Land validation plan

Yoshiaki HONDA
CEReS, Chiba Univ.

Items

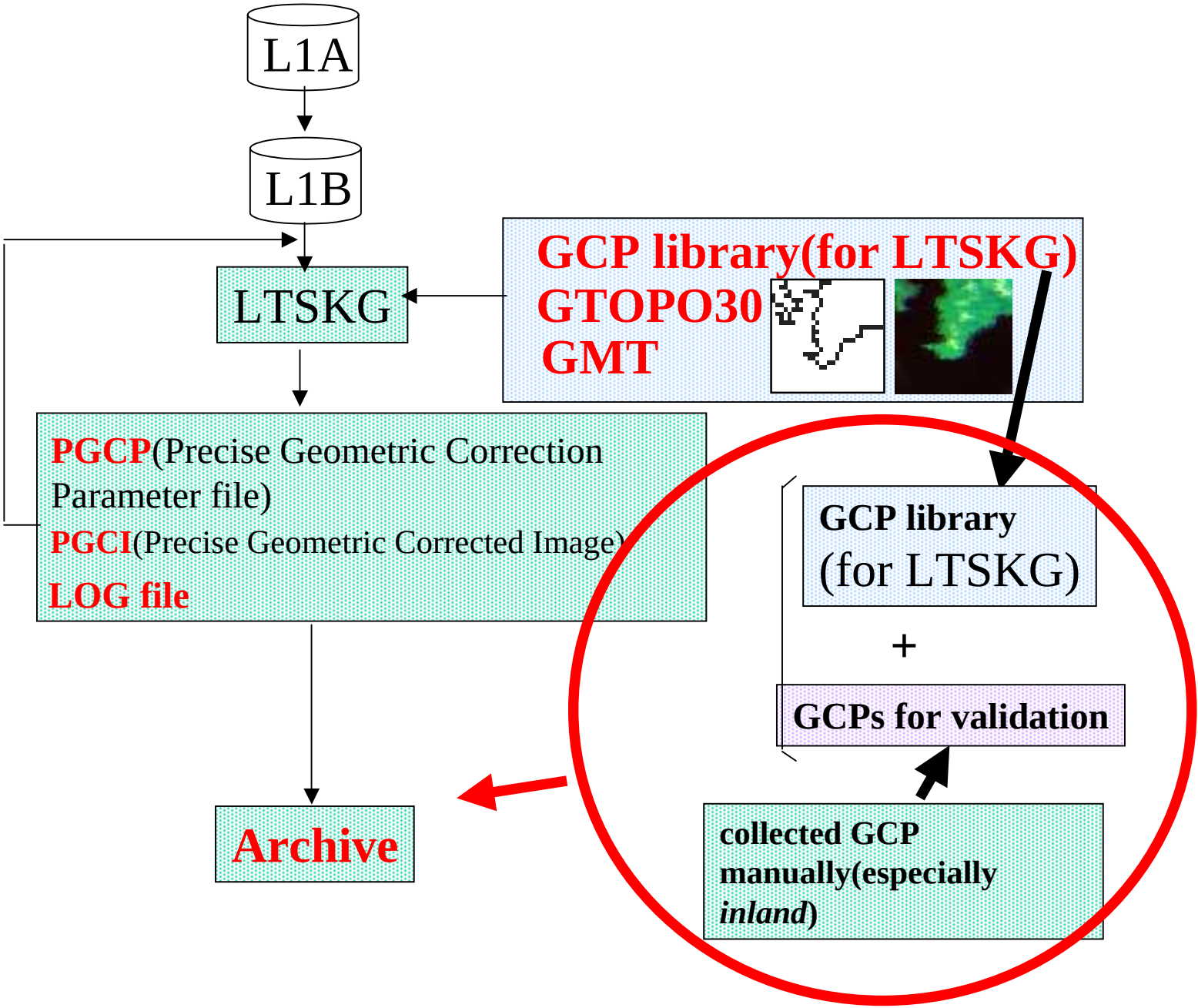
- Geometric correction
- Vegetation Index

Member

- Key member for geometric correction
  - T. Hashimoto (Chiba Univ.)
  - M. Matsuoka (NASDA)
  - H. Yamamoto (NASDA)

  - + some students

Validation for Precise Geometric Correction



Members

- Key member for vegetation index
  - A. Huete (U. of Arizona)
  - Y. Awaya (FRPP)
  - Y. Honda (Chiba Univ.)
  - H. Yoshioka (Aichi P.U.)
  - K. Yamamoto (NASDA)
    - M. Yoshimura (Kyoto Univ. for Miri)

