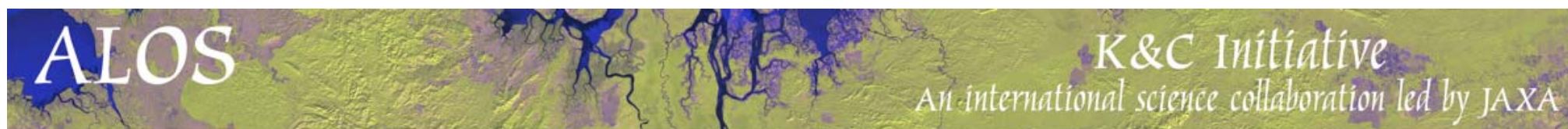


ALOS PALSAR data assimilation at INPE's Brazilian Amazon Deforestation Monitoring Program (PRODES and DETER)

Phase 2 – Extension Plan



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K&C Meeting # 11 - Tsukuba – Jan/2009

Extension Phase Proposal

Evaluate the accuracy of ALOS/PALSAR to detect deforestation in the Brazilian Amazônia

Objective 1:

- Incorporate ALOS-PALSAR K&C imagery into the validation process of DETER deforestation alerts

Study area:

- Brazilian Amazon Region – forested area usually monitored by DETER (excluding “*cerrado*” and other non-forest physiognomies)

Project plan:

- Development of a methodological procedure to generate ScanSAR imagery products useful to deforestation detection.
- Evaluate ALOS-PALSAR K&C data as a DETER validation data considering seasonal variability of deforestation and forest backscatter
- Enlarge DETER data validation using K&C imagery



Extension Phase Proposal

Evaluate the accuracy of ALOS/PALSAR to detect deforestation in the Brazilian Amazônia

Definition of deliverables

- Image processing methodology – radiometry and geometry
- Alos-Palsar K&C Reference Data - ScanSAR mosaic for Amazônia – 2008 (based on UTM tiles)
- Methodology for DETER polygons validation based on Alos-Palsar K&C
- Operational use of Alos-Palsar K&C for DETER validation

Data requirements

- ScanSAR

Acquisition strategy requirements

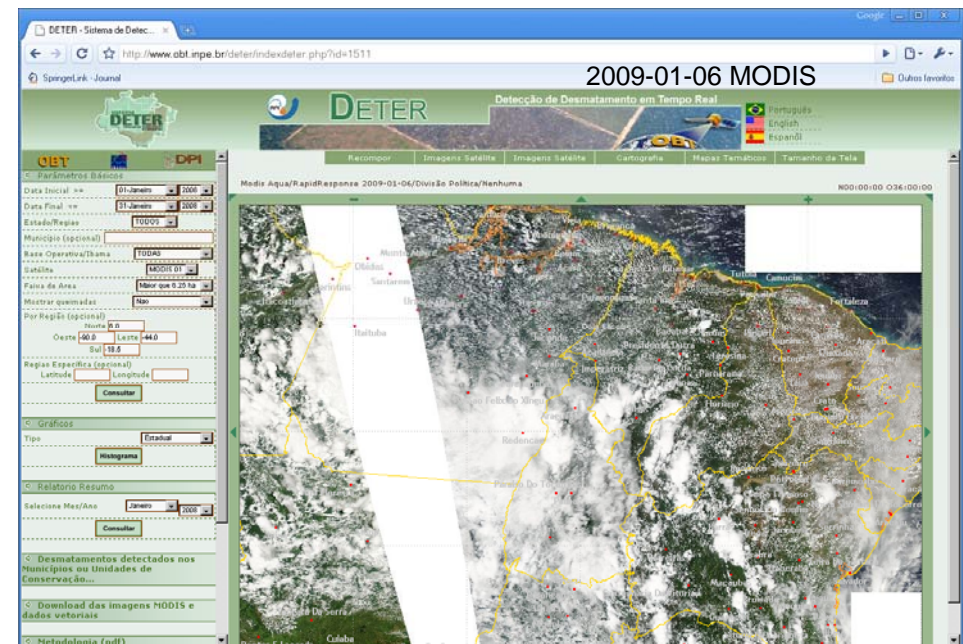
- Cycles 25-30

Processing requirements

- *Slant range*

Spatial resolution; processing level

- 50 m



Extension Phase Proposal

Evaluate the accuracy of ALOS/PALSAR to detect deforestation in the Brazilian Amazônia

Objective 2:

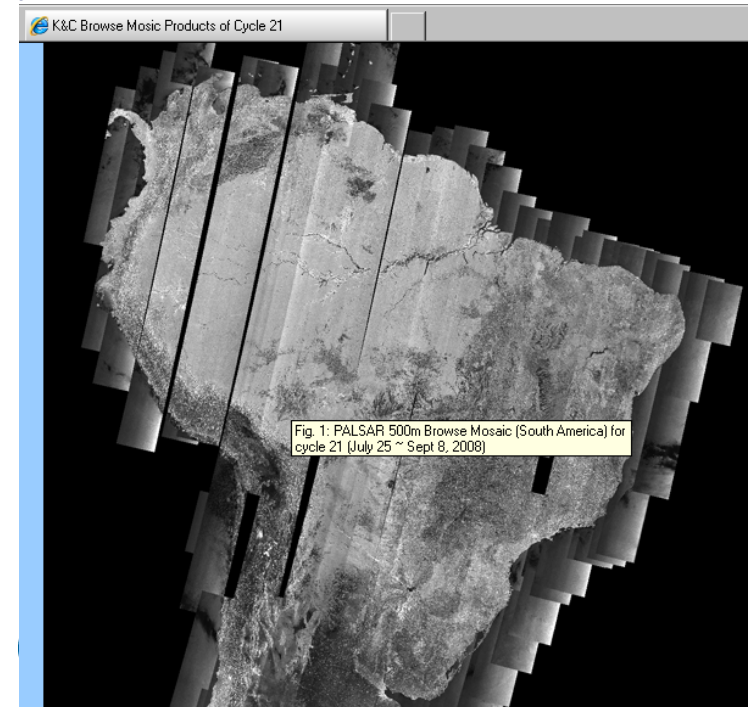
- ALOS-PALSAR K&C imagery assimilation into DETER deforestation alerts over clouded areas

