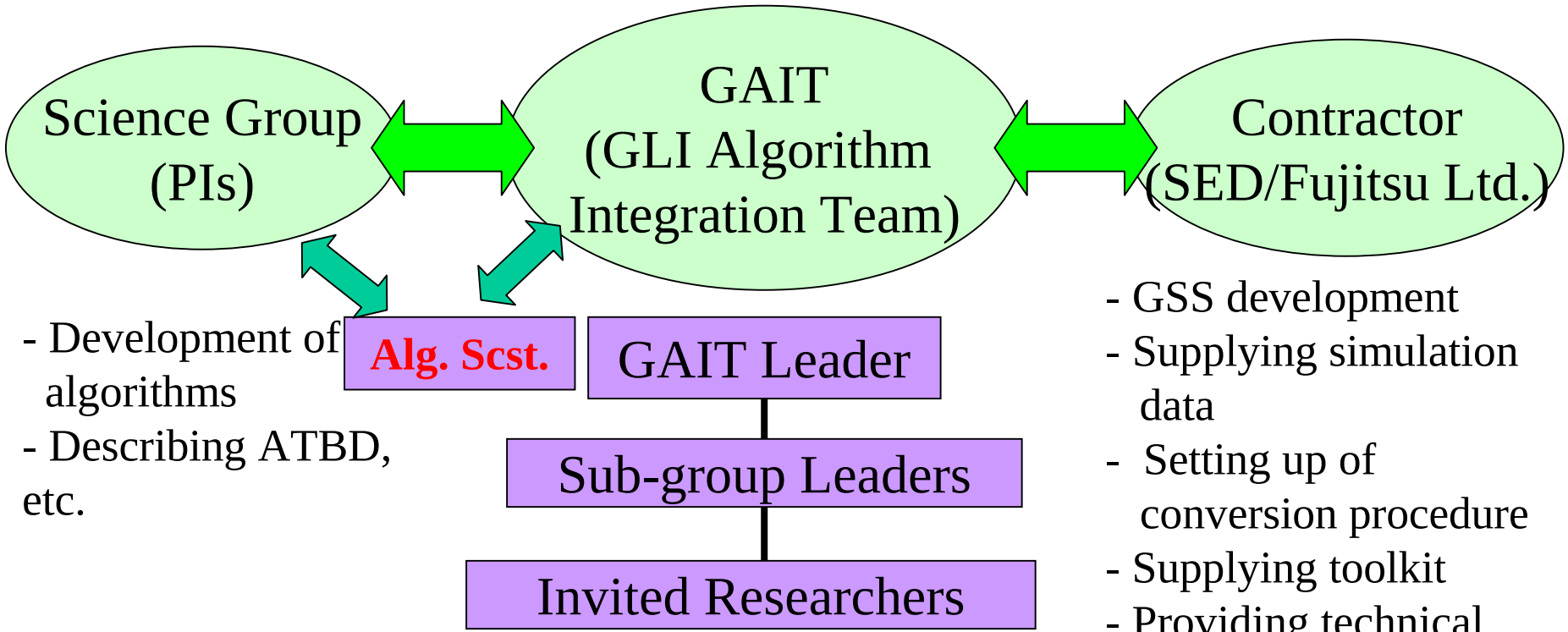
# Report from the Algorithm Scientist: Readiness for post-launch activities

**Hajime Fukushima**

**GLI Algorithm Scientist**

*at ADEOS-II/GLI Workshop, Nov. 14-16, 2001, Tokyo*

# GAIT Organization



# Thanks to GAIT Members...

Takashi Y. Nakajima (Lead)

Hiroshi Murakami

Masahiro Hori

Wen-Zhong Chen

Young-Je Park

Yi Liu

Peng Zhang

Xiaomei Yang

Qingyuan Zhang ( - 1999.3)

Hirokazu Yamamoto

Masahiro Kurihara (GLI PC)

Yasushi Mitomi (RESTEC)

Jun-ichi Inoue (Fujitsu Ltd.)

