



GLI Workshop Nov. 2001, Tokyo

GLI Science Activities Dec 2000-Nov 2001

Teruyuki Nakajima

Center for Climate System, The University of Tokyo

teruyuki@ccsr.u-tokyo.ac.jp



Updates of GLI project

- **Launch?: will be heard from NASDA**
- **NASDA organization changed: no large effects to GLI project (, so far)**
- **GLI sensor re-test in Dec. 2000- March 2001**
 - **Reviewed by Cal. WG (Prof. Y. Senga)**
 - **Sensor working fine**
 - **Oversaturation problem**
- **EOC has tested GAIT/L2 (ver. 0.2) algorithms (Oct. 2001)**
- **Further budget cut: not significant? (70% in FY2000)**
- **Ocean color channel saturation: Alternative algorithms**
- **Definition of extraterrestrial solar flux spectrum**
- **ATBD writing (A/I, PIs)**
- **PIs: More work on the next generation algorithms**
- **Validation system is nearly ready for operation**

GLI workshop summary (Nov. 2000, Kanazawa)



■ Hardware

- Report of non-linearity, saturation etc.
- **More study of PFT results and add more test (A/I, CAL team)**

■ Algorithm development

- Phase-II with new PIs
- Report of GLI L2 algorithms ver. 0.0
- **NASDA will check GSD clear sky radiance (A/I, GAIT)**
- **NASDA should provide PIs with GLI tools: L2 system distribution; MODIS transform code availability (A/I, EORC)**

■ **Another simulation case, regarding GLI250m data coverage (A/I, EOSD)**

■ Cal/val preparation

- Site and instrumentation studied
- **Some modification in data transfer flow: Mach-up data (L1A or B?); addition of pixel-by-pixel analysis in Atmosphere validation (A/I, EORC)**

■ New project proposals

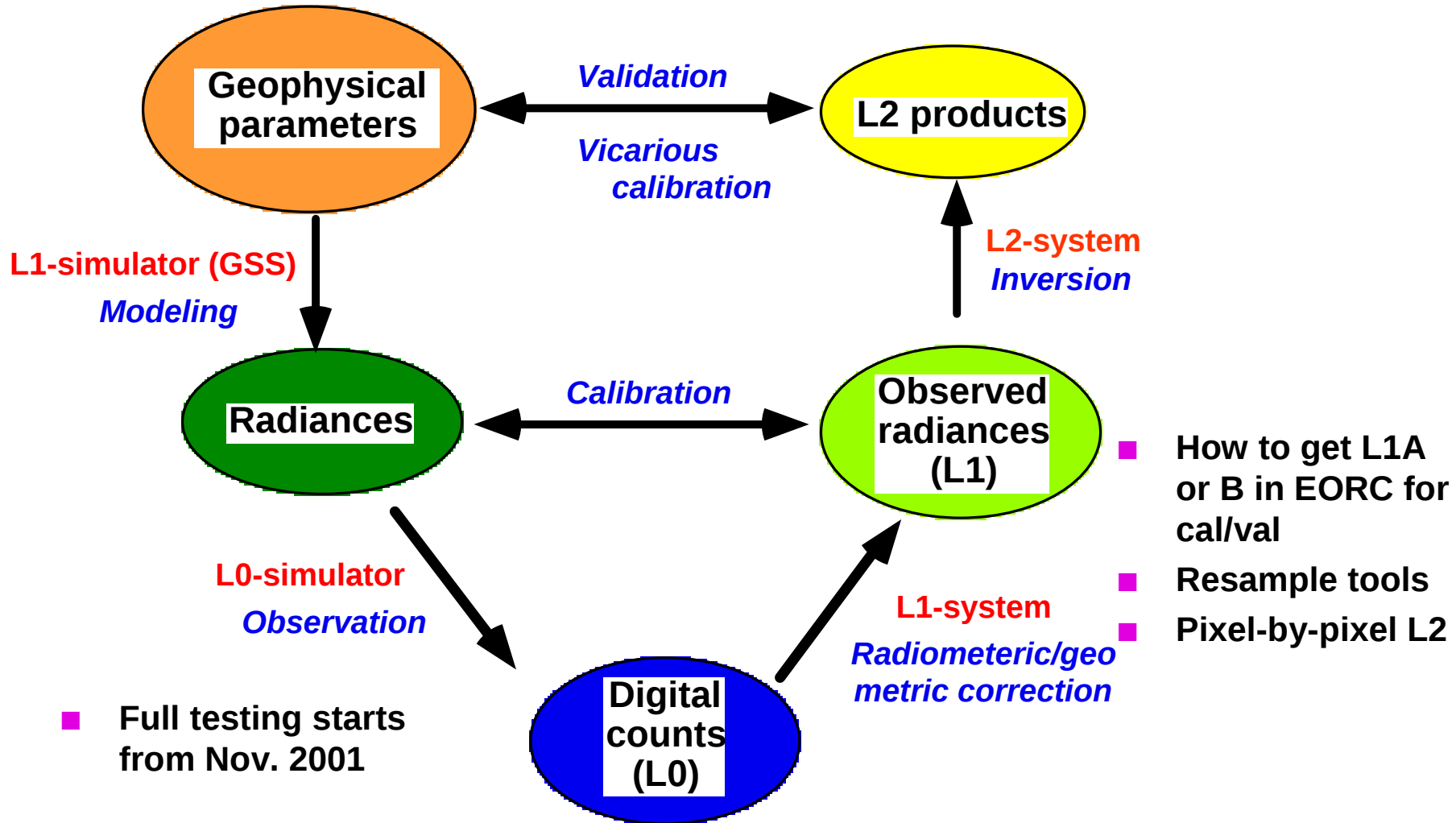
- Reformat GLI data analysis project: Use of OCTS & MODIS data
- OCTS+POLDER simultaneous analysis project : contact points are Prof. Mukai & a CNES scientist (TBD); **NASA OCTS project**

