



GLI Workshop Nov. 2000, Kanazawa

GLI Science Activities Dec 1999-Nov 2000

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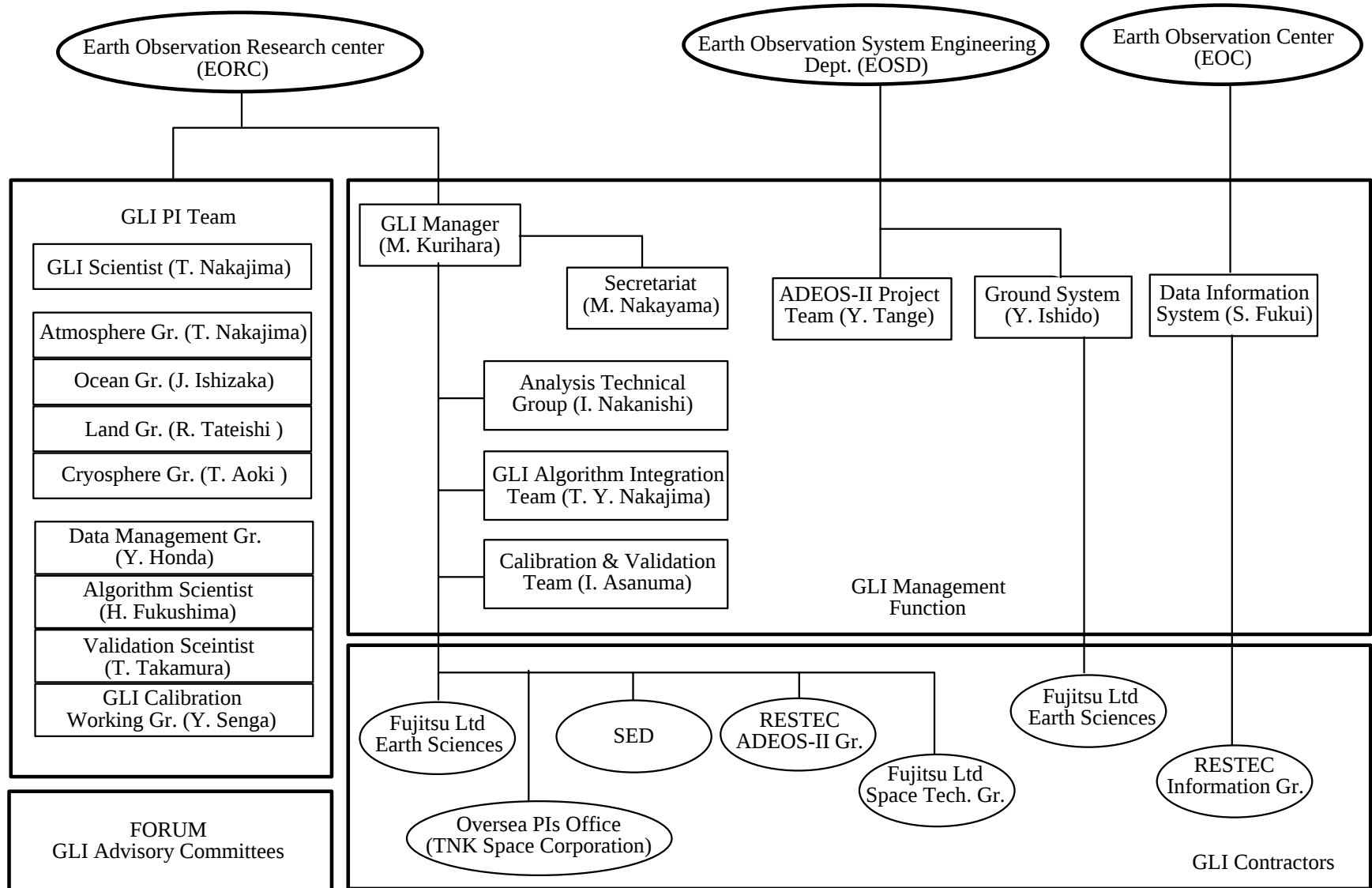
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Updates of GLI project



- Organization updated
- L2 algorithm shipped to EOC in Sept. 2000
- Validation system under development
- Ocean color channel saturation: report and action
- Large budget cut: to 70% of FY2000
- GLI sensor re-test in Dec. 2000- March 2000
 - Review of the test plan by cal. WG in Nov.