Masaru Tairadate (Fujitsu Ltd.)

Jun Miyamoto (SED Ltd.)

Yuji Hashibe (SED Ltd.)

# Readiness towards the initial post-launch activities

- Sensor characterization
- Algorithm Implementation
  - GAIT
- Data System at EOC/EORC
  - GLI Data Processing
  - Browse System
  - Match-up Subsystem
- Readiness at PI/scientists side

# GLI Standard Extra-terrestrial Solar Irradiance

- **GLI calibration team to use the standard solar irrd. data**
  - **Based on Thuillier 2001**
- **Thanks for J. Nieke for his contribution!**
- **PIs are encouraged to use the standard sol. irrad. data**
  - **if not, describe the sol. data you are using**

- **Standard solar irradiance data be available on the GLI web**
  - **Whole spectrum (350 - 2500nm)**
  - **Band-response weighted (for all the GLI channels?)**

# Impacts of Sensor Characteristics to Algorithm Implementation?

- **Low saturation bands**
  - **Alternative band scheme works fine**

# *Switching test* ***nLw460*** *(2000/09/26 Off Shikoku)*

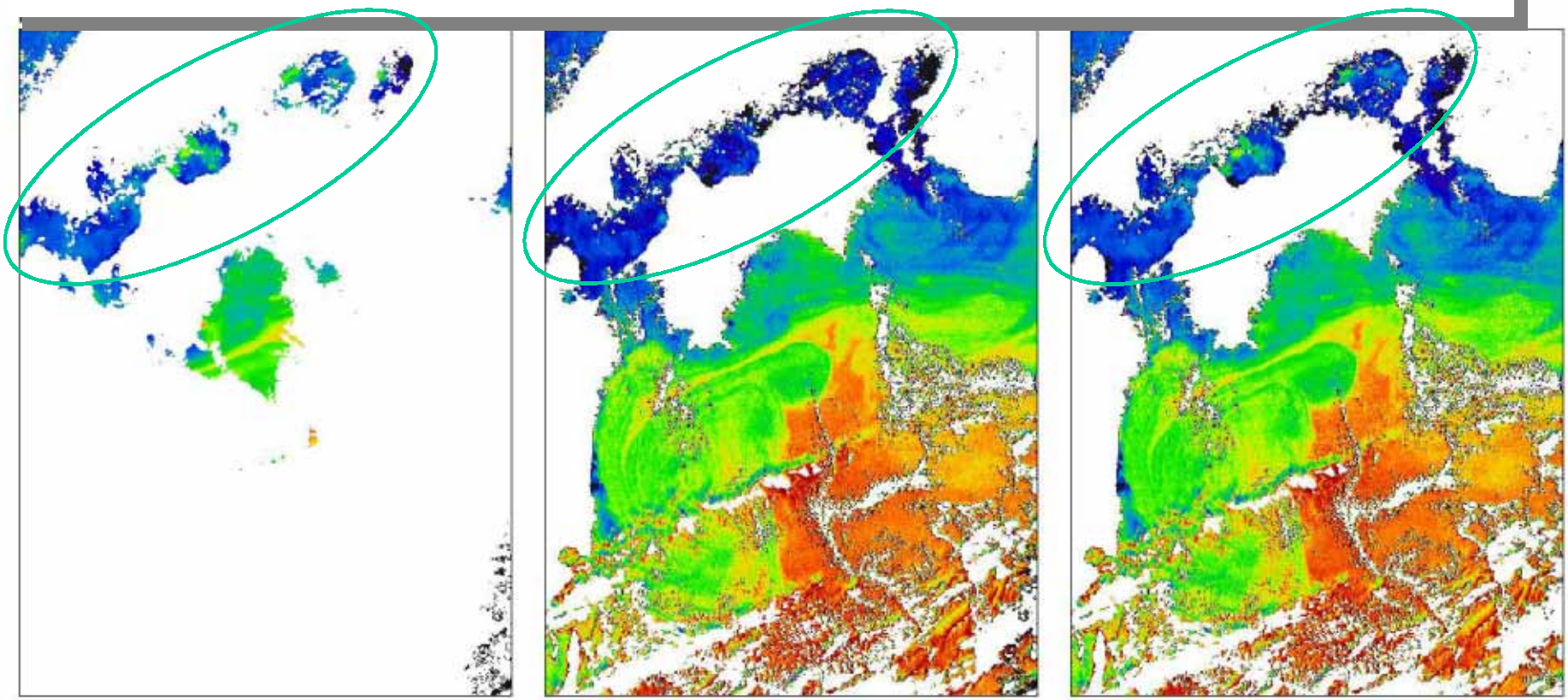
**by Murakami/Chen/Park**

***atmospheric correction by***

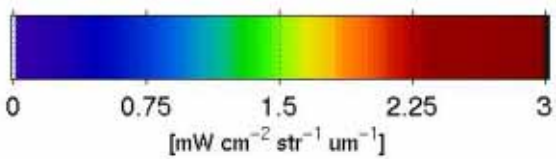
***CH16-18,***
*Original band*

***CH13-19,***
*Simple alternative bands*

***Switching***
*Possible without gaps*



0 0.75 1.5 2.25 3
[mW cm$^{-2}$ str$^{-1}$ um$^{-1}$]