  & Other PIs

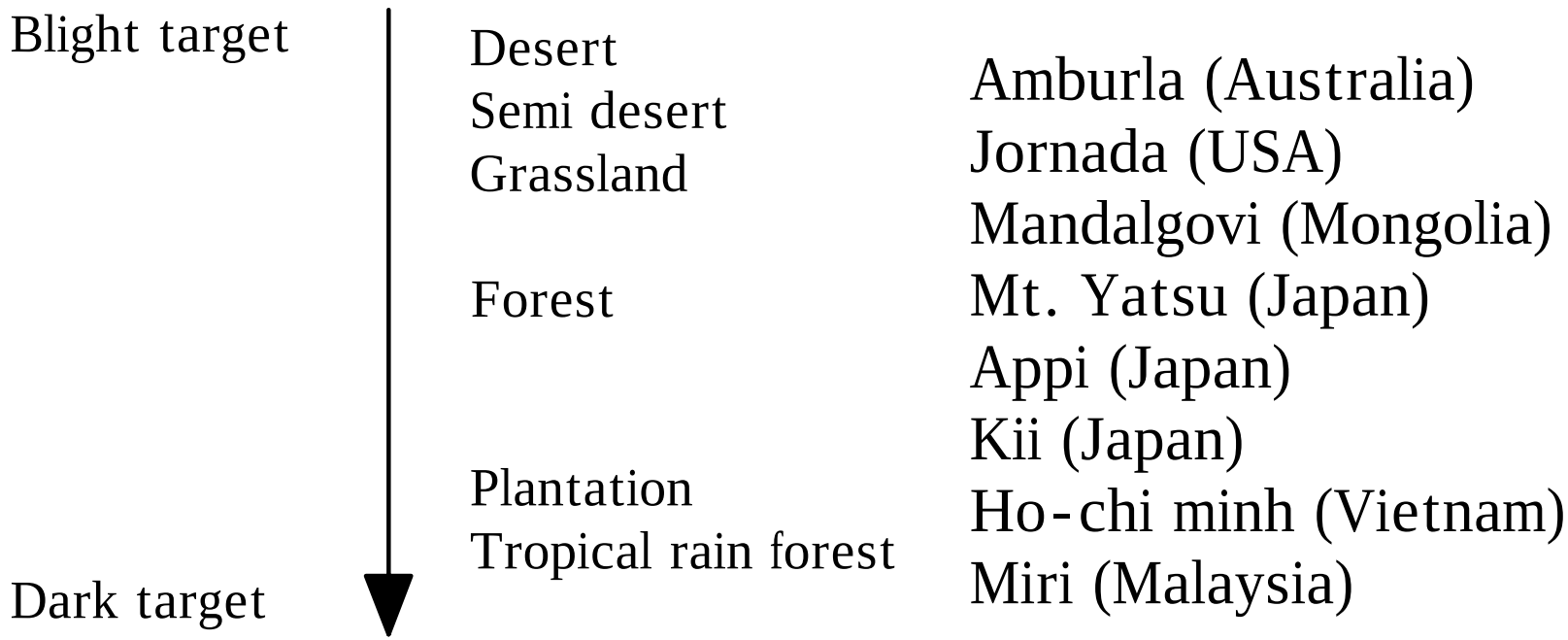
Method

- To use homogenous land surface
- To collect surface reflectance from blight to dark target (ground truth data)
- To collect atmospheric data
- To compare with standerd product from Match up data and other satellite data

Site Location

- Mandalgovi (Mongolia) 1400m
- Jornada (USA) 1200m
- Ho-chi minh (Vietnam) 5m
- Amburla (Australia) 1200m
- Mt. Yatsu, Appi, Kii (Japan) 800-1200m
- Miri (Malaysia) 200m

Combination of sites



+ EOS core validation sites with MODLAND

Time schedule & Instrumentation

- Mandalgovi (Mongolia) Grassland & semi desert
  - 2002 Aug. 2003 Aug., 2004?
  - Atmospheric observation
  - Mobile observation
    - 100 points surface reflectance from 2km × 2km
  - Instant tower
    - BRDF from 5m
    - 15 min interval surface reflectance
  - Grass picking
    - Surface reflectance from 2m
    - 1 week interval Dry weight

Time & Instrumentation

- Jornada (USA) Grass & Desert

  2002 Sep. Surface reflectance from RC helicopter & LAI 2000 etc

  2003 Sep. York & LAI 2000 etc.

  2004?

Time & Instrumentation

- Ho chi minh (Vietnam) Plantation, Crop & Mangrove
  - 2002 Dec. & 2003 Dec.
  - Surface reflectance
  - LAI2000
  - Model analysis
  - Atmospheric observation

Time & Instrumentation

- Amburla (Australia) Grass & Desert
  - 2002 Feb. Surface reflectance from RC Helicopter & LAI 2000 etc
  - 2003 Feb. Surface reflectance from RC Helicopter & LAI 2000 etc
  - 2004?

