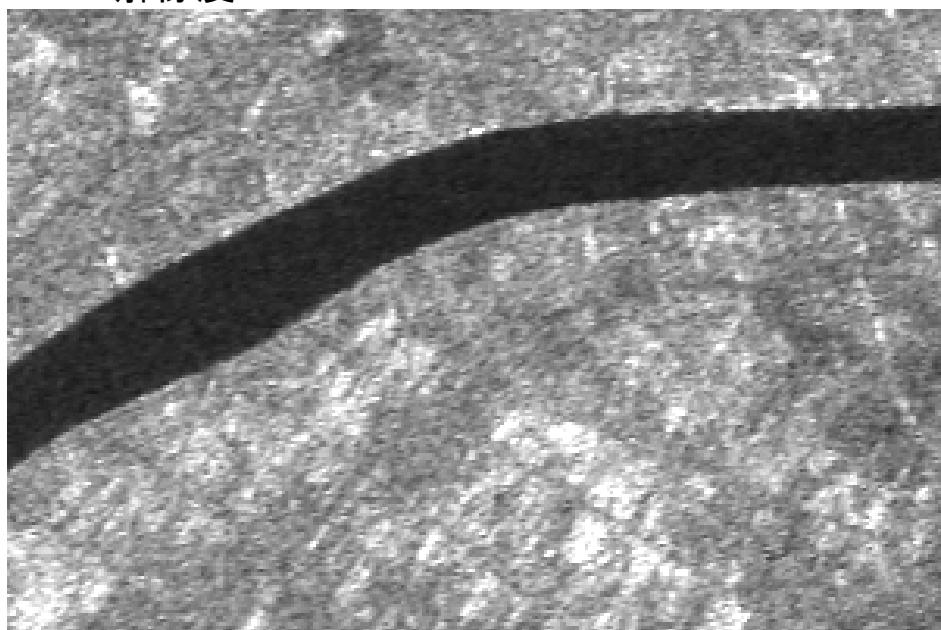
50m解像度



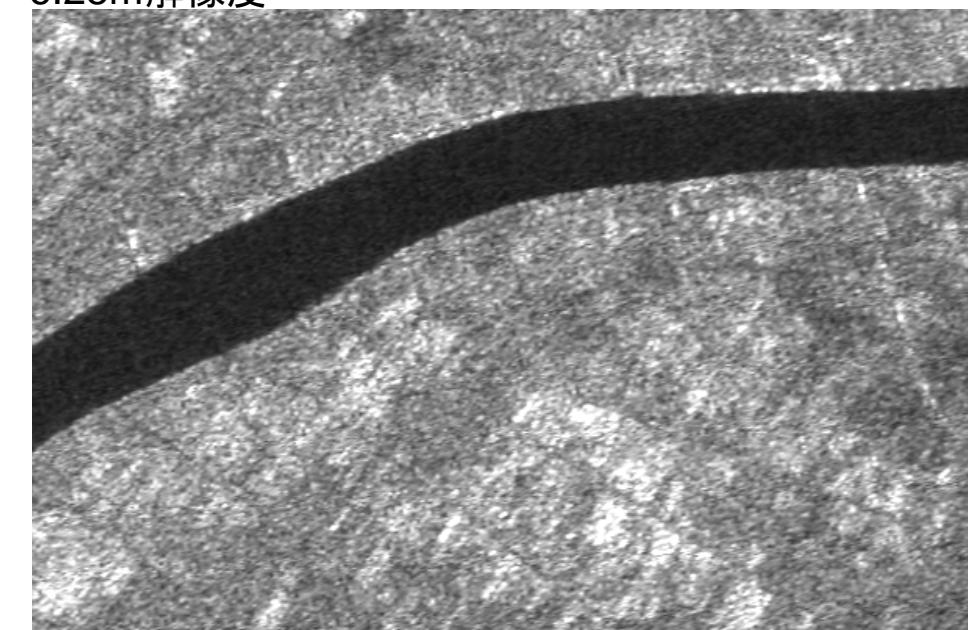
25m解像度



12.5m解像度

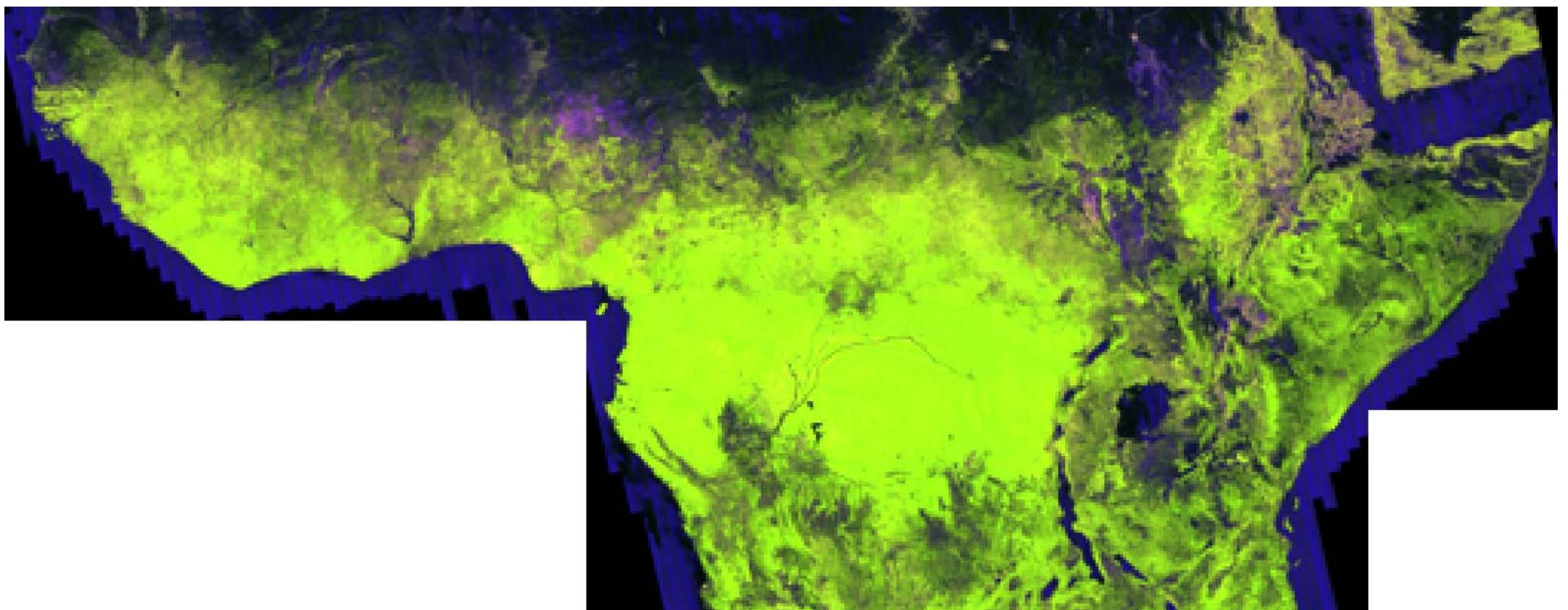


6.25m解像度

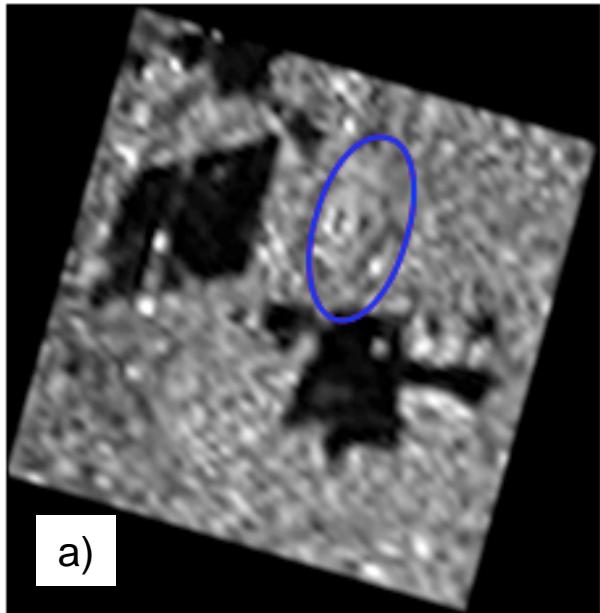


