Earthquake and Landslide precursors detection

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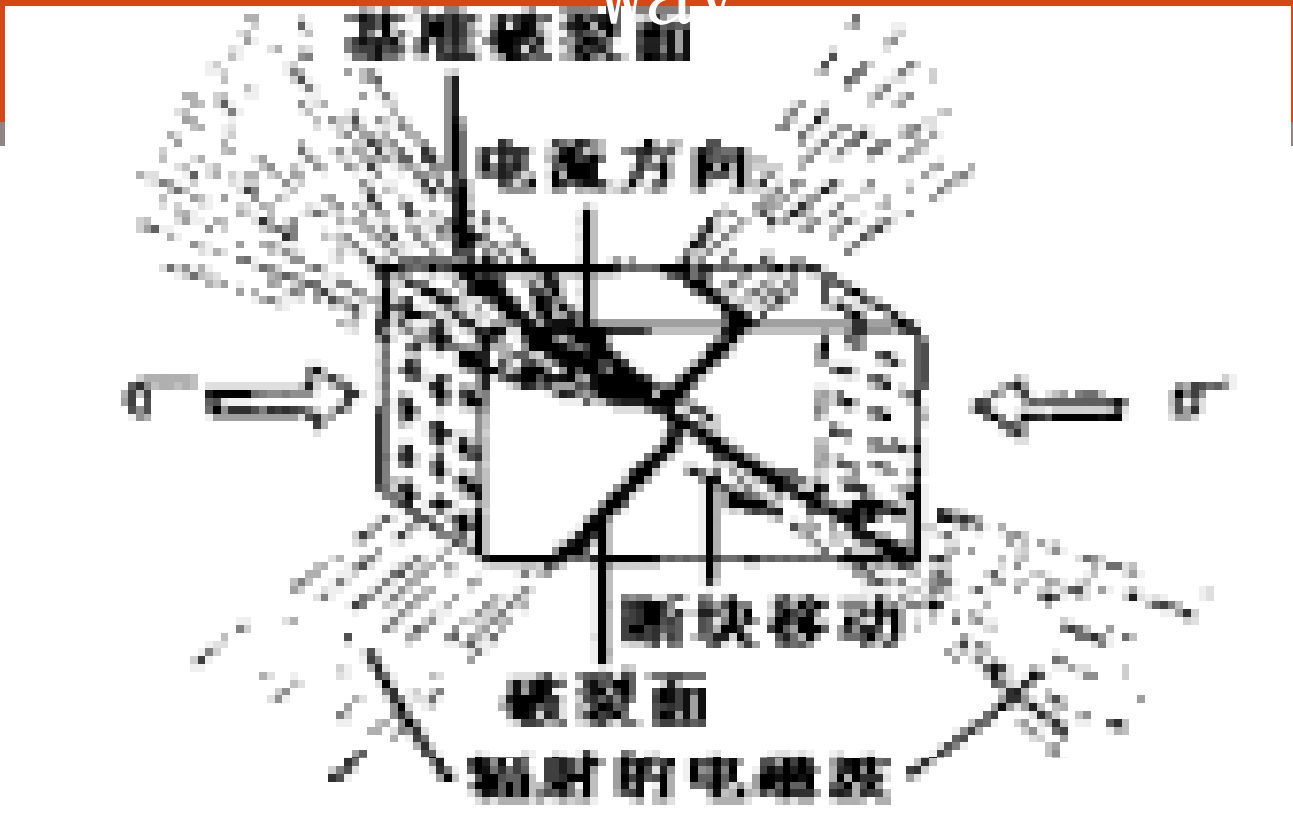
Contents