***Utilize original bands in no-saturation area to avoid large noise and negative nLw***

# *Switching test* ***CHLA*** *(2000/09/26 Off Shikoku)*

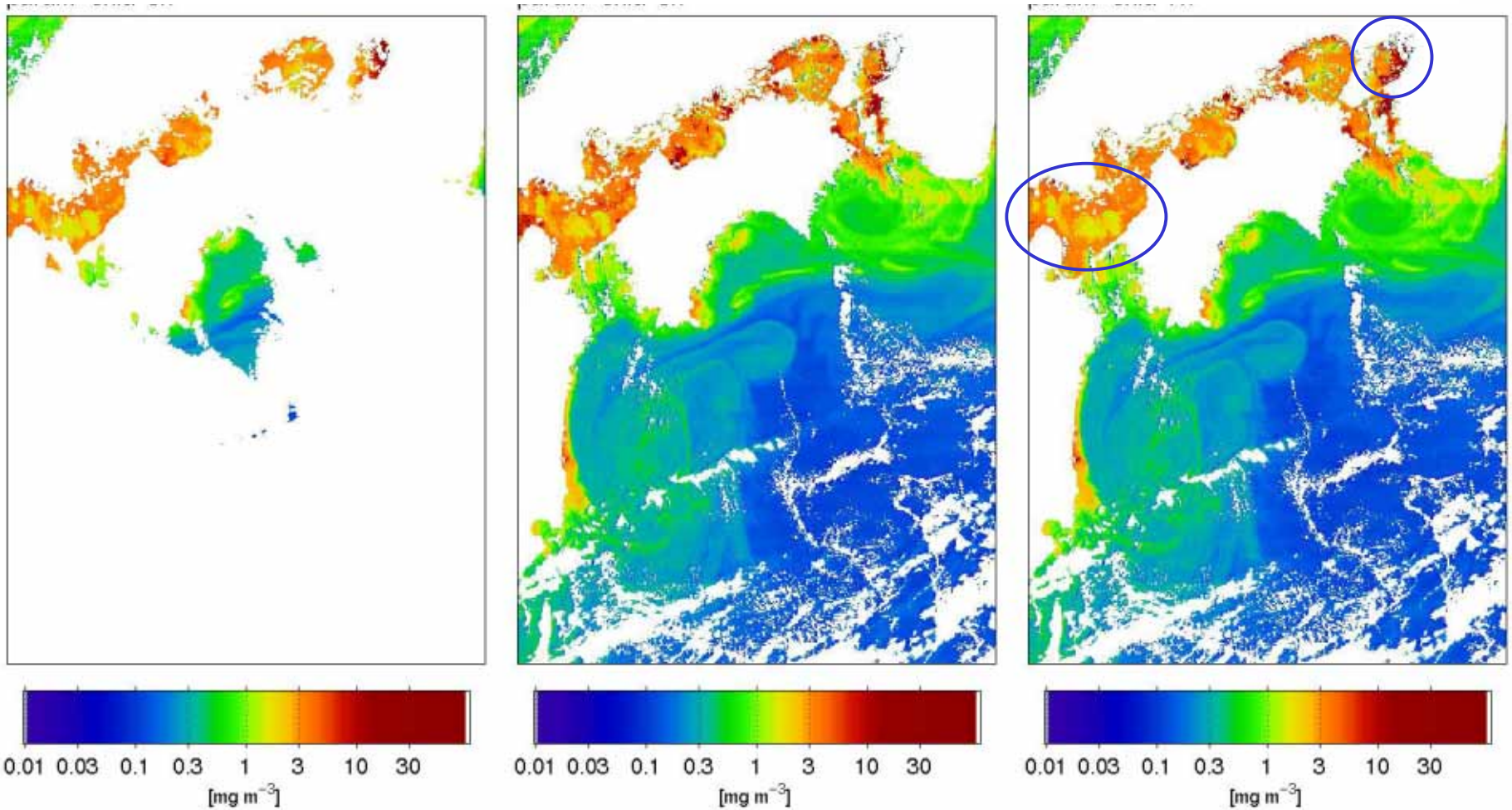
**by Murakami/Chen/Park**

***atmospheric correction by***

***CH16-18,***
*Original band*

***CH13-19,***
*Simple alternative bands*

***Switching***
*Possible without gaps*



# Impacts of Sensor Characteristics to Algorithm Initialization/implementation?

- **Low saturation bands**
  - **Alternative band scheme works fine**
  - **Sensitivity decay over saturation range**
    - **flagging via other bands seems to work**
- **Reflectivity/Pol. sensitivity vs. scan angle**
- **Stray light/BT recovery**
  - **Further study required**
- *Document by Cal team under preparation*
- **Proposal to initiate discussion with the calibration team (jointly with GAIT?)**
  - **to help the cal team to prioritize the work items**
    - **Comment/requirement from any PI/any group anticipated**
  - **to feed back to the science team**

# Satellite data availability (How to get the data?)

- **Whom to contact?**
  - **EORC is to provide L1/L2/MUD**
  - **Contacts?**
    - **L1/L2**
      - **GAIT?**
      - **to PIs: Please understand GAIT member's standpoints**
    - **Match-up data**
      - **Asanuma?**
- **How much possible?**
  - **Amount is resource-bounded**
