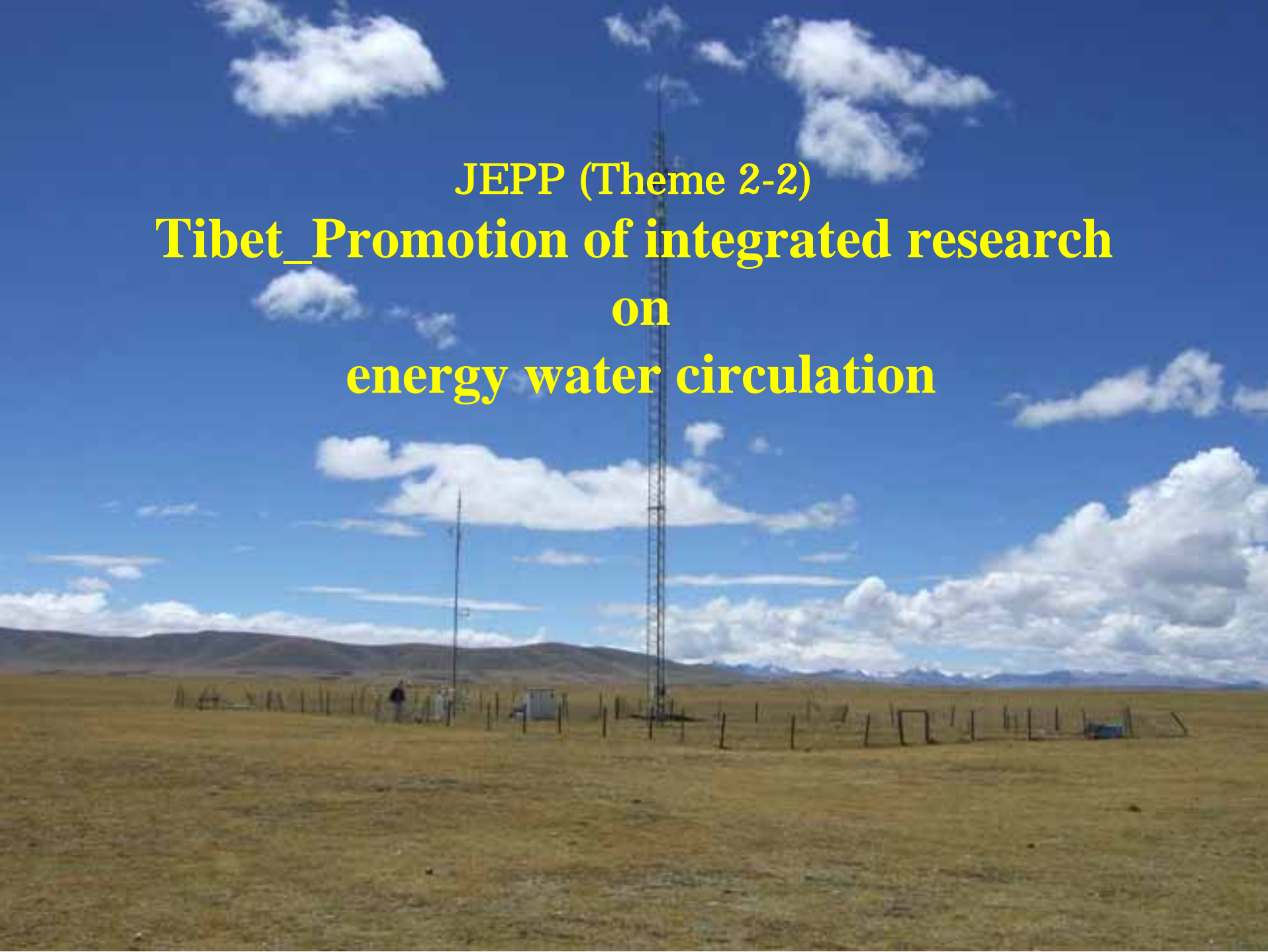


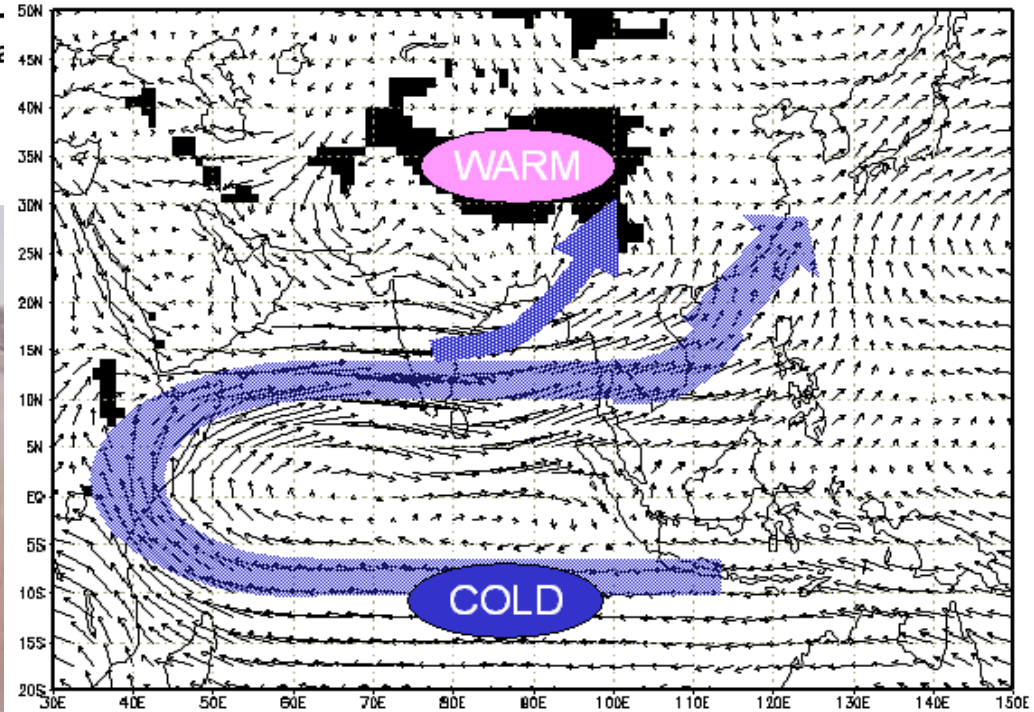
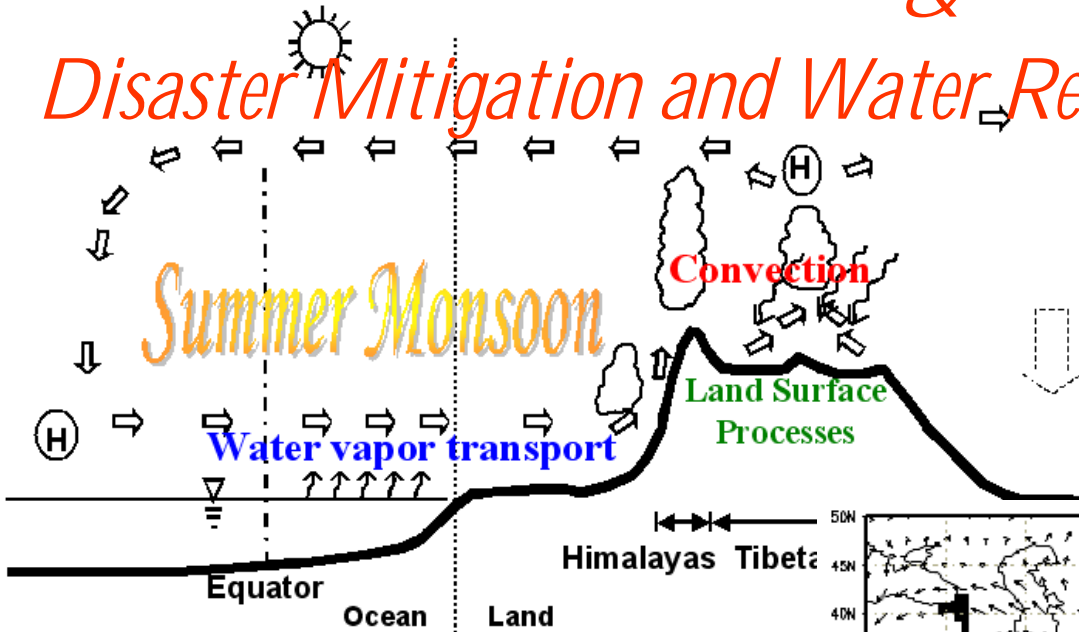
**JEPP (Theme 2-2)**  
**Tibet\_Promotion of integrated research**  
**on**  
**energy water circulation**



