

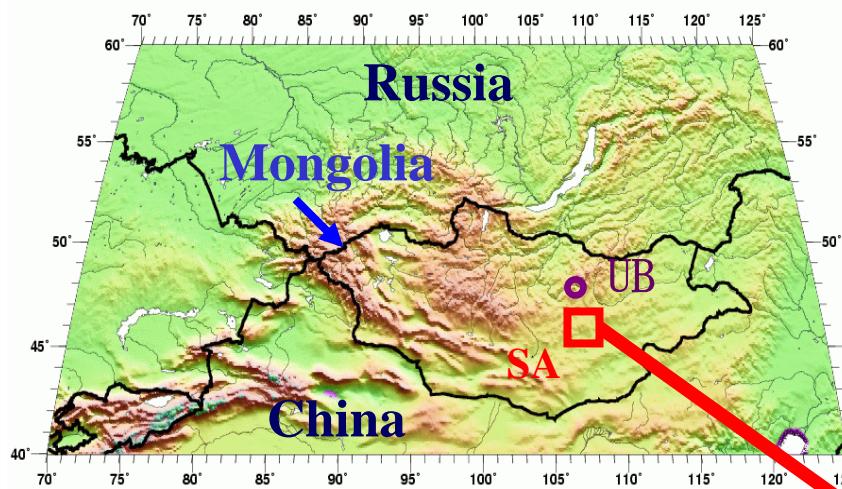
Current Status of Ground-Based Observations in Mongolia

Ichiro Kaihatsu (Hiroshima University)

1. Current monitoring status by AWS and ASSH
2. Available data for AMSR-E validation
3. Summary and research plans in FY 2005