GLI Project update



Science team activities



- Algorithm development
 - Phase-II has started
 - Phase-II started (27 PIs), validation and earth science PIs (30PIs)
 - GAIT has implemented PI algorithms into operation system
 - Standard products: 7 A, 3 O, 3 L, 1 C
 - GSS (L1 simulator) and GSD expanded
 - L0 simulator project
- Leader meetings, Data management WG meetings, PFT studies
- L3 products definition
- Simulator development: GSS, L1
- Limit in 250 m channel data: user requirement for ground receivers

GLI Products



- Scene: 26scene/path, 57path/4day
- L0 : 46GB/day 、 GLI original data (bit stream 12 or 13 bit)
- L1A : 35GB/day
- L1B : 53GB/day
- L2A-AO: 202MB/path, 4 pixel/line
- L2A-LC: 45GB/16days

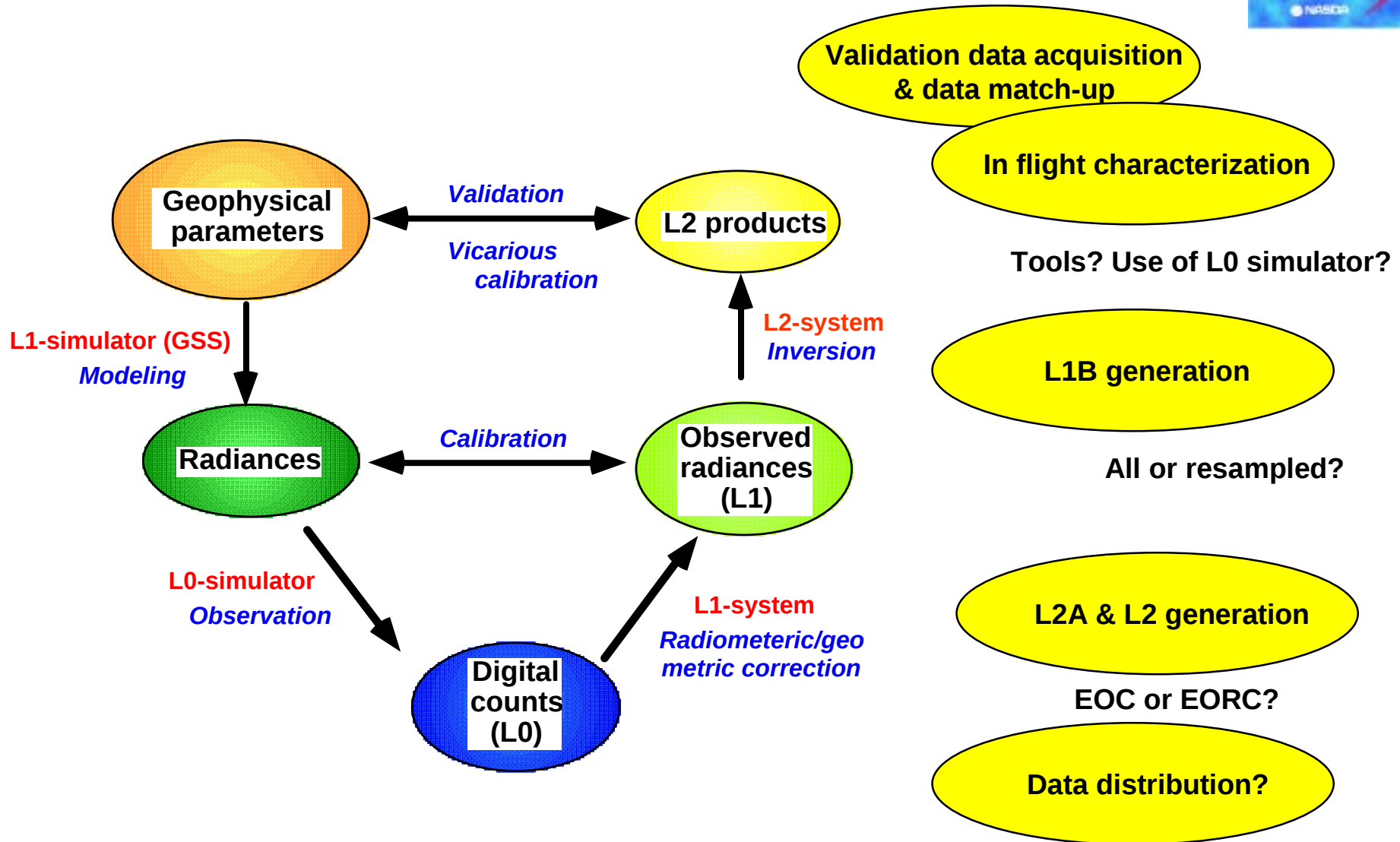
- Standard Products
- Atmosphere:
 - Cloud flag, type, fraction
 - optical thickness, effective particle radius, water path
 - Cloud top height, temperature
 - Aerosol optical thickness
- Ocean: Atmospheric correction radiances, In-water particles, SST
- Land: Atmospheric correction radiances, Precise geolocation, Vegetation index
- Cryosphere: Snow grain size/impurities