# Energy and Water Cycle over the Tibetan Plateau

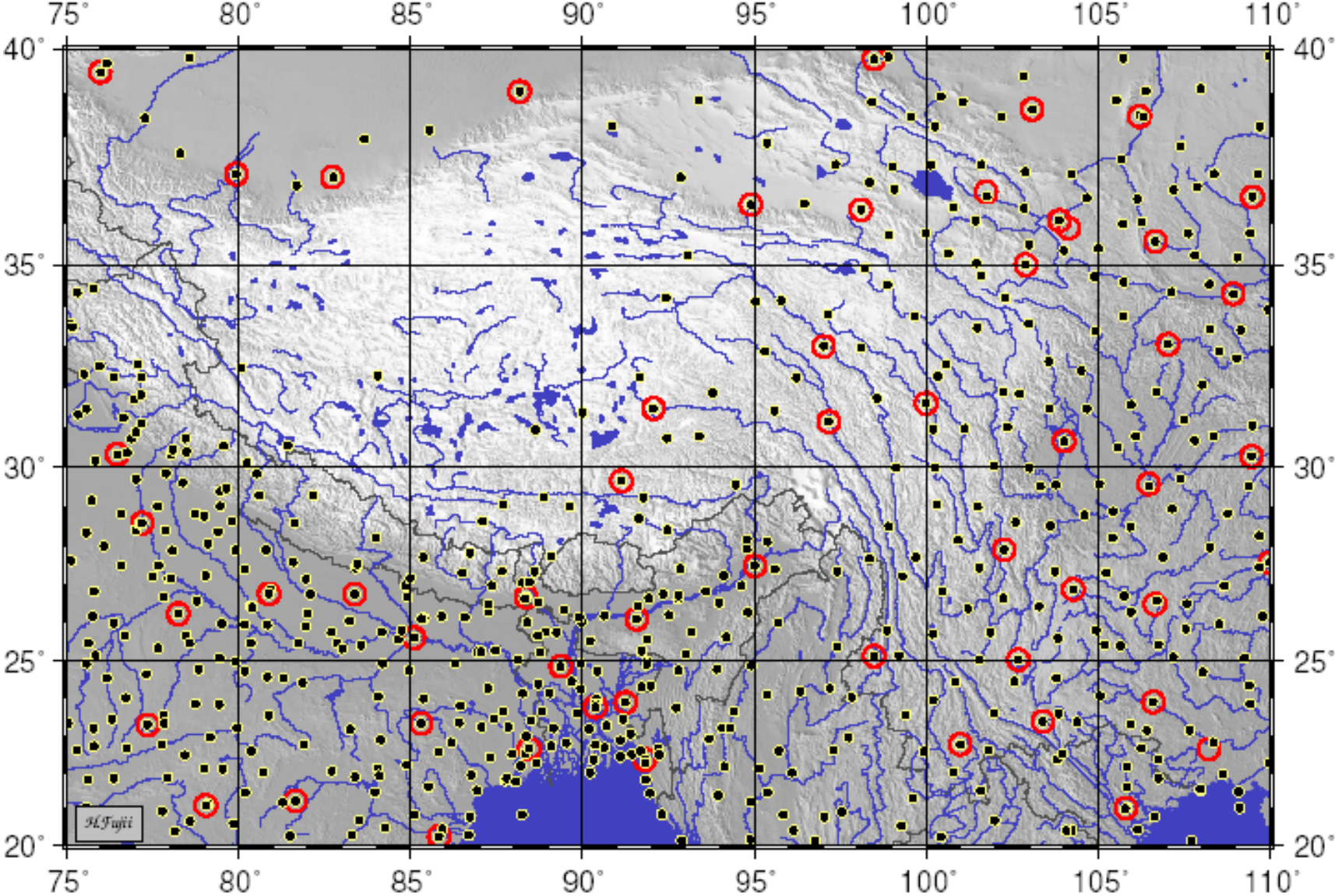
&

## Disaster Mitigation and Water Resources in Monsoon Asia

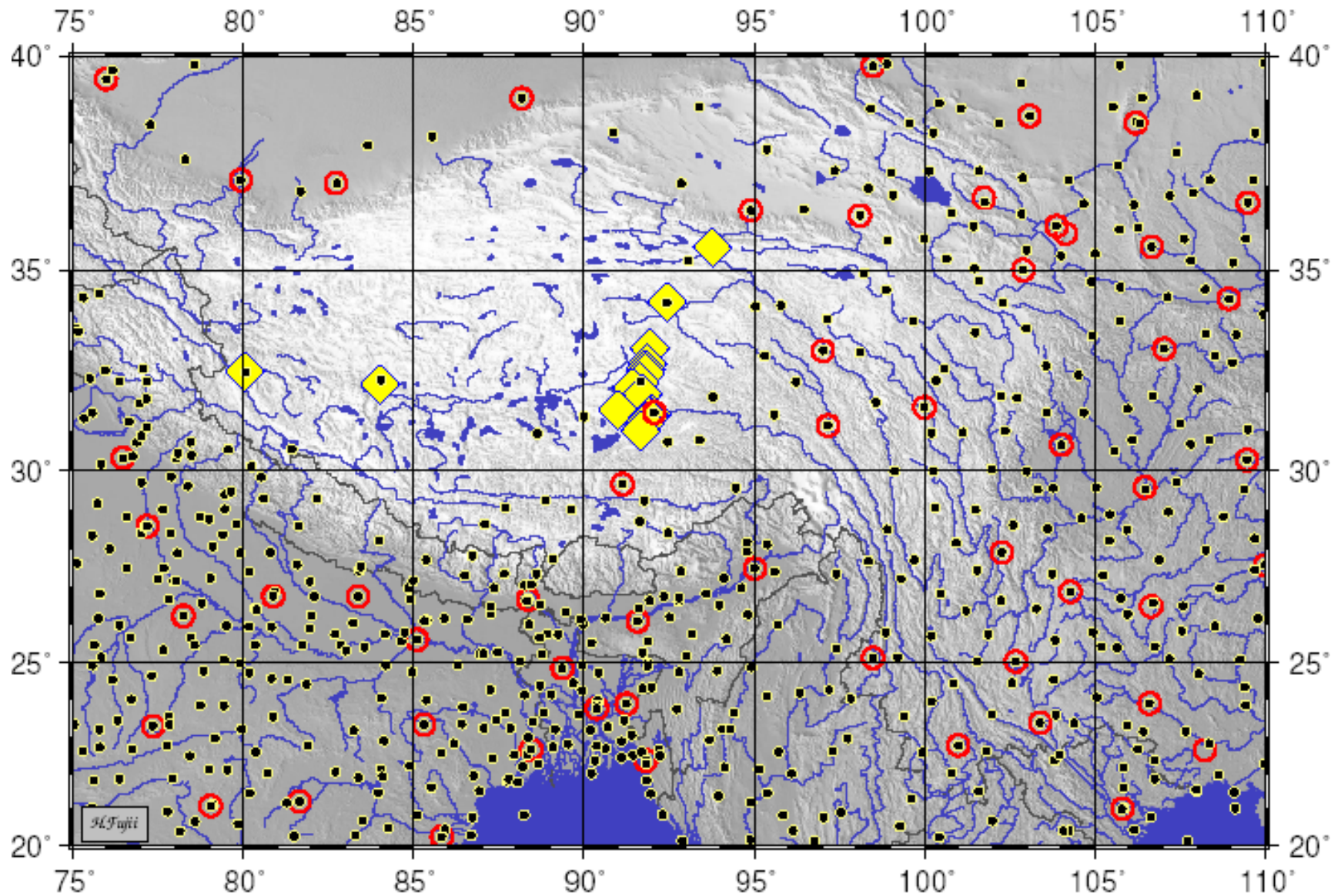




# WMO Stations

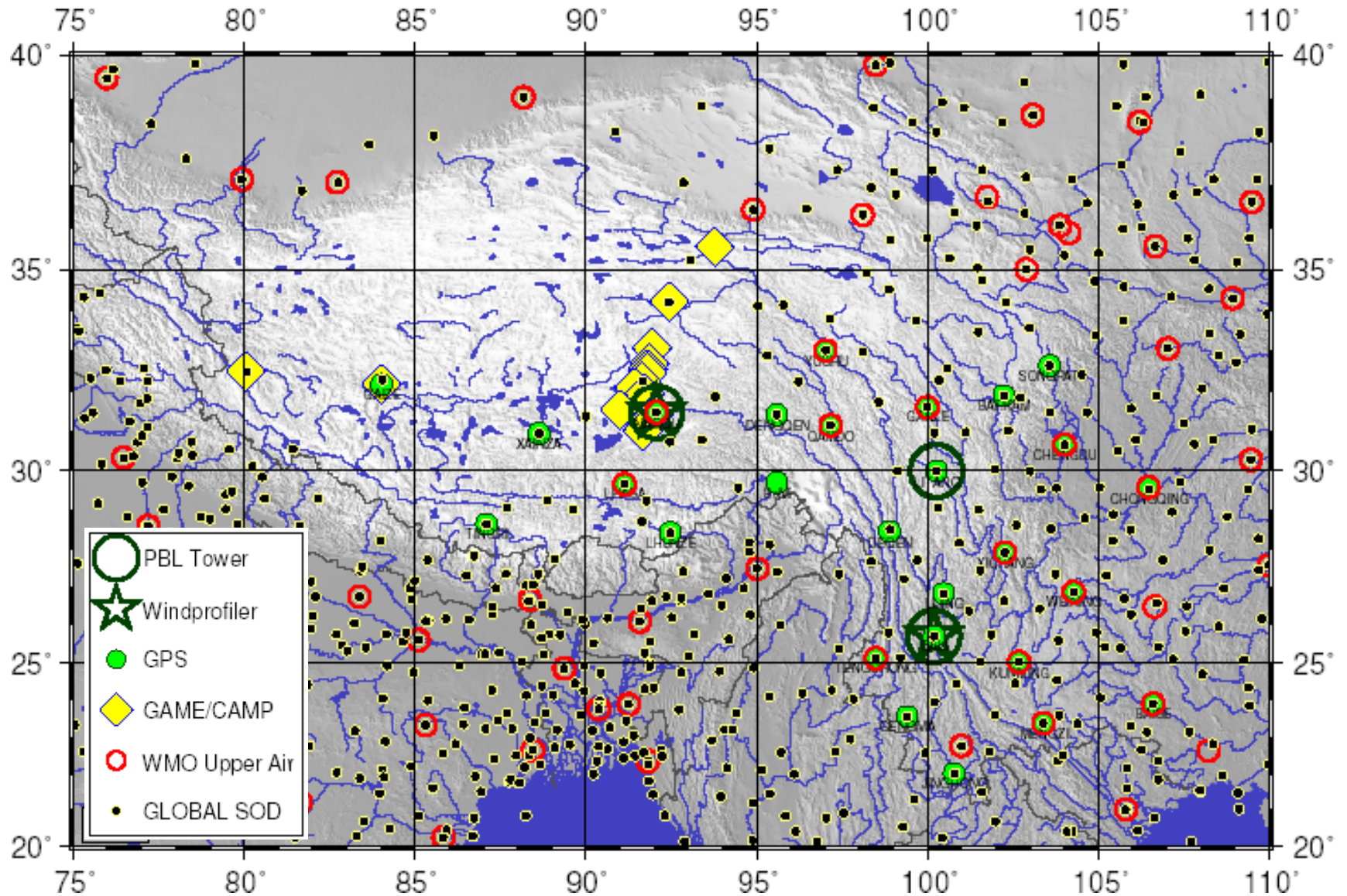


# WMO Stations + GAME/CEOP Stations

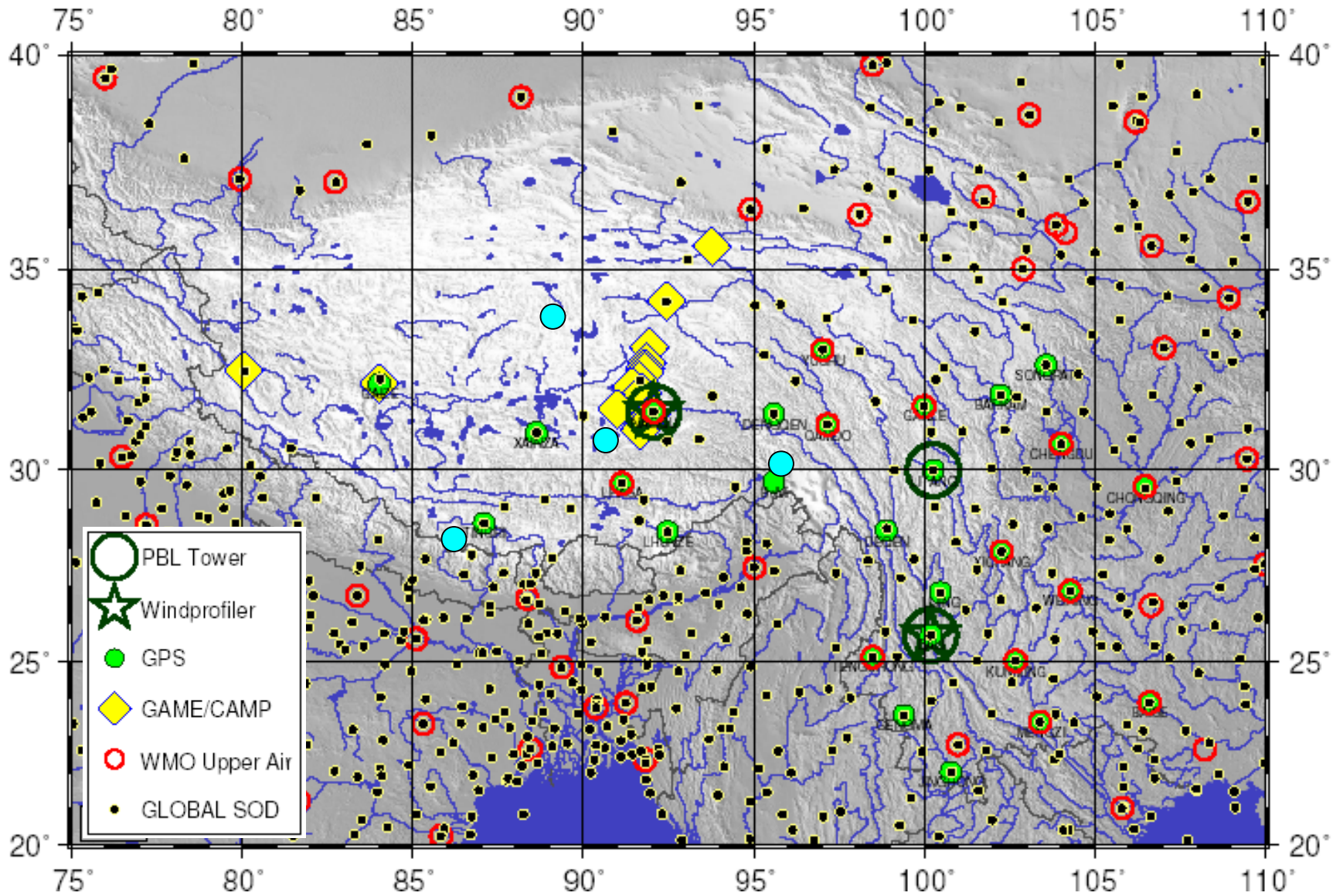