Time & Instrumentation

- Mt. Yatsu
  - 1996- (Apl.-Nov.)
  - Spectral information, video image & photo from 25m Tower
  - Leaf trap
  - LAI 2000
  - Fish eye photo
  - Once in Every month

Time & Istrumentation

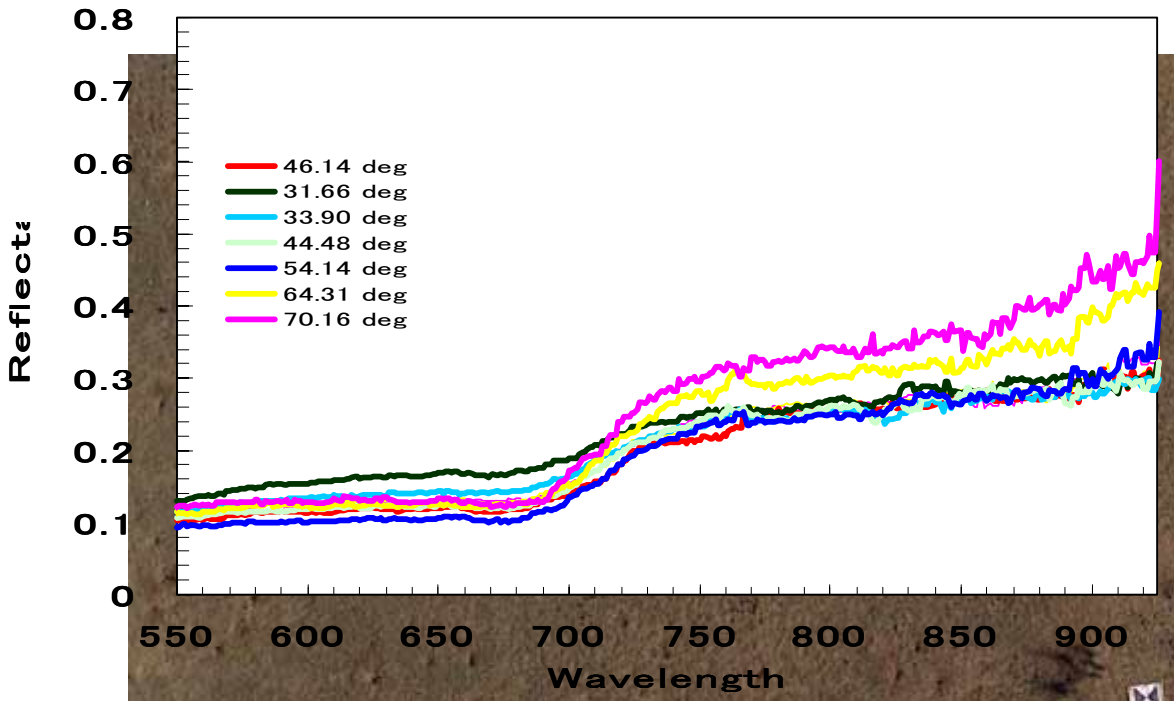
- Miri (Malaysia) Tropical rain forest
  - 2002 Aug, 2003 Aug, 2004?
  - Drive by kyoto univ.
  - Surface reflectance from 76m