※画像は2.5km × 3.75km四方

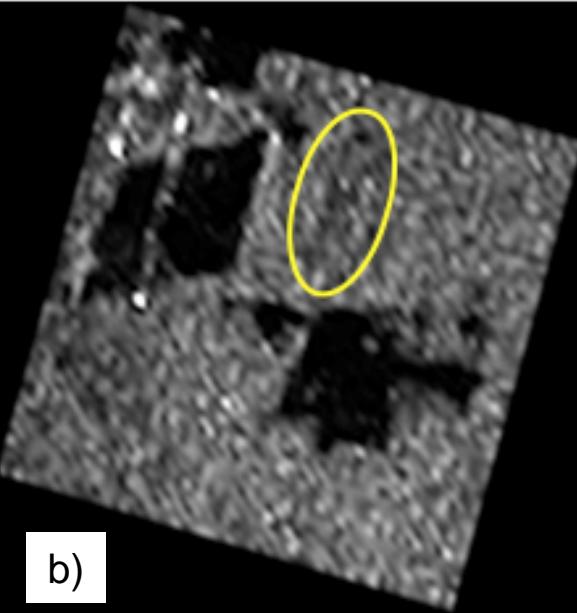




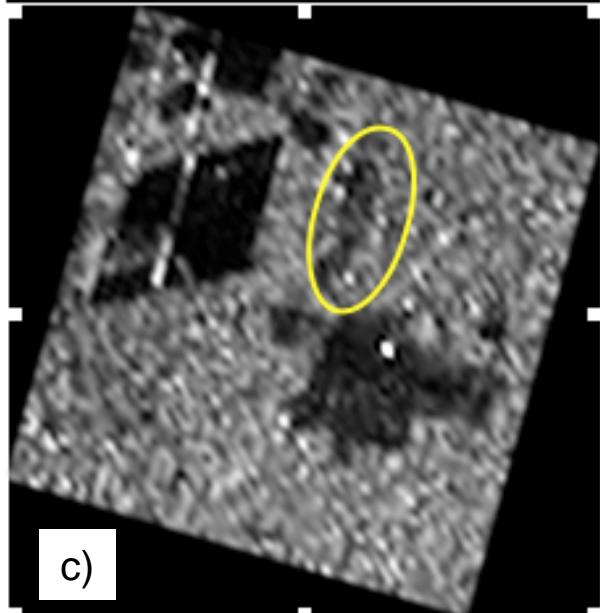
SCANSAR Examples



a)



b)



c)

図 5 左上 RSP406 2008/8/30 WB1、右上 RSP406 2008/10/15 WB1.
左下 RSP406 2008/11/30 WB1、現地図(まるでかこったところが伐採があったところ)..

a)before logging, b) mid of the cutting,c) after cutting.

These images are provided to IBAMA and use for the monitoring the logging.