# WMO stations + GAME/CEOP Stations + JICA Stations



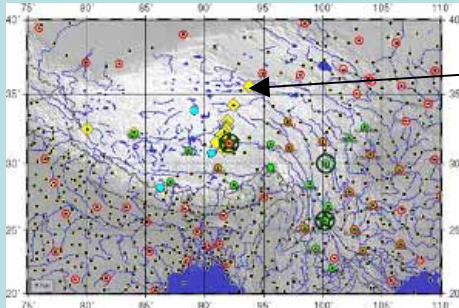
# WMO( ) + GAME/CEOP( ) + JICA/GPS( ) + MORP/CAS( )





# Promotion of Integrated Observation Study of Energy/Water Circulation over the Tibetan Plateau

## Establishment of land base stations in data sparse area

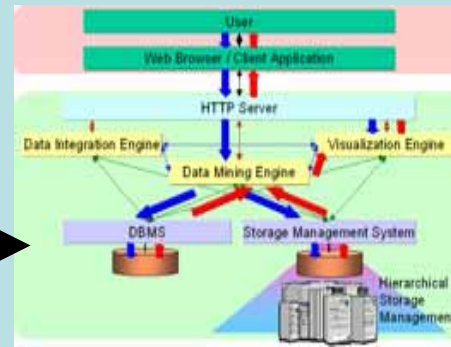


A new site near D66 (Aug. 28, 2006)

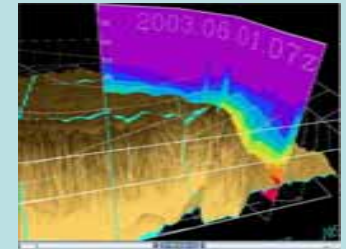


In addition to the operational stations, research stations in GAME/ Tibet and Camp/Tibet are updated for the longer and continuous observation. Twenty four GPS stations for precipitable water, three PBL tower and a profiler are now being constructed.

## Integrated Database System



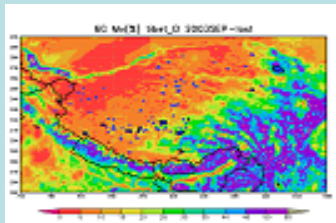
3-D Visualization



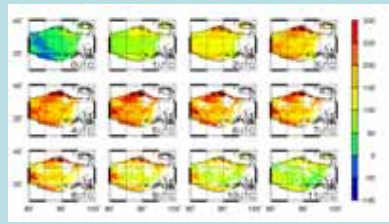
State of arts information technology is applied to implement a sophisticated database system to store and to use land-based and satellite data interactively.