Instrumentation

RC helicopter

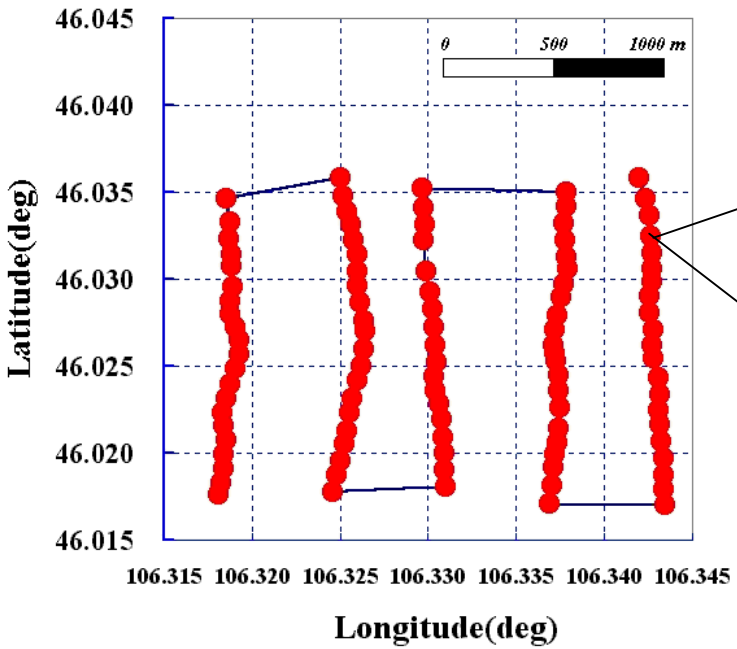
Transporter for RC Helicopter system

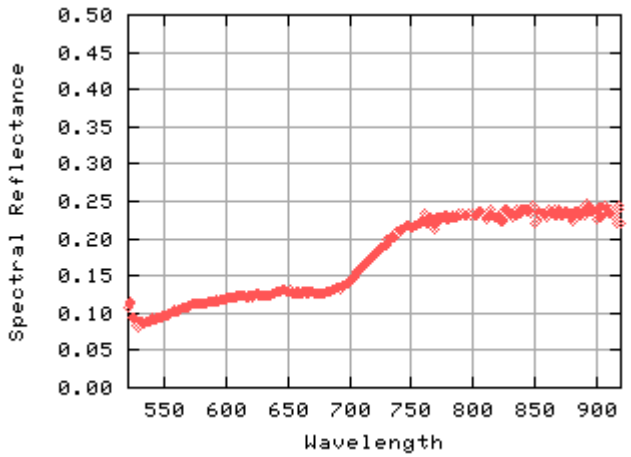
Data from helicopter



Mobile Observation

Observation using Mobile System





Spectrum

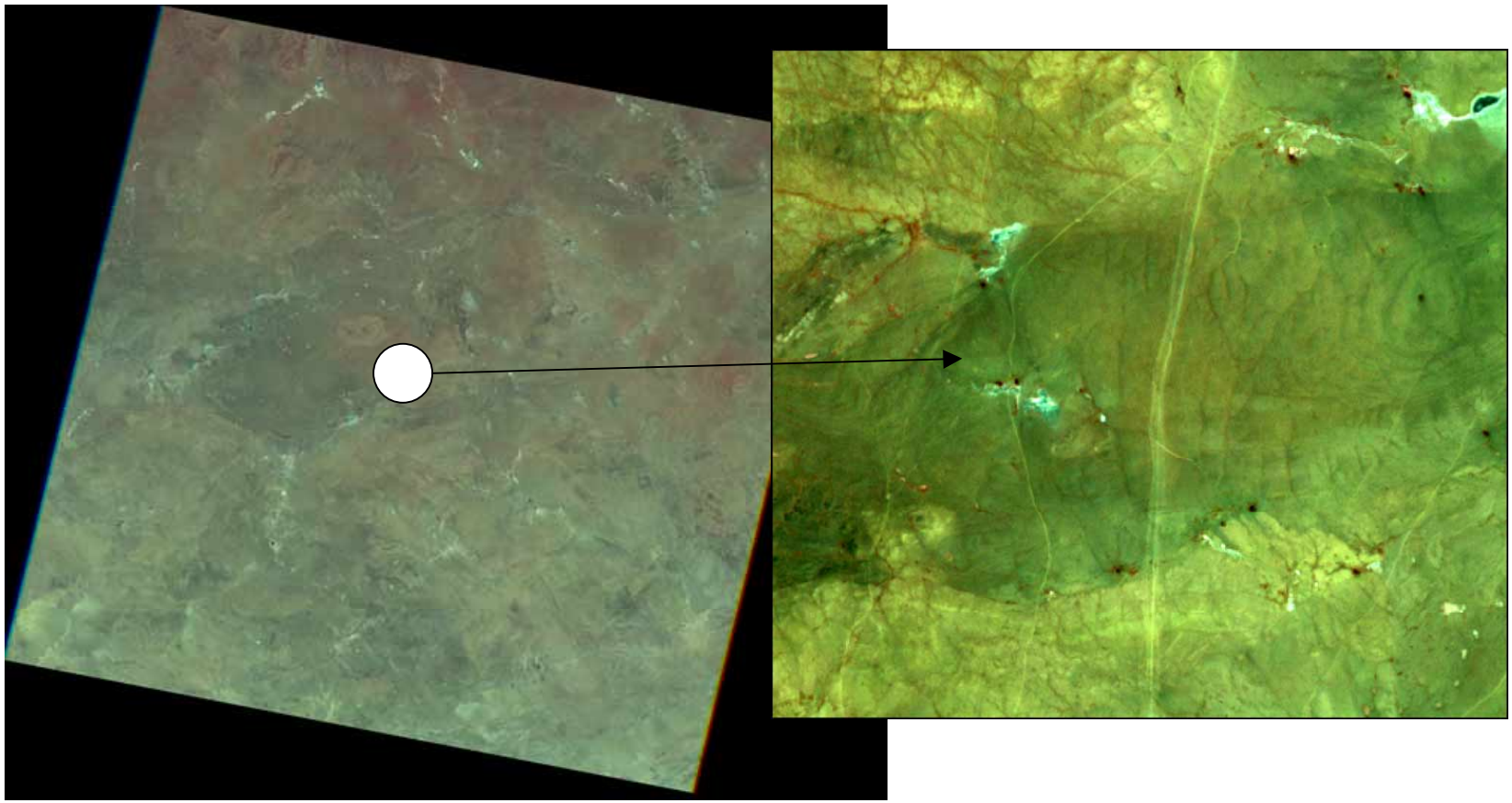
Digital Image

InstantTower Observation