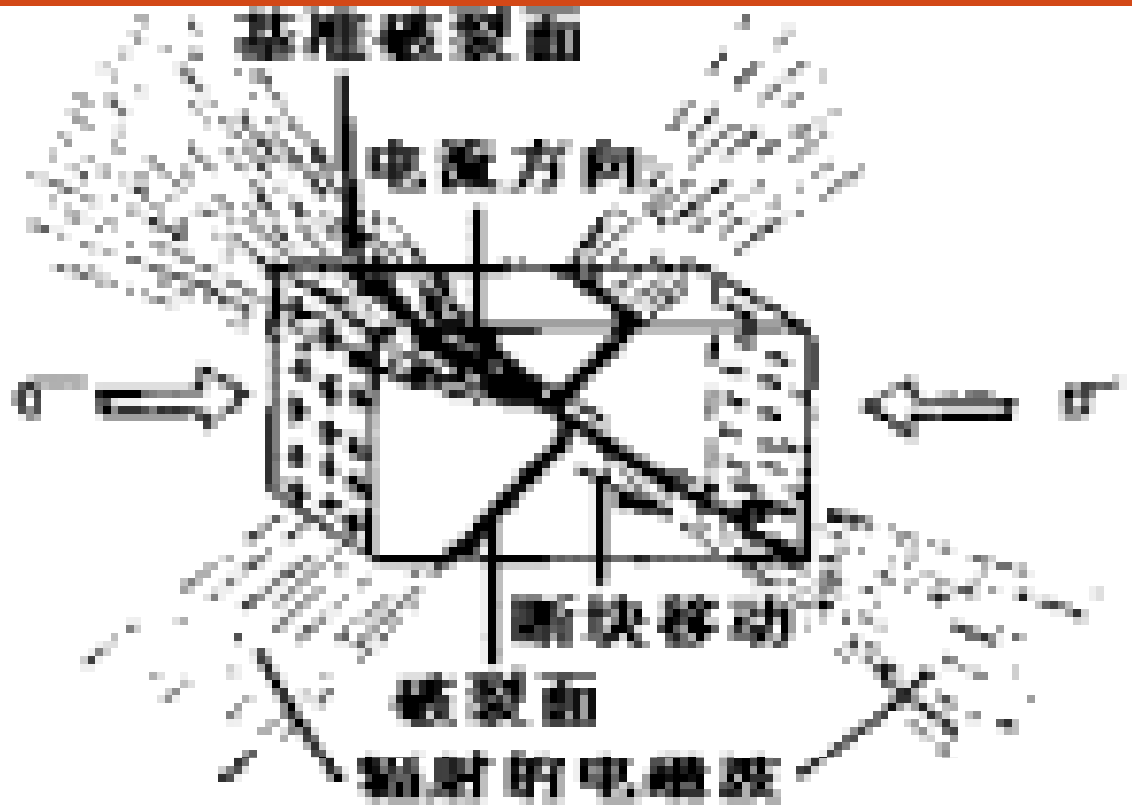
- Detating precursors signal (Sensing)
- Interpretation and Integration(get correct predition info)
- Promoting and insallation (impementation,make it practical)
- Correctly apply prediction infor (how to triger DSS(Decision Supporting System)
- Interfacing with other kinds of forcasting models (Dependency)