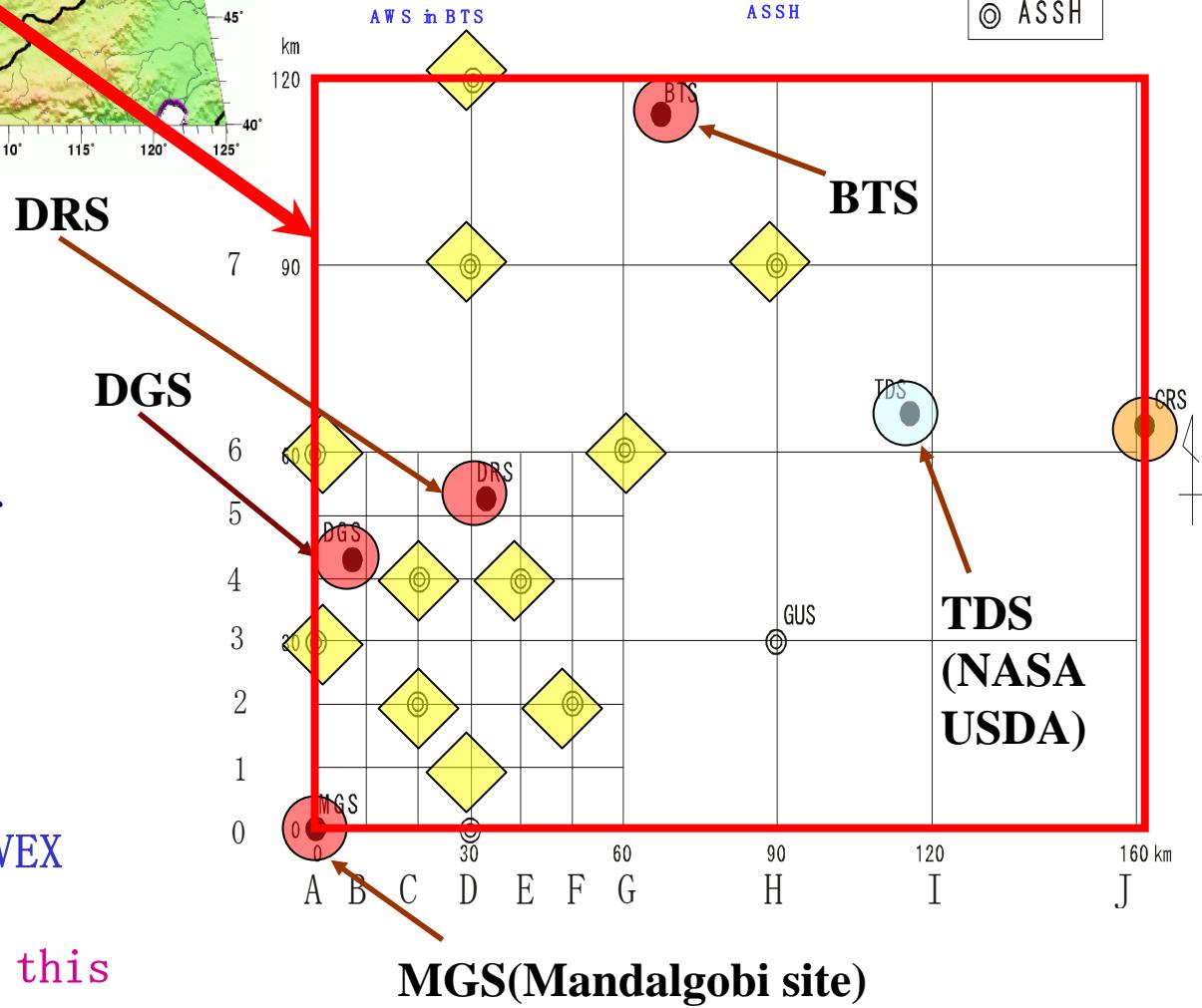
Honolulu

September 14, 2005

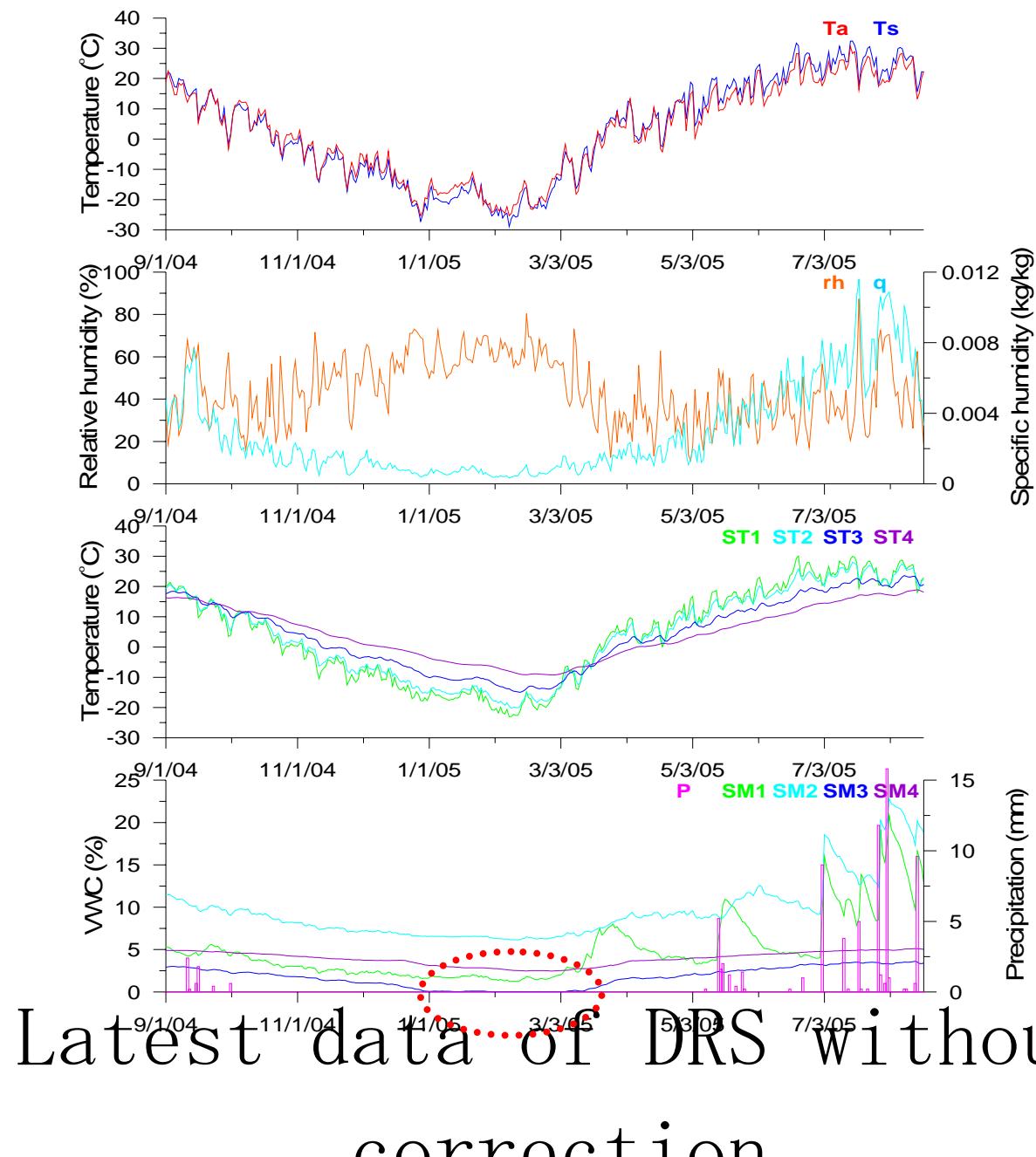


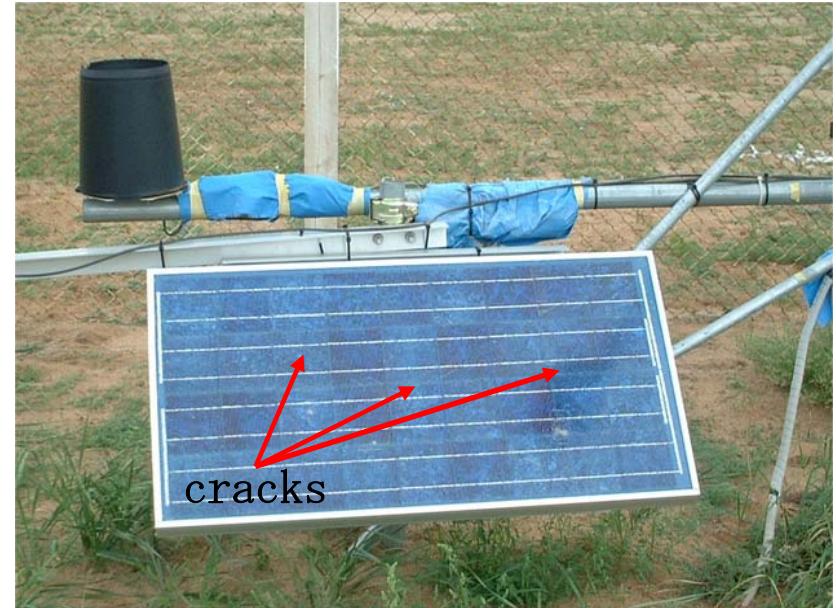
Location of AWS
(Automatic Weather Station) • ASSH
(Automatic Station for Soil Hydrology) in the study area, Aug., 2005

(SA : Study area of MAVEX (AMPEX), UB:
Ulaanbaatar)
We started new project MAVEX
(Mongol AMSR/AMSR-E/ALOS
Validation Experiment) in this April.



