

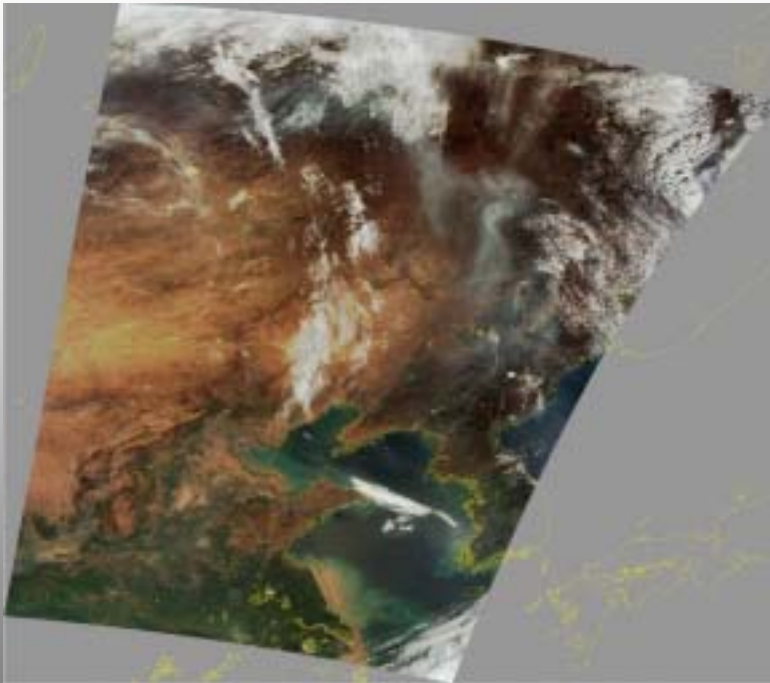
## Data Acquisition Strategy for ADEOS-II GLI 250 m

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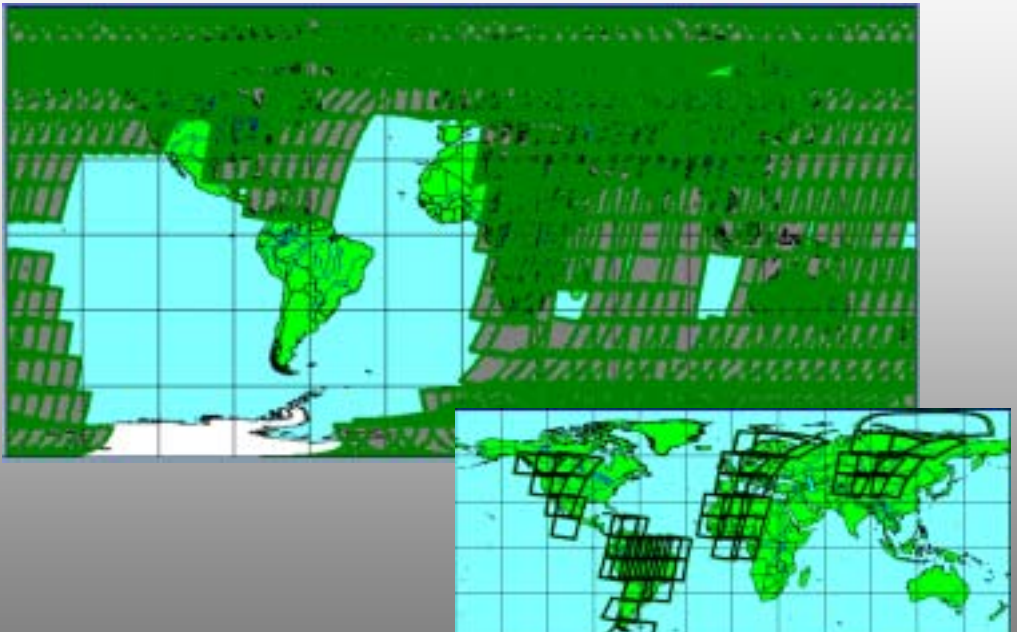
Kyoto & Carbon Initiative - 4th Science Advisory Panel meeting  
NASDA Earth Observation Research Center  
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## ADEOS-II (Midori-II) Launched Dec. 14, 2002 (H-IIA)



- Global Imager (GLI)
- 6 channels @ 250 m
- (B, G, R, NIR, MIR\*2)
- 30 channels @ 1 km
- 1600 km swath
- 4-day repeat