Sensing

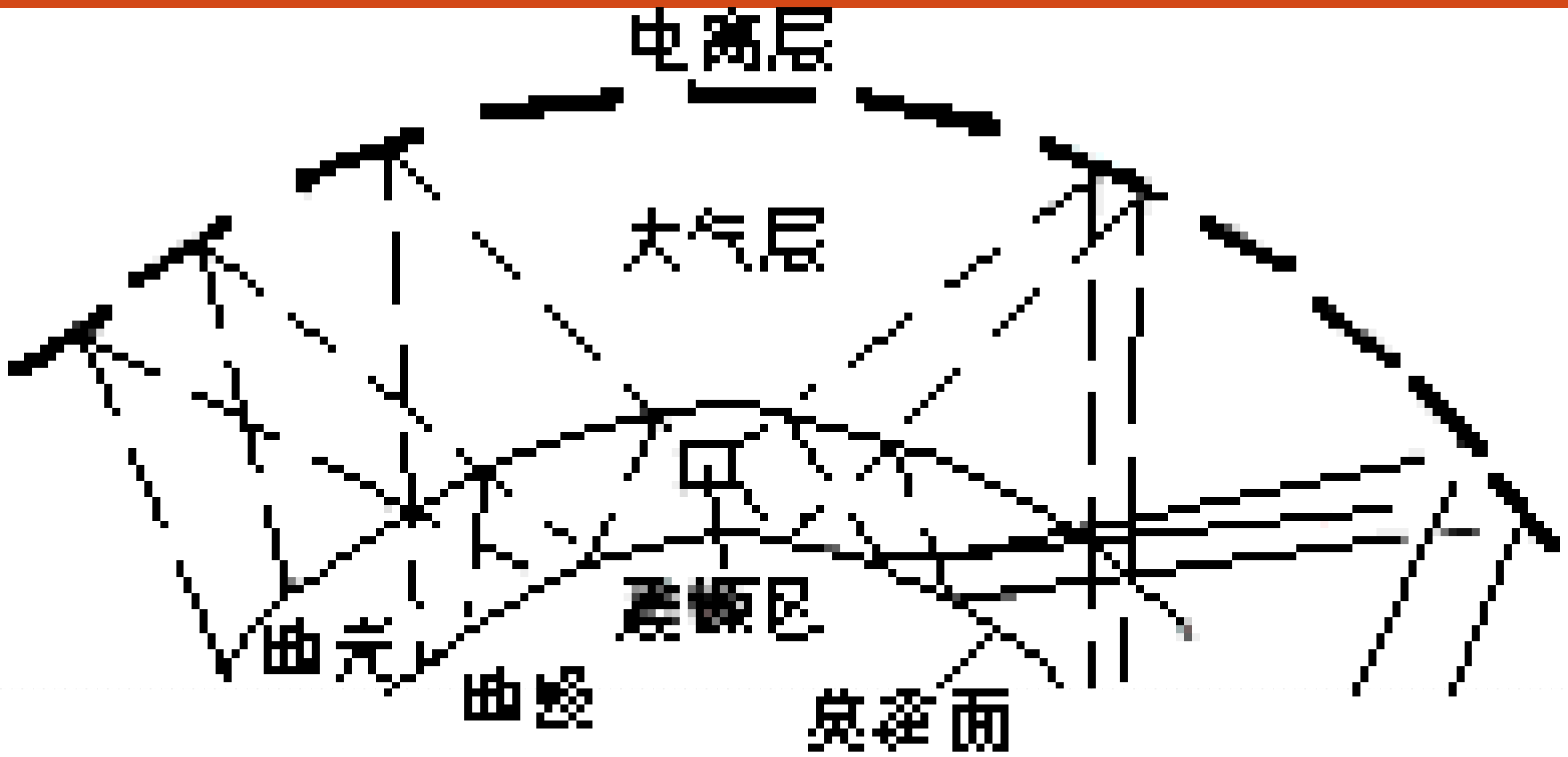
also trasmite low-frequency radio wav



field and also trasmite low-frequency radio way



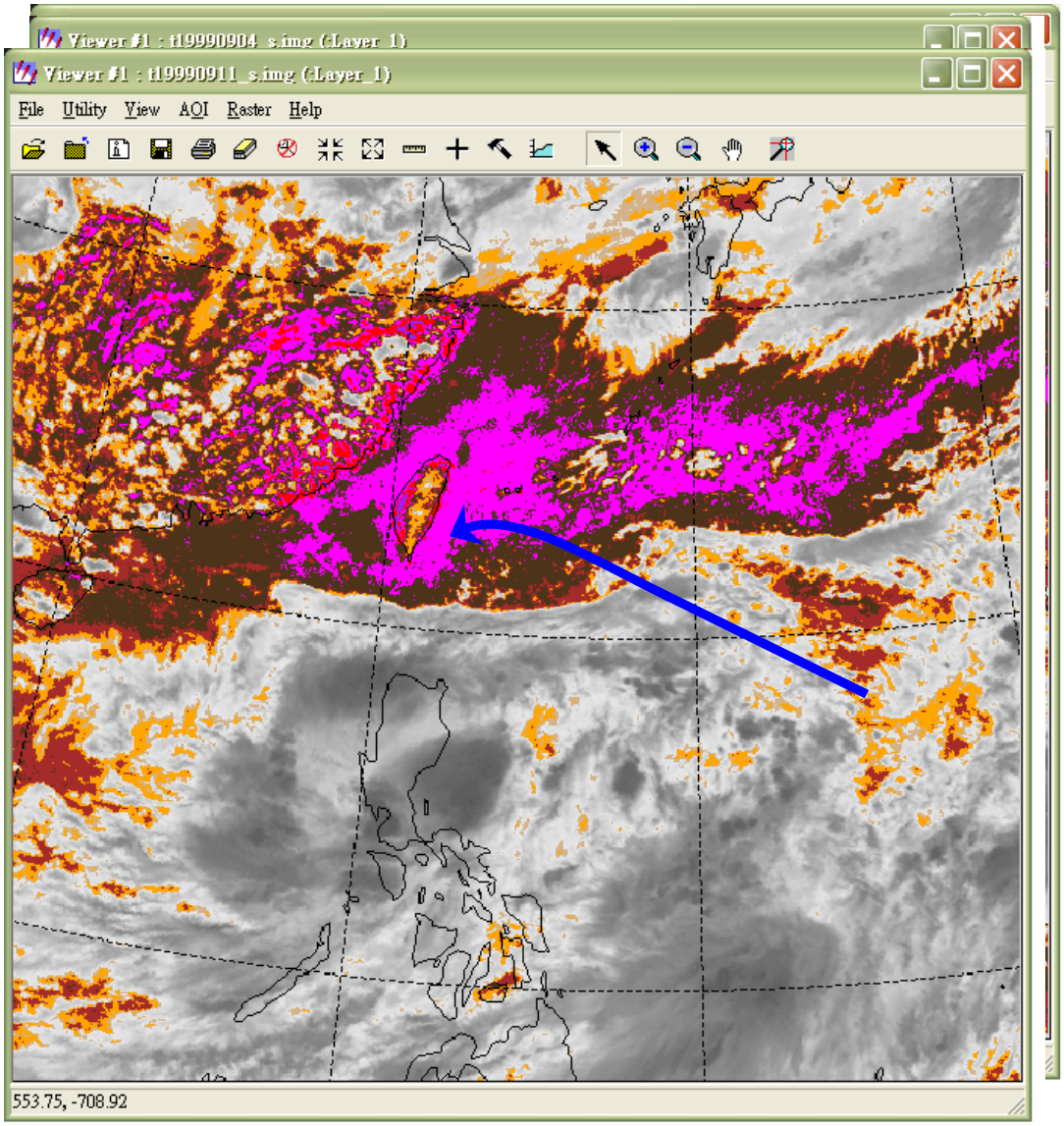
Low-F radio wave transmitting through atmosphere and crust