## Satellite Data Archive and Use

Soil water content (SSM/I)

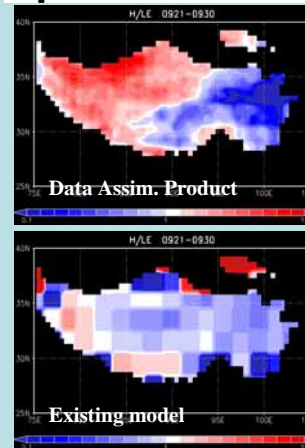


Surface heat flux (FY2C)



The satellite data are collected from various polar orbit satellites. In addition the data from the Chinese geostationary satellite, FY2C, are received and archived, which are used to produce surface temperature and various land surface fluxes.

## Energy/Water cycle estimation/ prediction with data assimilation



An application of integrated database system. The assimilated soil water content (upper panel) shows clear west-east contrast as compared with existing analysis (lower panel).



Toward the better prediction and the mitigation of meteorological and hydrological hazards !

2005-2007

## JEPP\_TIBET

**GAME/CEOP Sites**  
Satellite data archive  
processing



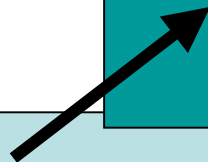
**Integrated Data Archive**

2005-2009

### JICA (CAMS/CMA)

**(JP-CHINA joint project)**

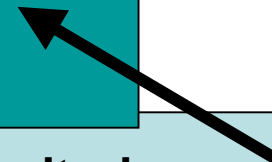
GPS\_precipitable water Obs.(26)  
PBL Tower (incl. Turbulence, 3)  
Wind Profiler (2)  
AWS (7+and other opr. AWS)