GLI regional coverage  
using DRTS (E 90 °) and direct down-link (DT) to the  
4 main ground stations (EOC, ASF, KRNS & WFF)



- Global coverage (land & water): 741 nodes
- Land only: ~335 nodes
- "K&C Land" (excl. N&S Poles and isolated islands): 242 nodes

- All land areas covered;
- Acquisition time window latitude dependent
  - arctic/antarctic: summer solstice +/- 1 month;
  - boreal: April 1 - September 30;
  - temperate/tropical: all year.
- Acquisition priority for a scene is assigned sequentially within each pass, using a rotating scheme (effect of tilt-mode **not** yet taken into account);
- ODR use max 1 scene/orbit, in non-DT/DRTS areas;



The effect of sun glint





K&C Observation Strategy v.0.2 (@100% success rate case):

- Average data flow: ~41 scenes/day
- Peak flow: ~57 scenes/day

(MMO background mission Feb-02: ~82 scenes/day)

Current capacity for 250 m Level 1B processing at EOC:  
~30 scenes/day

Required capacity: 45/60 scenes/day for average/peak flow.

Current capacity for higher level (geom-corr, atm-corr, composit) processing at EORC: <5 scenes/day -> **Bottle-neck!**

Improved EORC processing capacity under consideration.

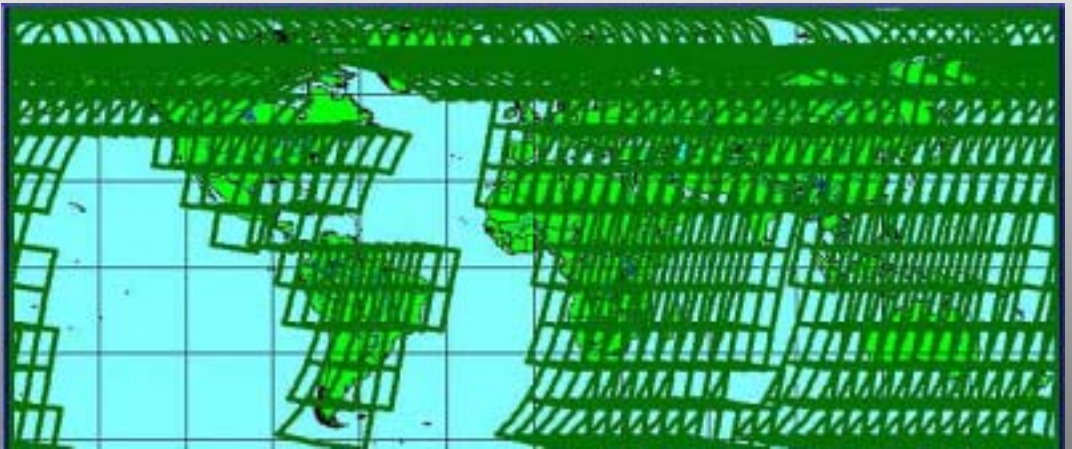
## Operational results

GLI in operational mode since April 15, 2003

First operational observation (programming) results:  
12 cycles (April 10 - May 27)

K&C Land area: 242 nodes

192 scenes programmed (DT: 151/178; ODR: 41/57)



## Acquisition plan - Time schedule

### June'03

v.0.2 obs plan revision -> K&C v.0.3

- Include additional obs. requests from GLI PI's and K&C collaborators
- Modify ODR mask
- Modify priority settings
- Consider tilt-mode bias effects

### Autumn'03

- K&C v.0.3 operations evaluation
- v.0.3 plan revision -> K&C v.1.0 (FINAL)

### DRTS direct down-link (4-day repeat):

Success rate:

- 59/151 (0.39): >75%
- 36/151 (0.24): 50-75%
- 16/151 (0.10): 25-50%
- 22/151 (0.15): 1-25%
- 18/151 (0.12): 0%

Low succes rate DRTS nodes will be considered for ODR.

### ODR (8-12 day repeat):

Success rate:

- 27/41 (0.66): >75%
- 11/41 (0.27): 50-75%
- 3/41 (0.07): 25-50%

Good ODR succes rate!

## NASDA EOC

- Level 1B processing (EOC standard product)

## NASDA EORC

- Geometric (DEM) correction;
- **16-day** compositing (cloud elimination);
- Atmospheric correction (Rayleigh + O<sup>3</sup>)

## NASDA EORC/Chiba Univ.

- Regional 16-day mosaic assembly