Actions for the budget cutback

- **Budget reduces to 70% of FY2000**
- **Define the minimum activity for FY2001**
 - **PI fund cutback**
 - **Validation activities: maintain, but need to define the minimum activities: AVIRIS issue in FY2002**
 - **L2 algorithm implementation: want to maintain personnel; Update issue in FY2002**
 - **More rationale and description of the project**
- **Increase the efficiency of team activities**
 - **Minimize duplicated activities among teams**
 - **Define tasks of each team**

GLI Product Generation Flow

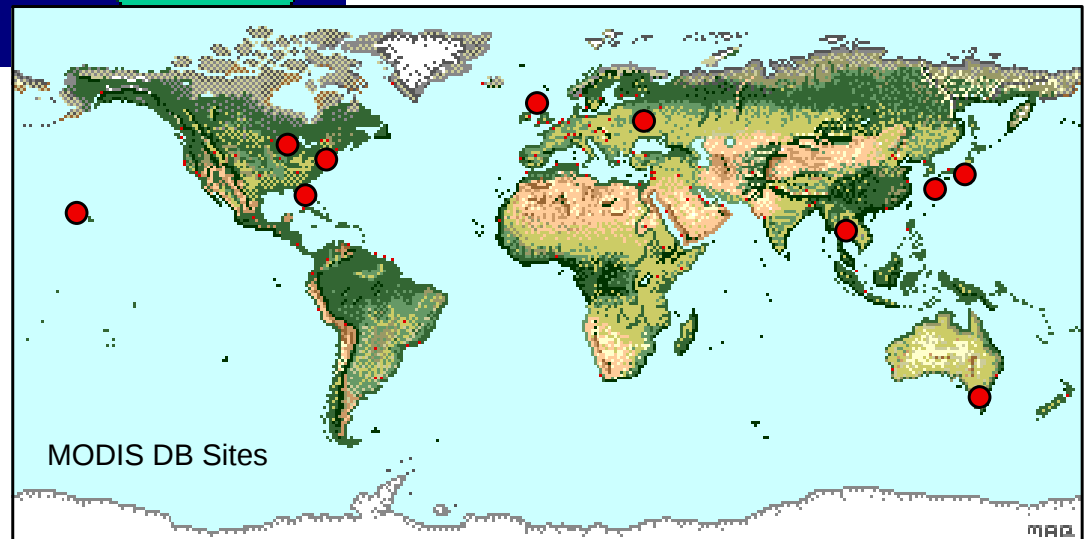
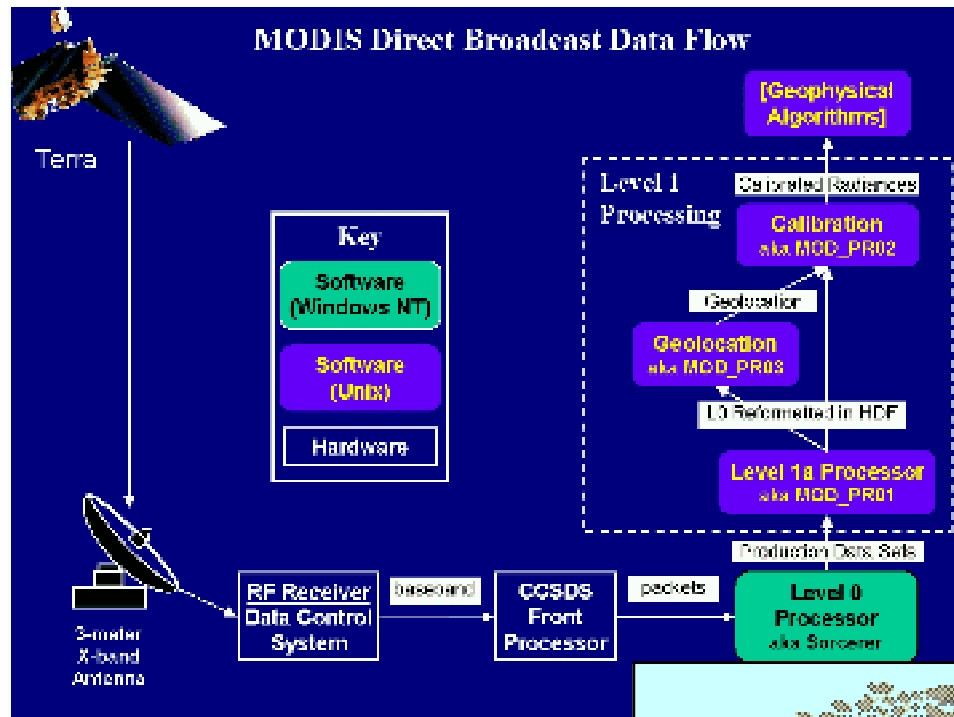