Biomass

- Grass picking for dry weight

Mongolian Validation site



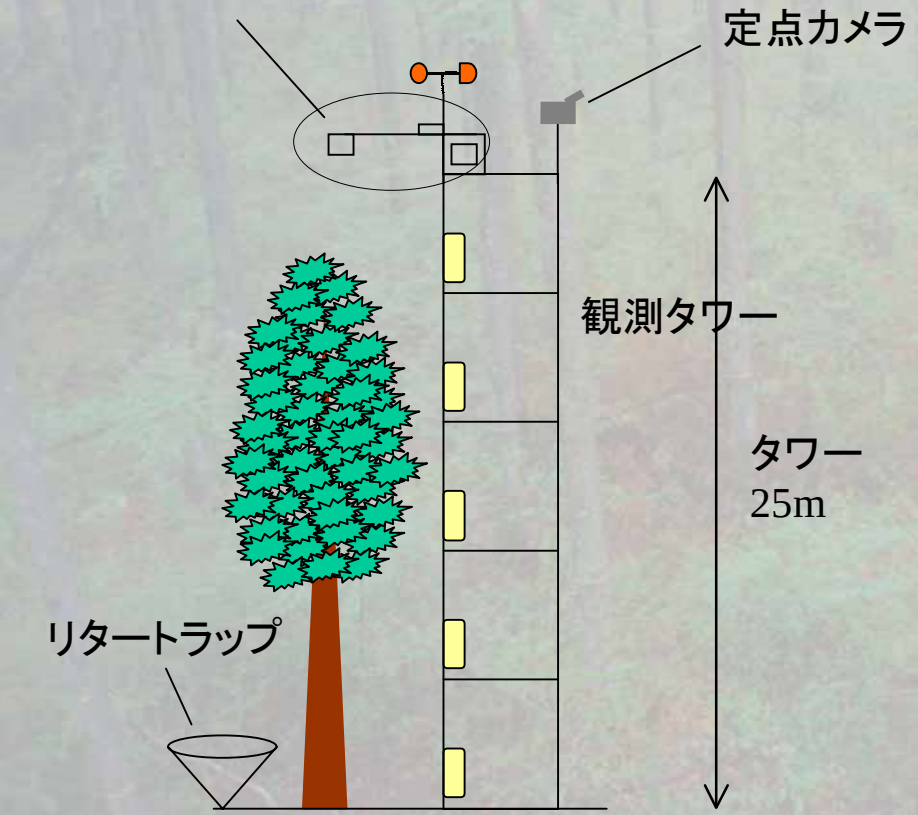
Base Camp (Japanese Hill)

Japanese Larch in Yatsu

定点カメラ画像による把握

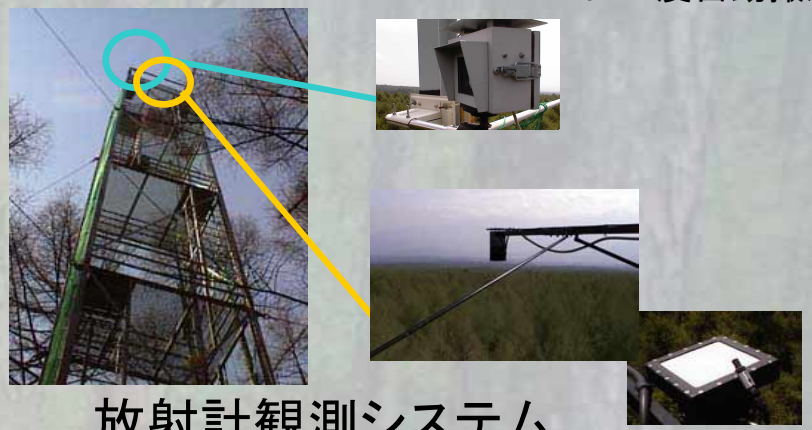
発芽開始時期
4月 30日

使用データに関する観測システム



定点カメラ

・一日一度自動撮影。



放射計観測システム

・15分間隔で分光データ、直下画像データを自動取得(6時～18時)