Deren Site Sep,2004~Aug,2005





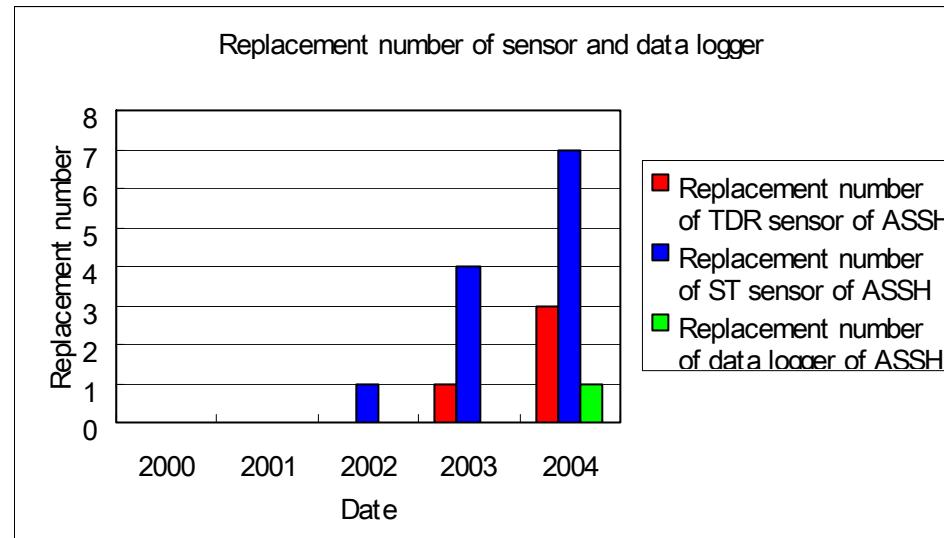
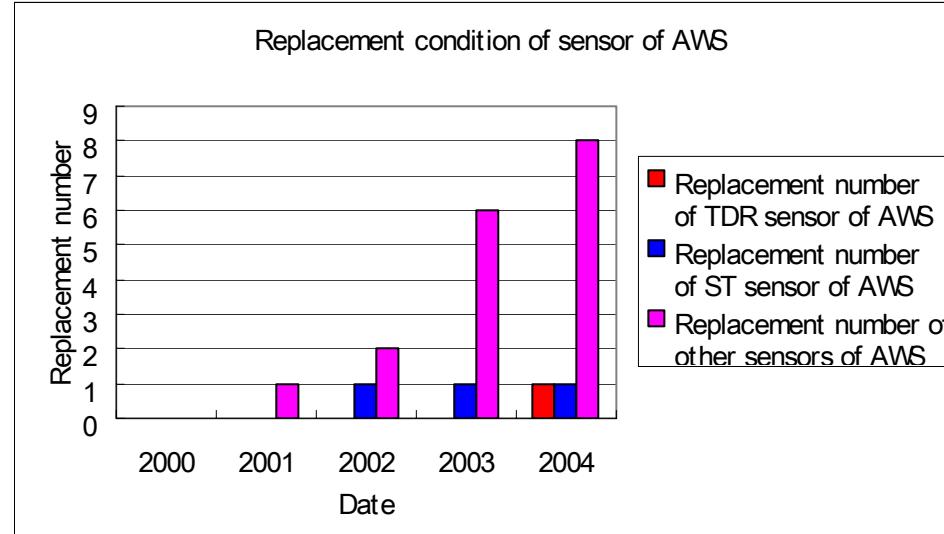
Cracks of
terminal
box

Cracks of
terminal
part of
CR10X

Deterioration
of water proof
shield



Current conditions of main parts of AWS and ASSH



Trouble conditions of AWS and
ASSH from 2000 to 2004

Problem of durability and life of sensor, data logger and station body

AWS and ASSH are
getting old/worse.