Need for enhancement of ground segment

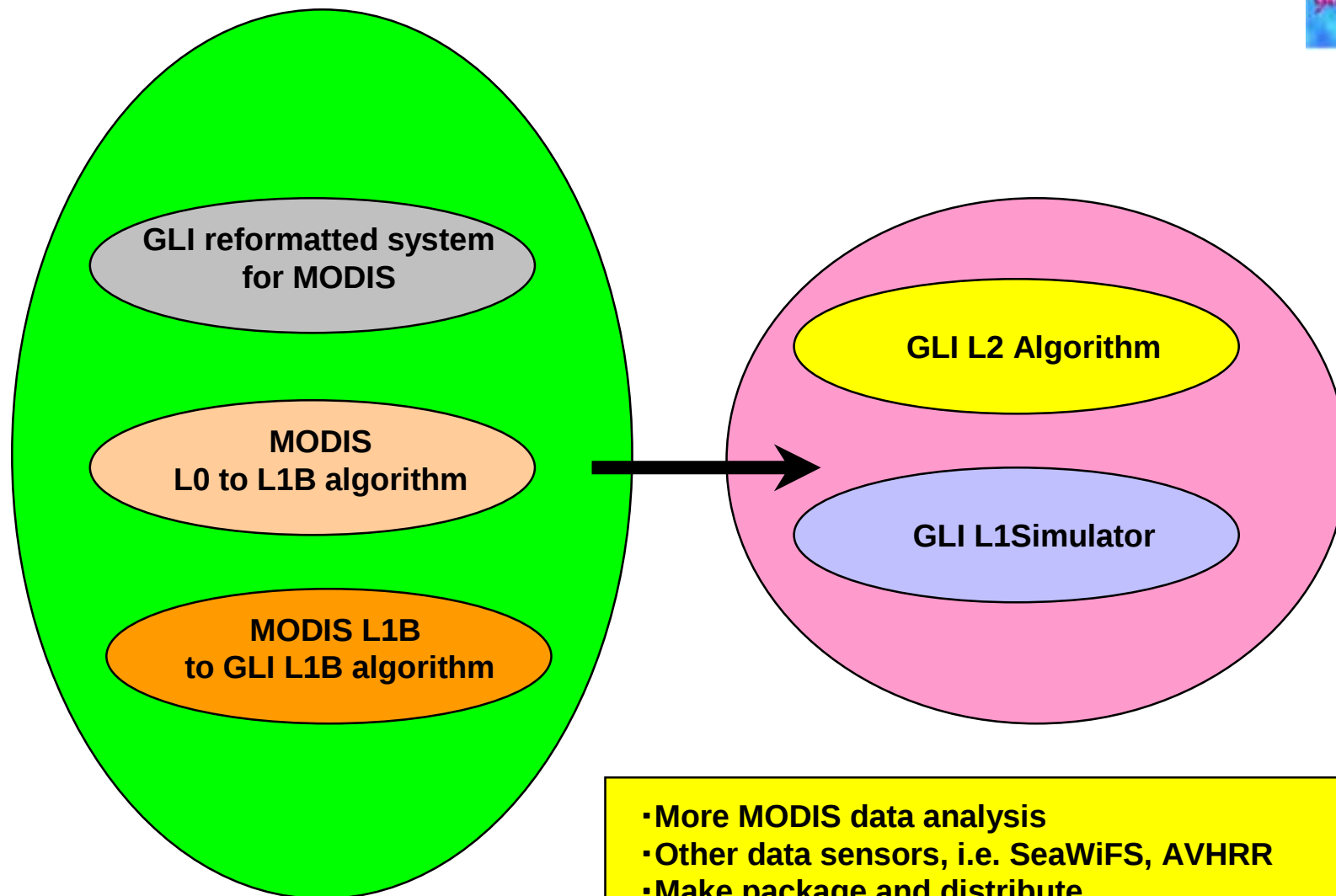


- Need receiving stations for 250m data
 - No compatibility to the existing systems
 - No good enterprise policy of NASDA
e.g., Sea Space Corp.
- MODIS receiving stations increasing
- NASA EOS DAAC do not process all the data

MODIS Direct Broadcasting System



Some strategy



- More MODIS data analysis
- Other data sensors, i.e. SeaWiFS, AVHRR
- Make package and distribute

Questions from the GLI Scientist (Dec. 1999)



- **Atmosphere-G**
 - What is the cloud validation scheme?
 - Answer: VIS+NIR & Microwave surface measurements
- **Ocean-G**
 - How to combine in- and above- water measurements?
 - Both measurements are required; need more study for above-water instrumentation
- **Land-G**
 - How to upscale the validation results? Site distribution?
 - Sites covering various vegetation types are studied
- **Cryosphere-G**
 - Algorithm flow OK?
 - Snow grain size and impurity are standard products; ice cover area etc. are research products

GLI workshop summary (Dec. 1999)



■ Hardware

- Non-linearity, saturation etc.: cause serious problems in L2 analysis and sensor characterization!
- **A/I-EOS**: GLI PIs require more PFT testing
- **A/I-EOS**: Distribute PFT data useful to all GLI PIs
- **A/I-EORC**: Evaluate the amount of lost geophys. data due to saturation
- **A/I-EOS**: Need frequent airborne radiance measurements

■ Algorithm development

- Phase-I to phase-II (New PIs)
- GLI L2 algorithms ver. 0.0 to EOSD: GAIT system very efficient!

■ Cal/val preparation

- Site and instrumentation studied

■ New project proposals

- **A/I EORC**: Reformat GLI data analysis project: Use of OCTS & MODIS data for testing the operational system: EORC, CCSR, CeRES, etc.
- OCTS+POLDER simultaneous analysis project : contact points are Prof. Mukai & a CNES scientist (TBD)

■ ADEOS-II launch schedule should be determined and announced as early as possible for proper operation of validation program