All Working Groups

Issues to address for each proposed product

Scientific relevance
Target end user
Organisational structure
- Lead organisation(s)
- additional collaborators
- links to user groups

Requirements for realisation
- funding (source?)
- MoU's
- anticipated problems

Level of ambition
- global vs. regional
- one-time vs. repetitive (frequency?)
- demonstration vs. operational product

Technical issues
- operational or R/D
- utility of existing JERS data
- importance of SAR/optical synergy
- min. system req (pol., inc.angl., #DT, spatial & radiom. resolution, etc.)
- adequacy of current obs. plan

Product validation
- methodology
- in situ networks?

Data flow
- from data take to final product
- data volumes foreseen
- bottlenecks
- proc. level from NASDA

Time schedule

Key words: Regianal scale appl.
Terrestrial Carbon
Environmental Treaties
GOFC/TCO/GTOS etc.

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Working Group compositions

WG #1 - Boreal and Temperate ARD and wetlands
Chris Schmullius (WG leader)
Martti Hallikainen
Alberto Moreira
Craig Dobson
Yrjö Rauste
Konstantin Olshofsky
Maurizio Santorio
Leif Eriksson

WG #2 - Tropical and Arid products
Richard Lucas (WG leader)
Philippe Paillou
Reiner Zimmermann
Paul Reichert
Dirk Hoekman
Ruandha Sugardiman
Manabu Watanabe

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Anticipated products

FSU (Chris Schmullius)
- Siberian biomass (?)
- Siberian CH4 sources

UW@A/UNSW (Richard Lucas)
- Mangrove Watch
- N. Queensland biomass

JRC (Yrjö Rauste on behalf of FDG)
- Eurasia & Central Africa
  - PALSAR mosaics
  - Forest biophysical parameters
  - Wetlands extent

OAB (Philippe Paillou)
- Pan Saharan PALSAR mosaics
- Sub-surface hydrology maps

CESBIO (Thuy Le Toan)
- Biomass retrieval algoritms

FAO, MPI-BGC - End Users

DLR, Helsinki-U, WAU, VTT - collaborating partners?

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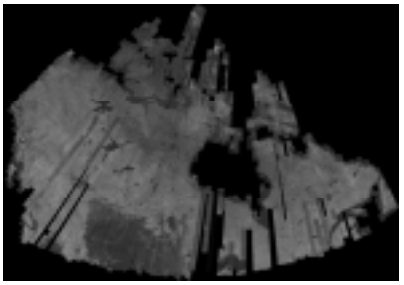
Products defined at K&C Science Panel meeting #2 @ UCSB

PALSAR image mosaics

Lead scientists
Masanobu Shimada, NASDA EORC
Bruce Chapman, JPL

Utility
- Stand-alone product (GRFM/GBFM type)
- Intermediate K&C product (e.g. for flood mapping)
- Feed-back on acquisition plan success rate



Features
- Fine resolution (100 m or better)
- Global coverage
- Automatic generation
- DEM corrected

Best-case output
- 4 coverages/year
  - 2x Dual-pol
  - 1x HH
  - 1x ScanSAR

Minimum output
- Low resolution (~1km?) mosaics

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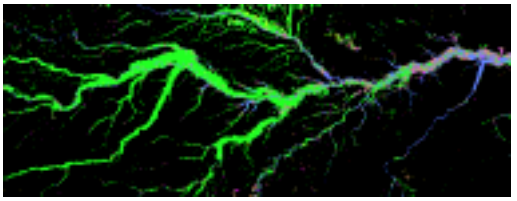
Products defined at K&C Science Panel meeting #2 @ UCSB

Wetlands mapping

Lead scientists
Laura Hess, UCSB
Ake Rosenqvist, NASDA EORC

Product types
- Wetlands spatial extent
- Inundation seasonality
- Vegetation structure



Sensor
- PALSAR ScanSAR (5-beam HH)

Geographical coverage
Tropical wetlands
- Amazon basin (prototype)
- Pantanal, Bananal, Congo, Mekong, Kakadu, TBD

Intput data requirements
- 100 m ScanSAR mosaics time series
(9 coverages during 13 months)

Methodology
- GRFM activity

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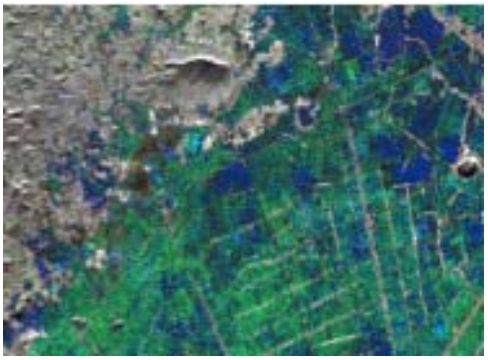
Products defined at K&C Science Panel meeting #2 @ UCSB

Mapping of irrigated rice

Lead scientist
Bill Salas, UNH

Product type
- (Irrigated) rice paddy spatial extent



Sensor
- PALSAR ScanSAR (5-beam HH)
- GLI 250m

Geographical coverage
- China
- SE-Asia
- India

Intput data requirements
- 100 m ScanSAR mosaics time series
(9 coverages during 13 months)

Methodology
- operational (UNH)