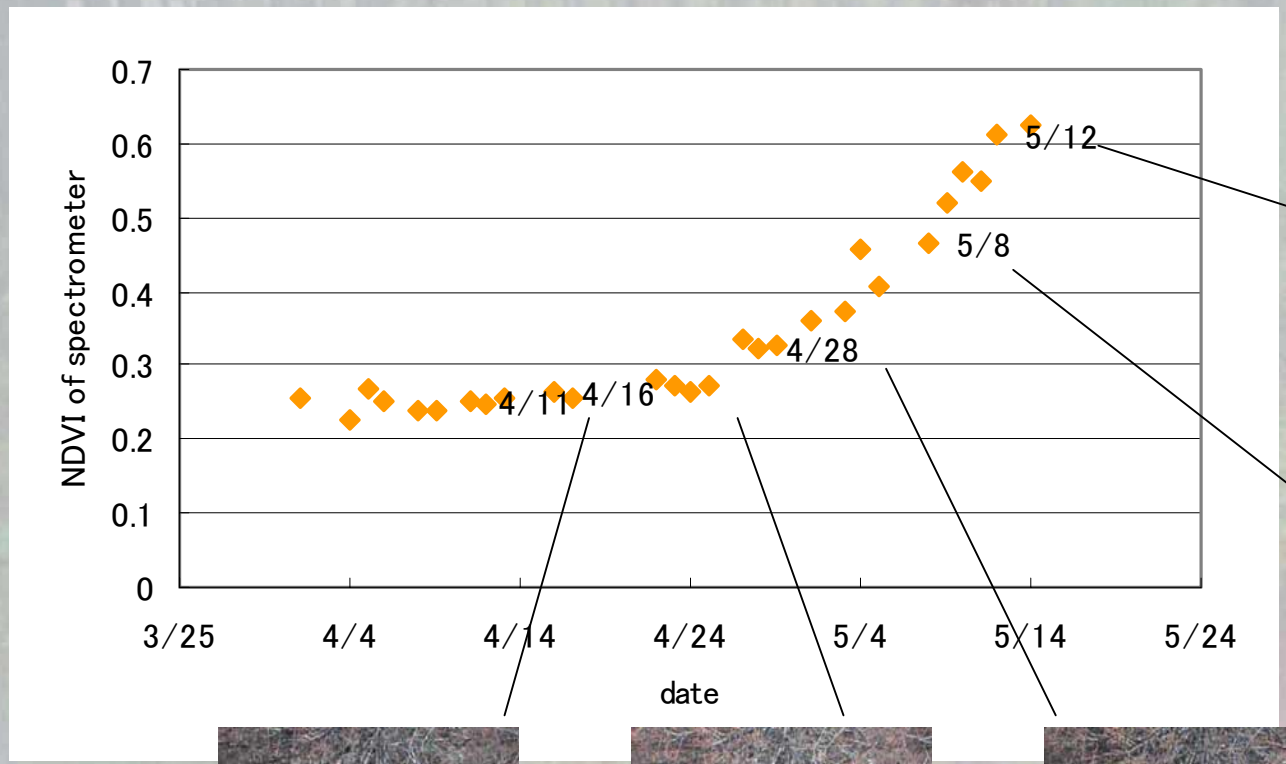
ディフューザ

リタートラップ

・8月末ごろ、設置
・月１～4回落葉を回収
・回収した落葉は、80度の乾燥機に24時間入れ、重量を測定する。

発芽時期のNDVIの推移

NDVI=(NIR-RED)/（NIR+RED)