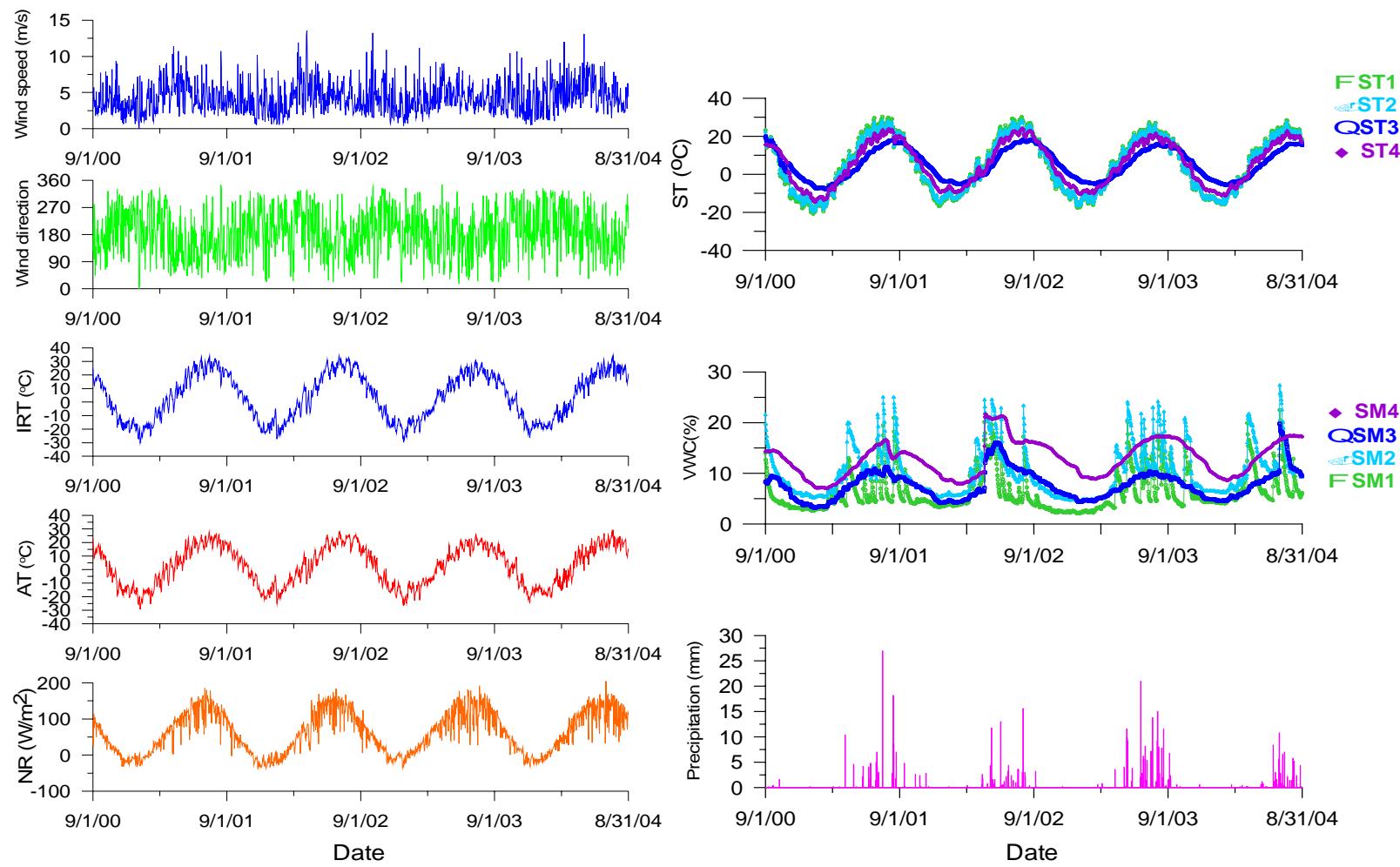
Durability and life
of sensor and data
logger and other
parts of AWS/ASSH

Necessity of
replacement of
sensor, data
logger etc.