    - **Priority on standard algorithm PI to research algorithm PI**
    - **Re-distribution of data should be allowed (among PIs?)**
- **Recommend: NASDA needs to clarify the contacts at EORC (or discussion in the GLI team leader meeting recommended)**

# Software supports/distribution for PIs

- Excerpts from the 2000 GLI Workshop
  - NASDA will provide the following items via ftp from its web site: (1) MODIS conversion software, (2) data access tool, (3) user's manual for (1) and (2), and (4) L1B file format description. (Due date: March 2001)
    → 栗原A/Iとしてアナウンスする。
- Discussion on the GLI Group Leader Meeting
  - NASDA should provide PIs with tools used for analyzing the GLI data.→ 処置済み

# Software supports/distribution for PIs

- **Runtime environment: SGI only?**
  - **Efforts underway transporting into Linux environ. (by Mukai/ Sano)**
  - **Contacts?**
- **MODIS data conversion software**
  - **Contacts?**
- **Level-1 to Level-2 conversion**
  - **Propriety issue of third party algorithm/software may arise**
    - **Negotiation be made with the algorithm provider**
  - **Contacts?**
- **View/analyze L-1/2/3 data**
  - **Standard HDF browser can be used**
- **Match-up Data Analysis**
  - **Recommend: MUD processing software be made available for PI**
  - **A/I: NASDA should clarify the contact point**