**Monitoring and Research Platform  
(MORP) by  
Institute of Tibetan Plateau/CAS**

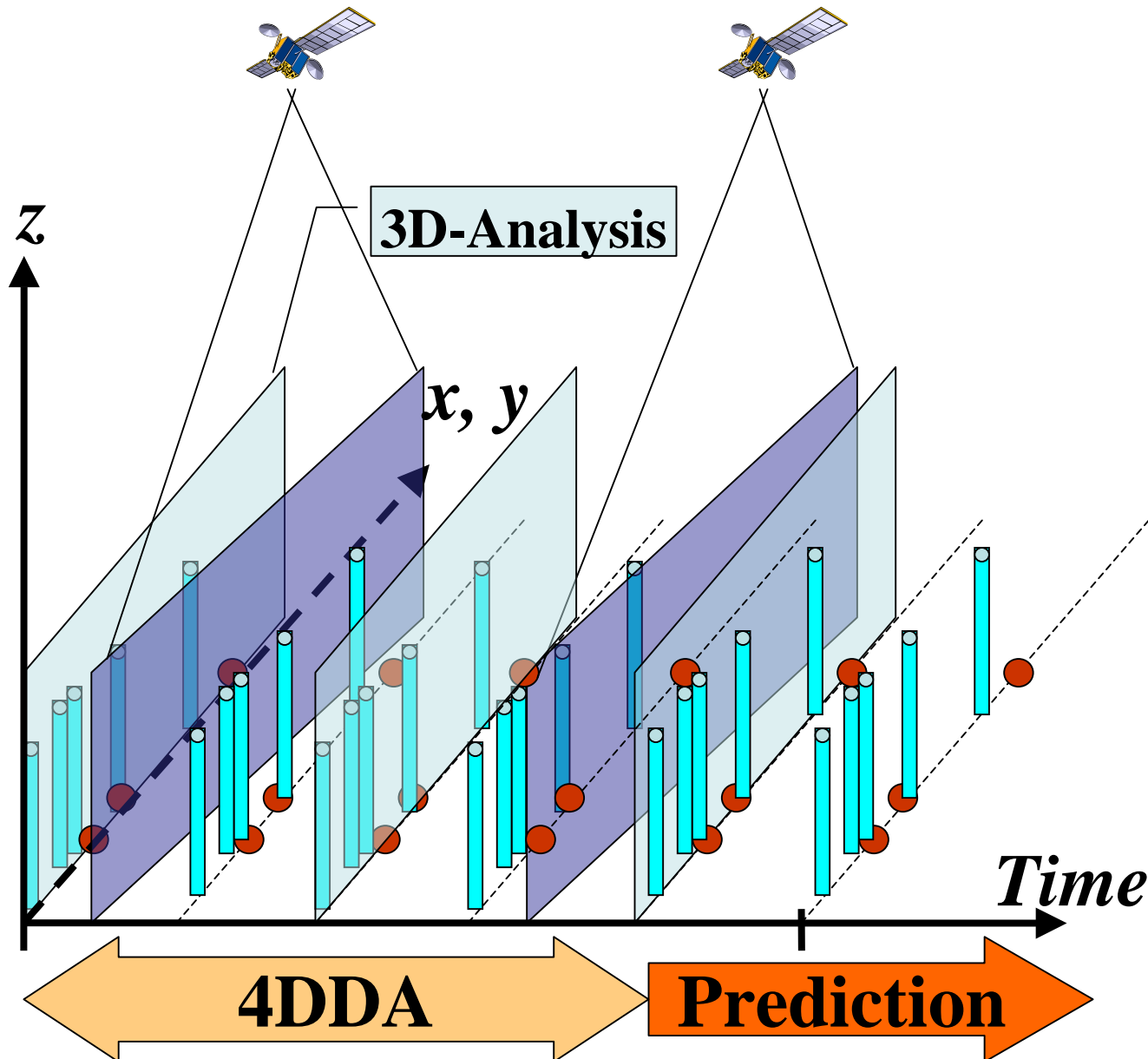
Qomolanma  
Namu-cuo  
Linzhi

.....



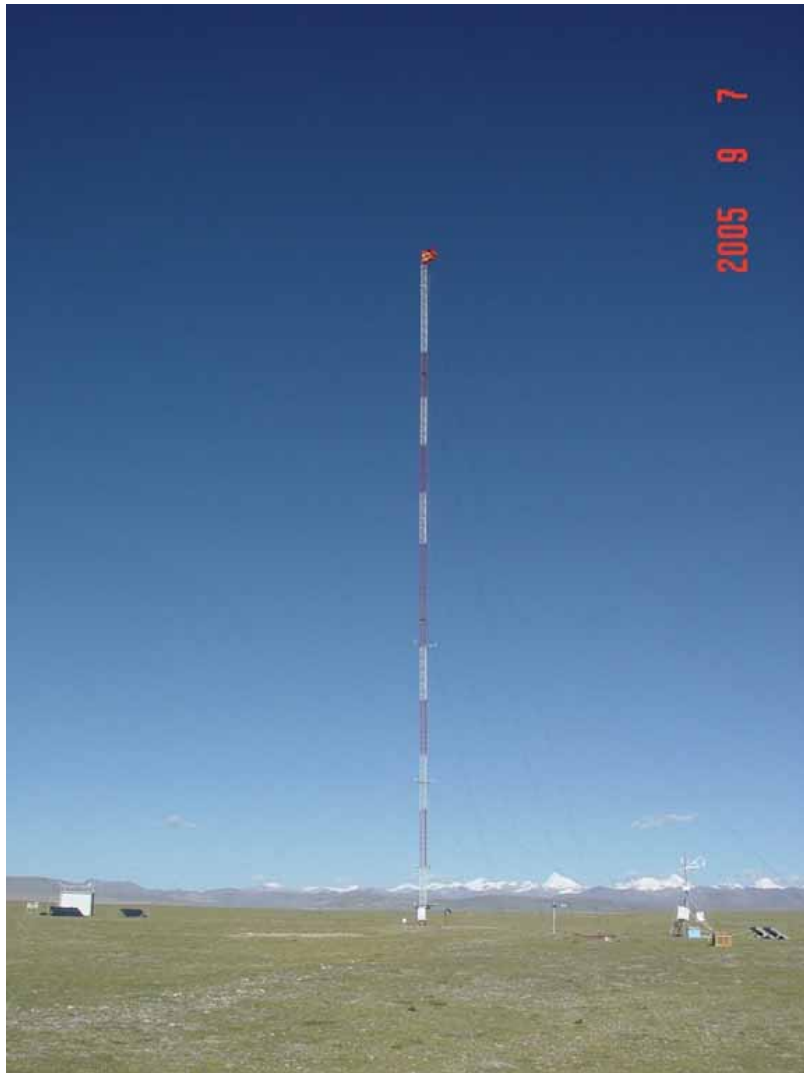


# 4 Dimensional Data Assimilation



# Some MORP Stations

## Namu Cuo



## Qomoranma