Actions for the budget cutback in FY2000

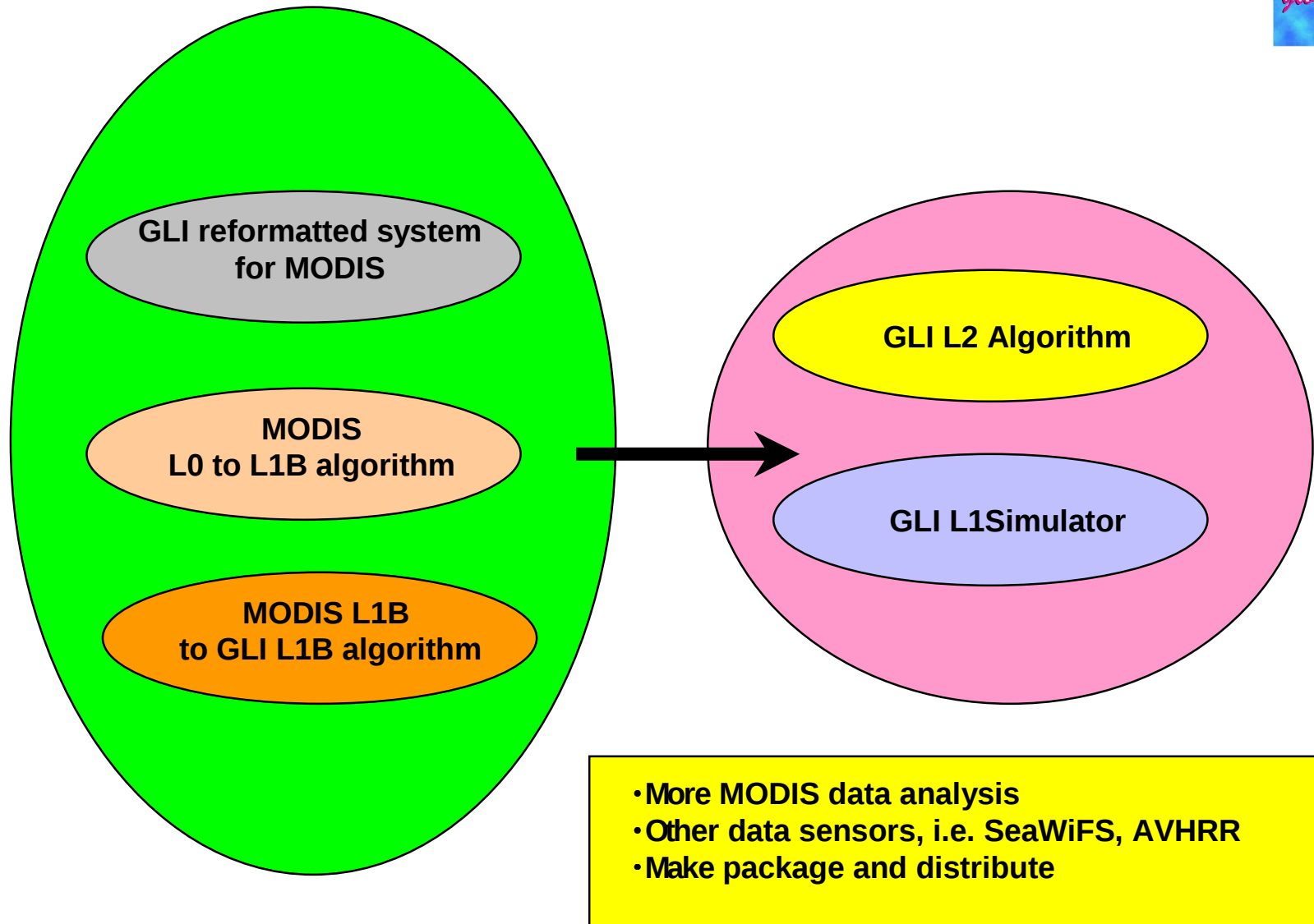


- PI funds cut by 50% to 70% of that of FY1999
- Definition of priorities in validation instrumentations
- Save budget for validation system establishment
 - GAIT - VAL Team interface
 - Network instrumentations
- Still we need more rationale and description of the project for FY2002
- Increase the efficiency of team activities
 - Minimize duplicated activities among teams
 - Define tasks of each team