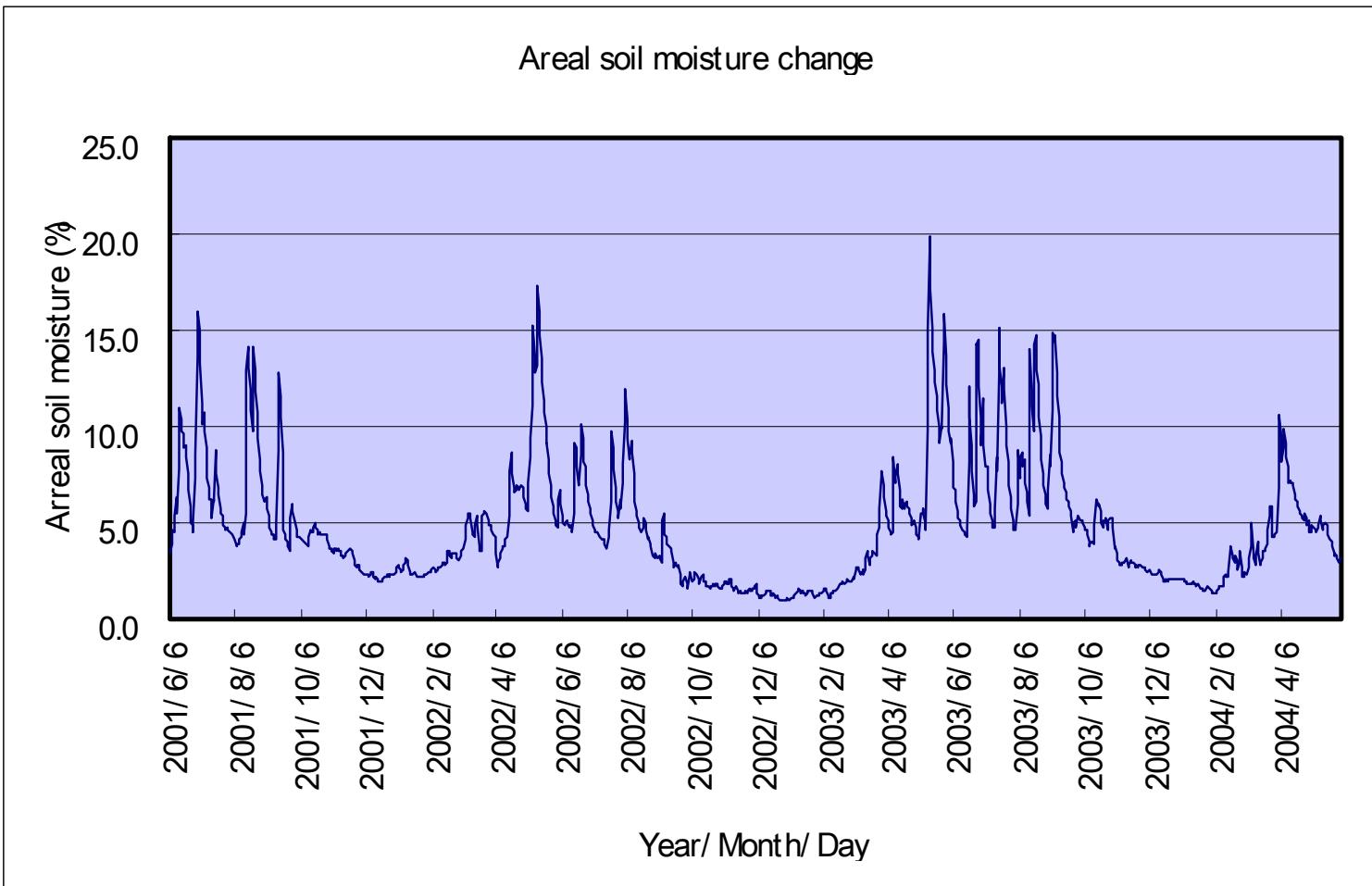
Available ground truth data in 2004

- > Monitoring data
 - AWS and ASSH data from October 2003 to September 2004
- > Data of physical soil properties of AWS sites and some ASSH points
 - soil type, saturated hydraulic conductivity, porosity, dry density, soil physical characteristic curve
- > Vegetation data at Mandalgobi site in 2004 (April to September)
 - plant cover and plant water content, type of emerged plant
- > Routine data of soil moisture by stations of NAMHEM (Natural Agency for Meteorology, Hydrology and Environment Monitoring in Mongolia) in 2002 and 2003