Study area:

- Brazilian Amazônia – forested area usually monitored by DETER

Project plan:

- Methodological procedure to generate ScanSAR imagery products useful to deforestation mapping. – Multi-temporal approach
- Evaluate ALOS-PALSAR K&C deforestation mapping considering DETER as validation data
- Extend DETER alert over cloud covered areas using K&C imagery



Extension Phase Proposal

Evaluate the accuracy of ALOS/PALSAR to detect deforestation in the Brazilian Amazônia

Definition of deliverables

- Image processing methodology – multi-temporal approach to deforestation mapping
- Mapping accuracy – field work and ancillary data
- Operational use of Alos-Palsar K&C to detect deforestation, complementary to DETER alerts

Data requirements

- ScanSAR

Acquisition strategy requirements

- cycles 25-30

Processing requirements

- *Slant range*

Spatial resolution; processing level

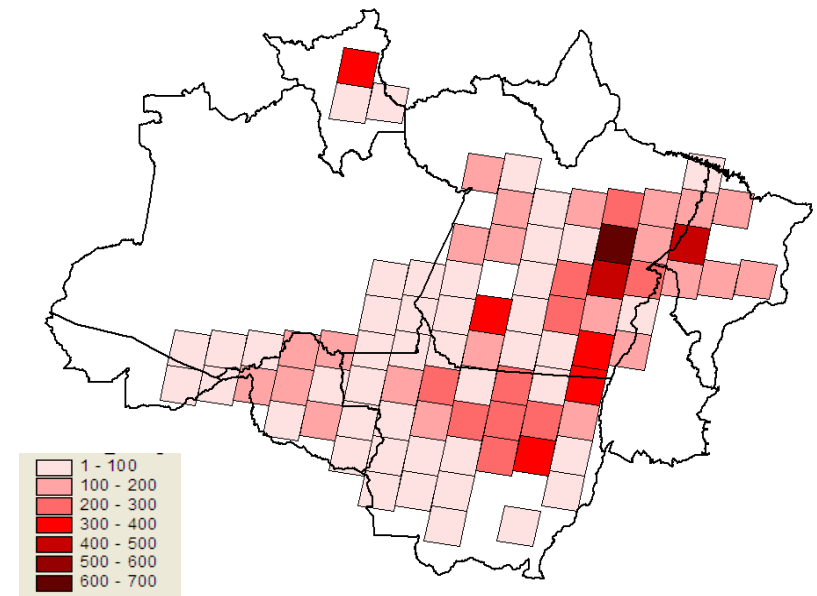
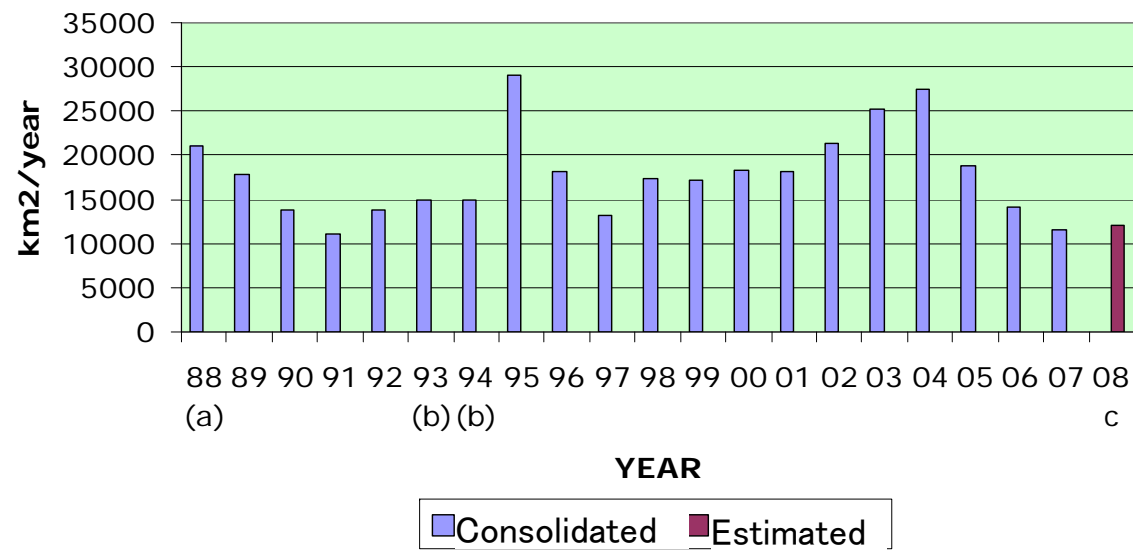
- 50 m



Deforestation

2008

Annual Deforestation Rate - Amazônia Legal



Thank you!

INPE sincerely thanks JAXA for the support and continued opportunity to develop very relevant SAR application project for the Brazilian Satellite Based Amazon Monitoring Program