Tapajos, PARA State, Brazil

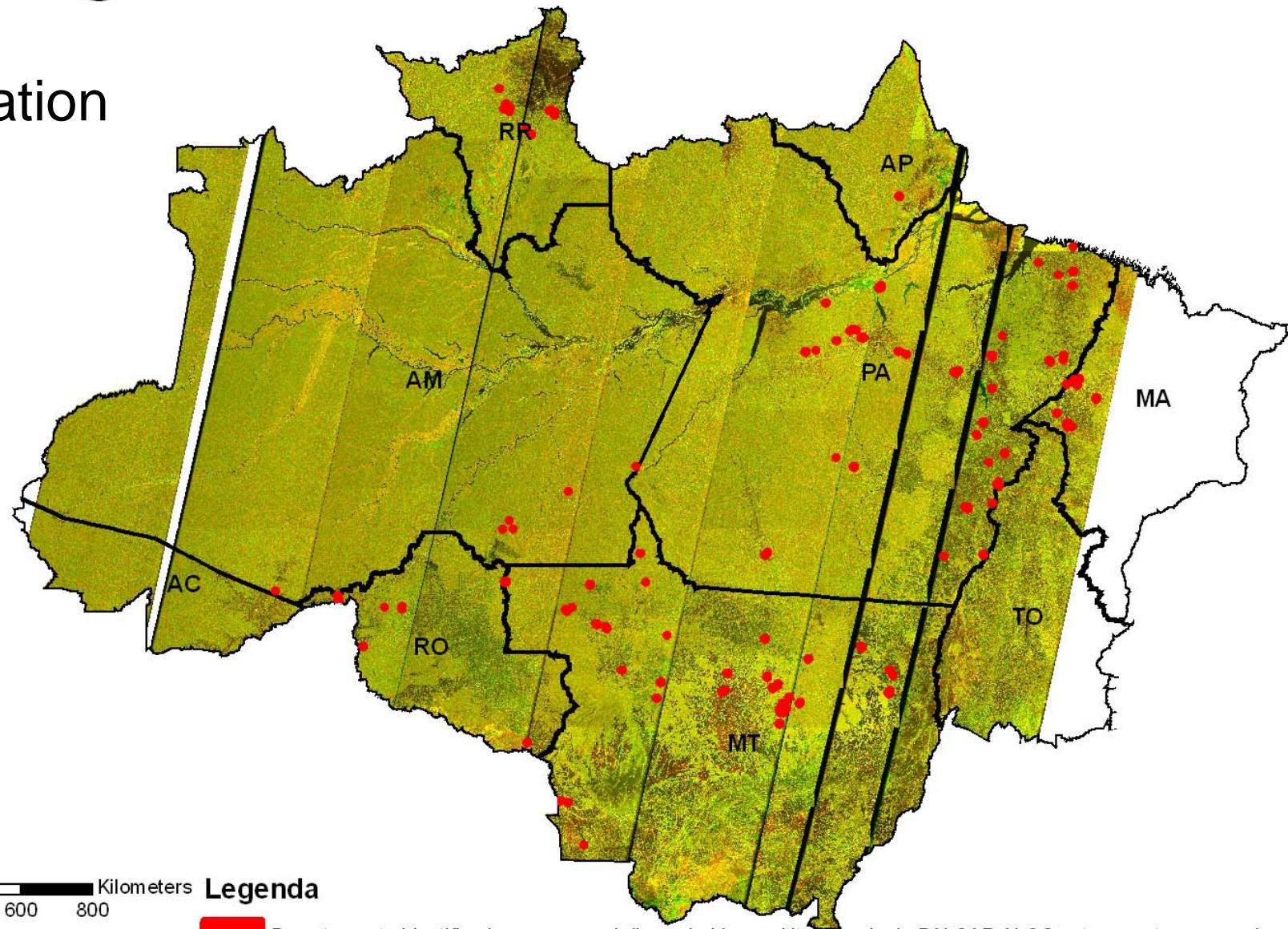


Logging place

INDICAR Ciclo 28 e 30

Agosto 2009 a Novembro 2009

Deforestation
found by
using the
PALSAR



Quick distribution to IBAMA

Amazon Deforest Watch (Santarem) JERS-1 & ALOS

Acquisition Term

1993/6/26

~2007/9/13

JERS-1

- 1993/6/26
- 1997/5/4
- 1997/7/31

ALOS

- 2007/6/13
- 2007/9/13

Lat : S 2° 34'

Lon : W 54° 45'

2007/9/13