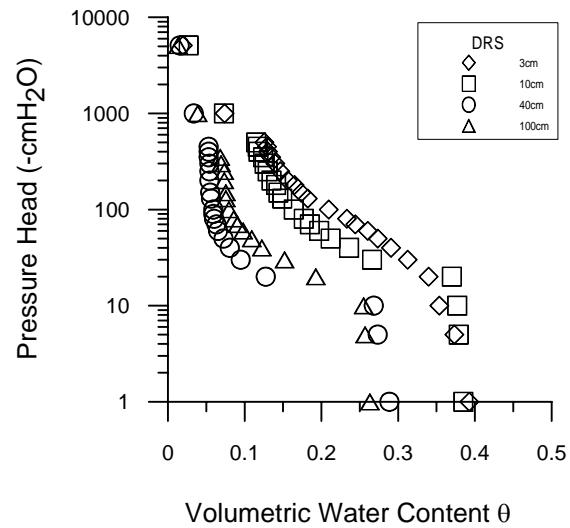
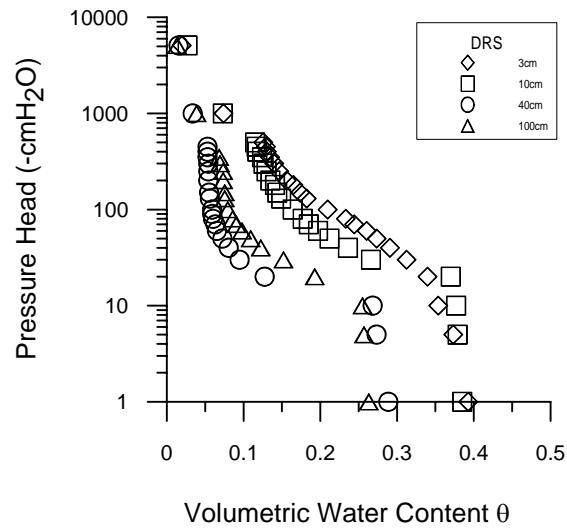
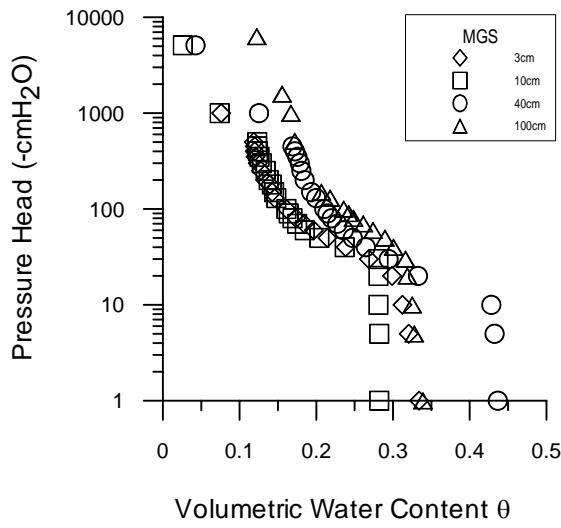
Mandalgobi Site Sep.2000~Aug.2004



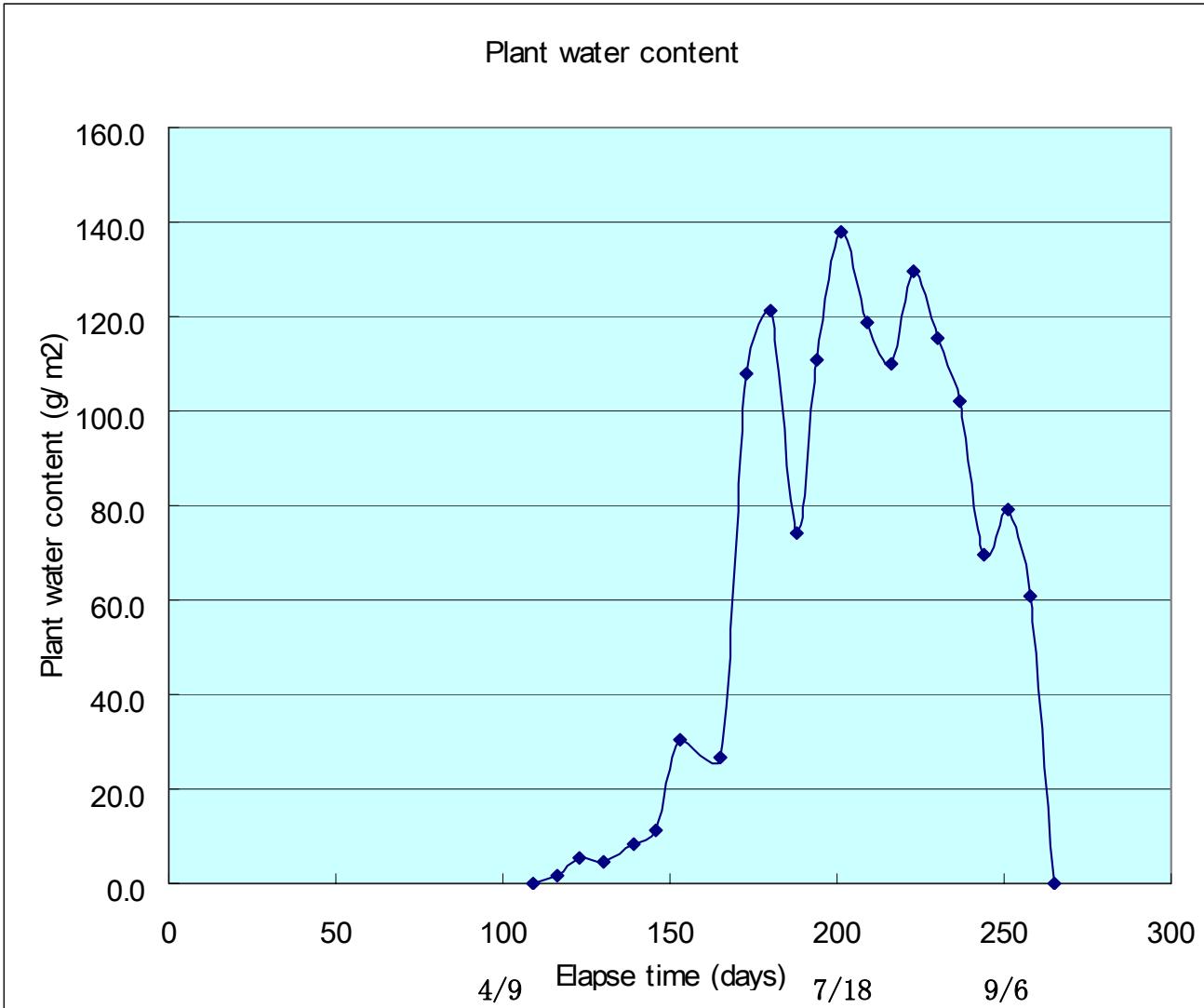
Change in the daily mean values of basic elements from September 2000 to August 2004 at Mandalgobi (IRT: surface soil temperature, AT: air temperature, NR: net radiation flux, St: soil temperature, VWC: volumetric water content of soil moisture)