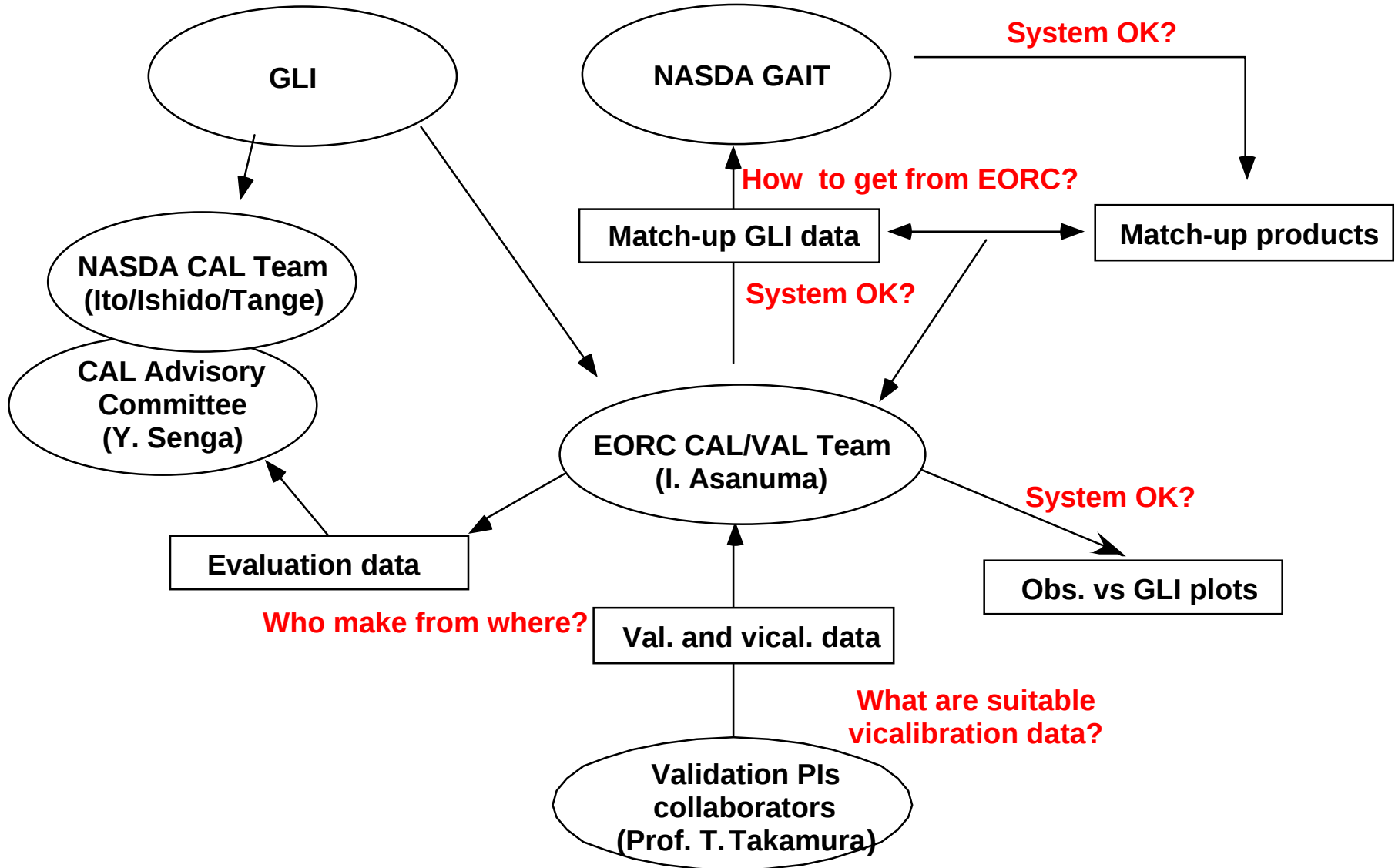
GLI Product Generation Flow



GLI L2 system distribution



Science side concerns are ...



Summary of GLI WS2001 (1)



■ Hardware

- **A/I: Study more details**
 - ≡ **Sensitivity decay over saturation range: flagging**
 - ≡ **Reflectivity/Polarization sensitivity vs scan angle**
 - ≡ **Stray light/BT recovery**
- **A/I: GLI characterization data should be opened to PI s**
- **Calibration data archiving system (EOSD)**

■ Algorithms

- **Excellent: We appreciate GAIT efforts and other related groups**
- **Alternative band algorithms under development**

■ 250m data

- **A/I: More survey and effort for better coverage; More candidate facilities have been suggested**
- **Hebrew University has a plan of SeaSpace receiving station (10m).**
- **RC: NASDA should encourage commercial enterprises to have functions of GLI data acquisition**

Summary of GLI WS2001 (2)



- **No L2A browse (Shimoda)**
 - **NASDA said that there was no requirement**
 - **RC: PI team also recommends**
- **A/I: Investigate the scientific result of the L1 simulation test**
- **GLI standard extraterrestrial irradiance**
 - **A/I: Spectrum for $\lambda > 3 \mu\text{m}$**
 - **A/I: Response function-weighted irradiance**
- **Data transfer from EOC to EORC**
 - **All L1B data**