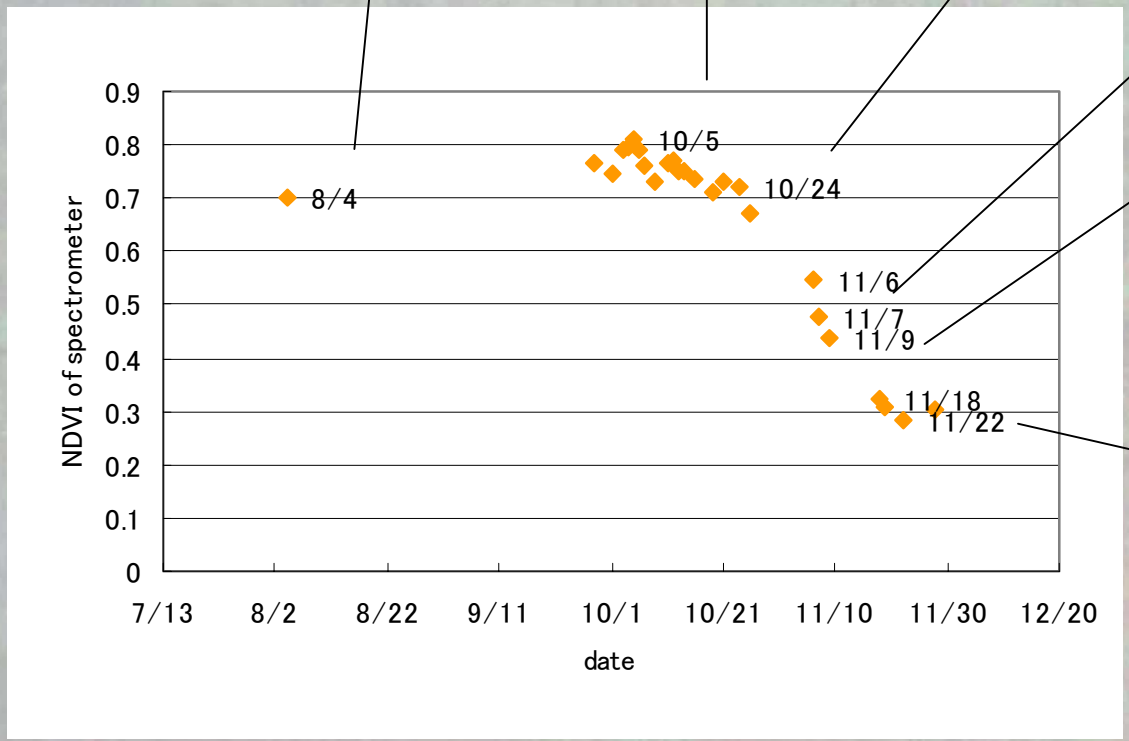


落葉時期のNDVIの推移

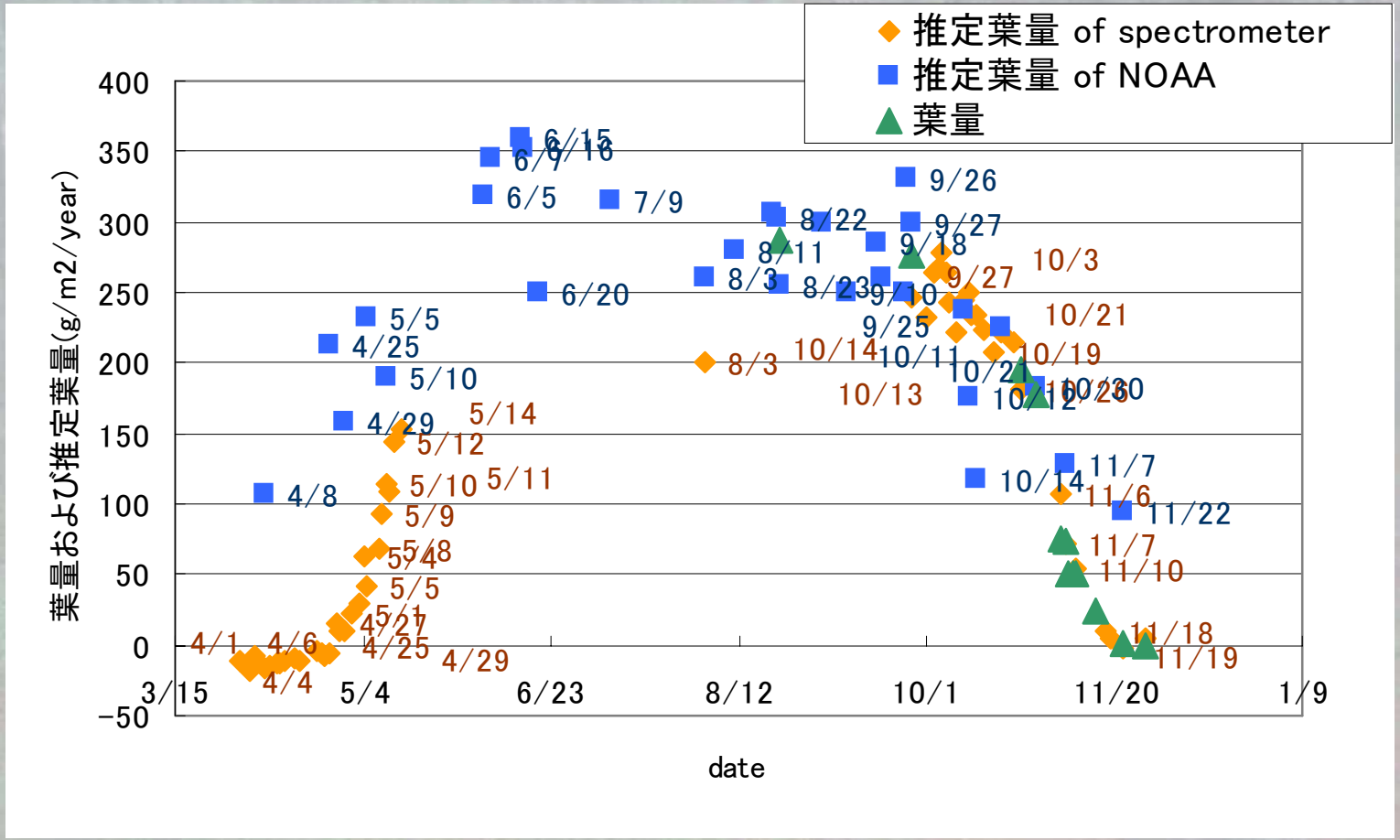
NDVI=(NIR-RED)/（NIR+RED)