Change of areal soil moisture at the 3cm depth
of the study area from June 2001 to May 2004



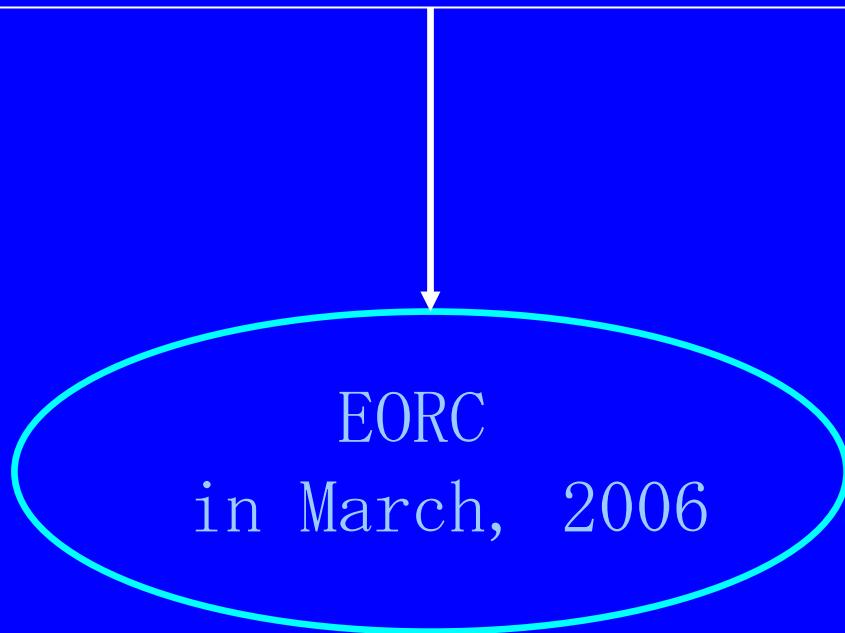
Relationships between soil moisture and pressure head of three AWS site soils



Plant water content in Mandalgobi site, 2004

Presentation schedule of ground-based observation data in 2005

ground-based observation data from
October 2004 to September 2005



Summary and research plans in FY 2005

- Successfully monitoring by AWS and ASSH in 2004
- Problem of durability and life of AWS/ASSH
- Various ground truth data in 2004
 - Continuing monitoring by AWS and ASSH, data processing and plant water measurement in Mandalgobi and its estimation
 - Physical soil property analysis ($K(\psi)$, $\lambda(\theta)$)
 - Making efforts for replacement of all sensors and data loggers