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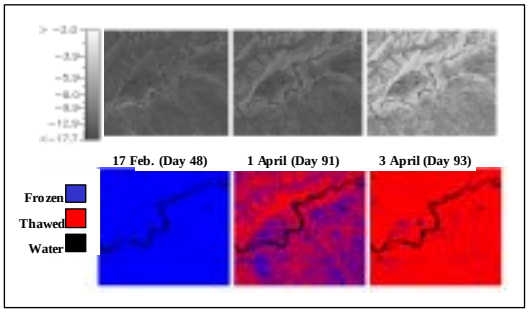
Products defined at K&C Science Panel meeting #2 @ UCSB

Boreal products

Lead scientist
Kyle McDonald, JPL

Product type
- Process monitoring (freeze/thaw)
- Boreal wetlands mapping
- Biomass



Sensor
- PALSAR ScanSAR (5-beam HH)
- PALSAR Dual-pol HH+HV

Geographical coverage
- Alaska (prototype)
- Pan-boreal (TBD)

Intput data requirements
- 100 m ScanSAR time series (9 coverages during 13 months)

Methodology
- operational (UNH)

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Products defined at K&C Science Panel meeting #2 @ UCSB

GLI-250m products

Lead scientist
Ryotaro Tateishi, Chiba Univ.
NASDA EORC

Product type
- Land Cover Classification
- Annual global (6-ch) mosaics (contemporary in time with PALSAR mosaics)

Sensor
- ADEOS-II GLI 250m

Geographical coverage
- Eurasia (LCC - year 1)
- Global

Intput data requirements
- 16-day cloud-free composites during veg. season (LCC)
- 16-day cloud-free composites during ALOS acq. window

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Products defined at K&C Science Panel meeting #2 @ UCSB

Forest change and biomass products

Lead scientist - lead organisation

TBD

Product type

- Deforestation - identification & spatial extent (x,y; km2/yr)
- Above-ground biomass accumulation (gC/m2/yr)
- Thinning/biomass removal (gC/m2/yr)
- Biomass inventory (below σ^0 saturation)

Sensor

- PALSAR Dual-pol HH+HV
- (GLI)

Geographical coverage

- Global - TBD

Intput data requirements

- Annual time series
- HV channel

- zero-base line
- Veg-base line (1.5 km)

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Working Group compositions

WG #2 - PALSAR mosaics
Bruce Chapman (WG leader)
Masanobu Shimada

WG #3 - Forest & biomass change
Craig Dobson (WG leader)
Josef Cihlar
Tony Milne
Paul Siqueira

WG #4 - Wetlands & rice paddy
Laura Hess (WG leader)
Bill Salas
Doug Alsdorf
John Melack

WG #5 - Boreal products
Kyle McDonald (WG leader)
Larry Smith
J. C. Shi

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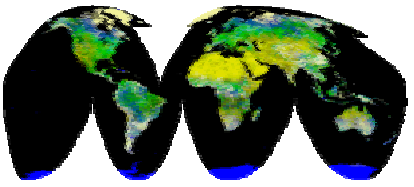
Working Group #1
GLI products

Potential products
- 250 m Land Cover Classification [TCO req.]
- 250 m continuous fields [TCO req.]
- LAI, NPP, albedo??
- Image products
  - cloud-free composites
  - image mosaics
- 1 km products?
- map projections



IGBP-DIS NOAA AVHRR 1 km LCC

Synergy with MODIS-1/2
- Strengths of MODIS and GLI
- Avoid duplication

Tentative lead organisations
- UMD
- UMT
- Chiba Univ.
- ...

Time schedule
- ADEOS-II launch: Nov. 2002

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Working Group #2
PALSAR mosaics products

Special issues
- NASDA goal: at least one global coverage

- Over which areas can repetitive mosaics be justified?
- Full resolution vs. ScanSAR
- Fine resolution mosaic pixel spacing: 100 m - or finer?
- DEM correction (SRTM? PRISM?)
- Geometric accuracy and validation

Tentative lead organisations
- NASDA EORC
- JPL
- JRC (Siberia, Africa)
- ...

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Working Group #3
Forest change and biomass products

Forest change products
- detection of change
- spatial quantification

Biomass products
- (incremental) biomass change
- stock inventory (boreal areas?)

- Acquisitions - annual
- Product generation
  - global @ 5 yrs(?)
  - hotspots - annual(?)

Note GOFC/TCO product requirements

Tentative lead organisation(s)
???

No partner - no product!

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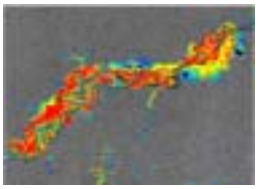
Working Group #5
Wetlands and rice paddy

Tentative lead organisation(s)
- UCSB

Wetlands
- wetlands delineation - global?
- flood duration mapping - regional (which?)
- ADEOS-II/POLDER for wetlands detection

Irrigated rice
- Focus areas?
- active acreage
- # crop cycles



- More emphasis on ScanSAR?
- Adequacy of current acq. plan

Note Ramsar wetlands treaty

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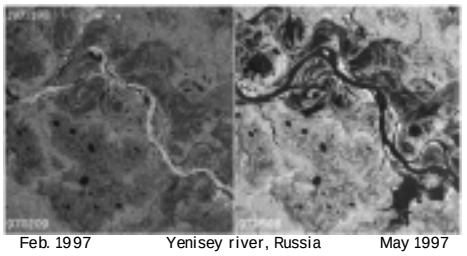
Working Group #4
Boreal products

Special issues
- Freeze/thaw
- Boreal wetlands
- ADEOS-II POLDER for wetlands detection
- Low biomass forest

Sensors:
- PALSAR
- GLI

Tentative lead organisations
- NASA JPL
- UMT?



Feb. 1997 Yenisey river, Russia May 1997

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