 - **A/I: Investigate the possibility of some temporary files transfer (4 day minimum radiances, Atmospheric L2A-segment)**
- **Data and software information**
 - **A/I: NASDA should provide a list of points of contact with regard to software support/distribution**
 - **Define the available softwares: MODIS to GLI formatter**



Summary of GLI WS2001 (3)

- **EORC data availability to PI s and collaborators**
 - **Access from PI to help NASDA is important**
 - **RC: Improve the present security system which is not efficient for research work.**
 - **A/I: Identifying the contact point**
 - **Through ftp OK**
- **Validation activities**
 - **RC: Offer maximum conveniences to collaborators**
 - **Only PI through ftp: Is this OK? (MUD, in situ data); web for scatter plots**
 - **A/I Seek a mechanism to transfer match-up GLI data to in situ data providers**
 - **RC: Validation working mechanism between CAL/VAL G. and in situ data providers**
 - ≡ **Define mechanism**
 - ≡ **Software support**
- **A/I: Need to make a protocol and format for query of data transfer from in-situ data providers**



Summary of GLI WS2001 (3)

- **Coordination of vicarious calibration**
 - **Define IFOs**
 - **Land, Ocean-Atmosphere coordination of L-up and L-dwn**
 - **Bright target calibration:**
 - ≡ **Desert and aircraft**