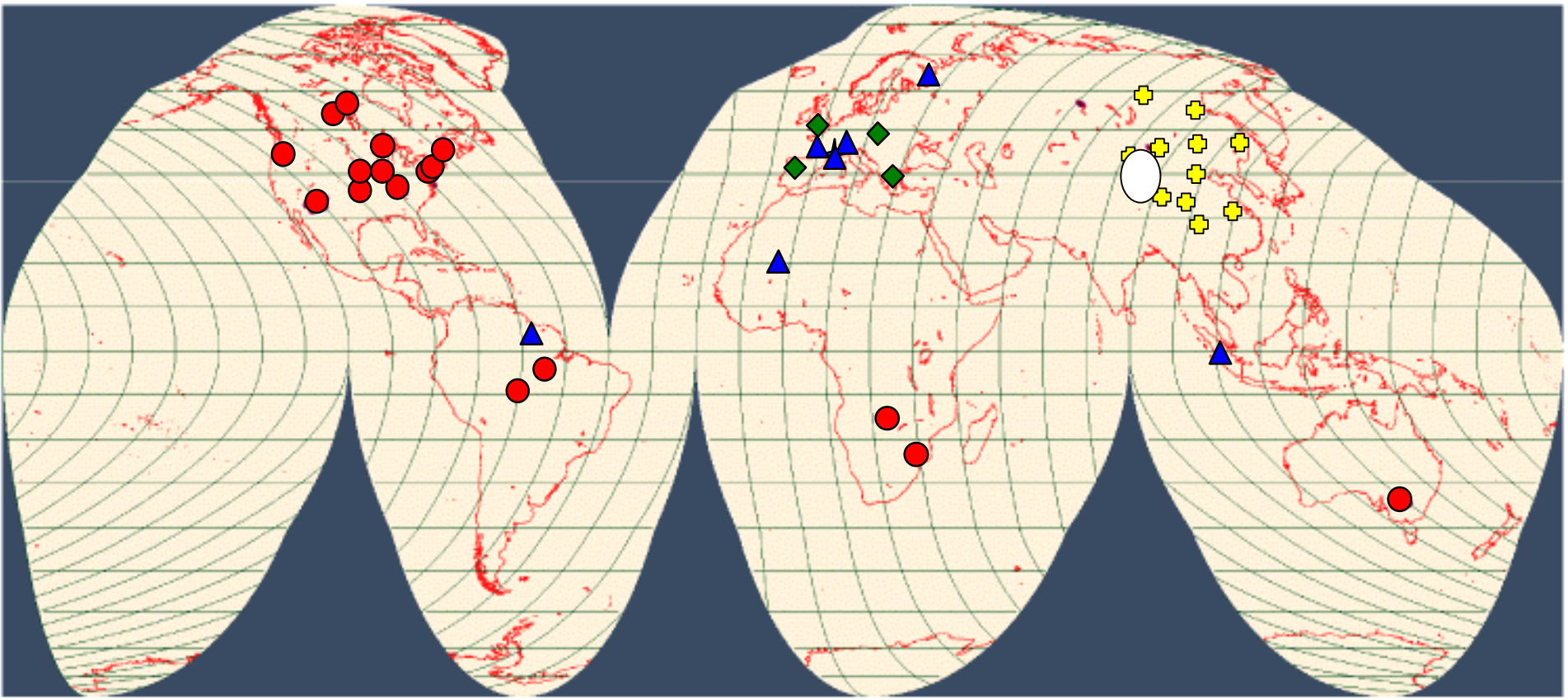



葉量の推定



葉量の推定精度	放射計	96%
	衛星データ	76%

Distribution of Sites



MODLAND (NASA)
VALERI (CNES)
VALERI (EC?)
VALERI (China?)

Goode Homolosine projection - MODLAND Level 3 grid