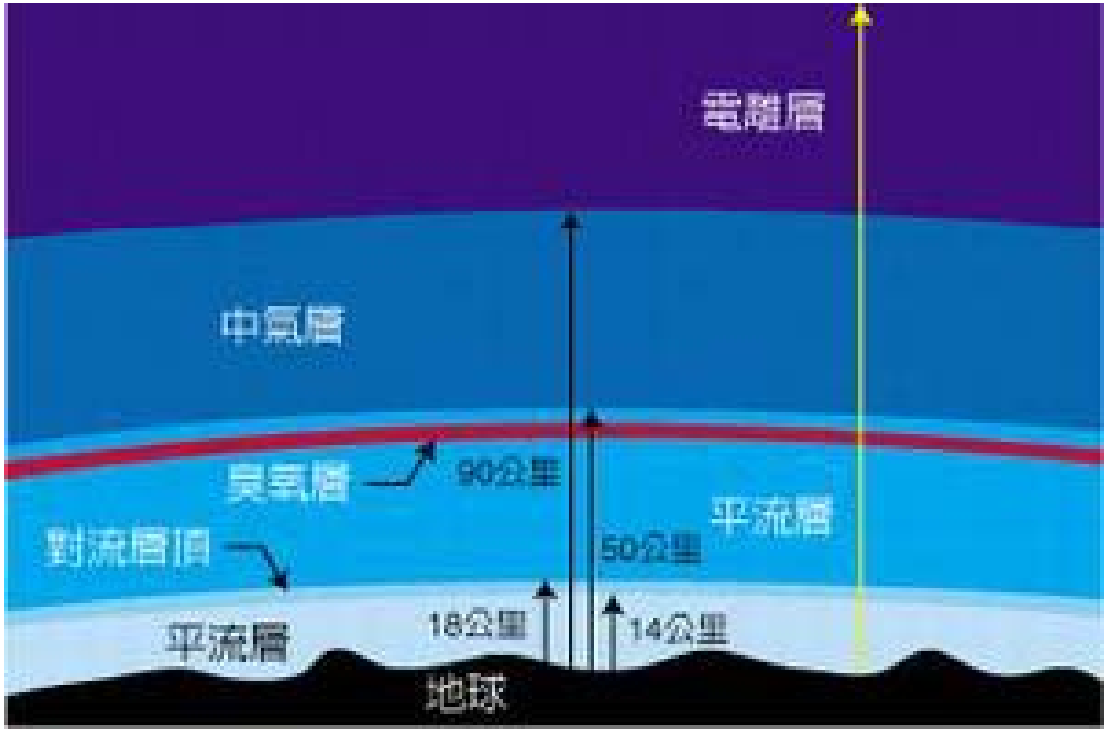
MDCB-5 EATHQUAKE PRCURSOR DETECTOR

MDCB-6 is designed for detectin landslide prcursors signal

Applying thermal imagers to detect the earthquake stress moving path (in 1999. the 921 earthquake)

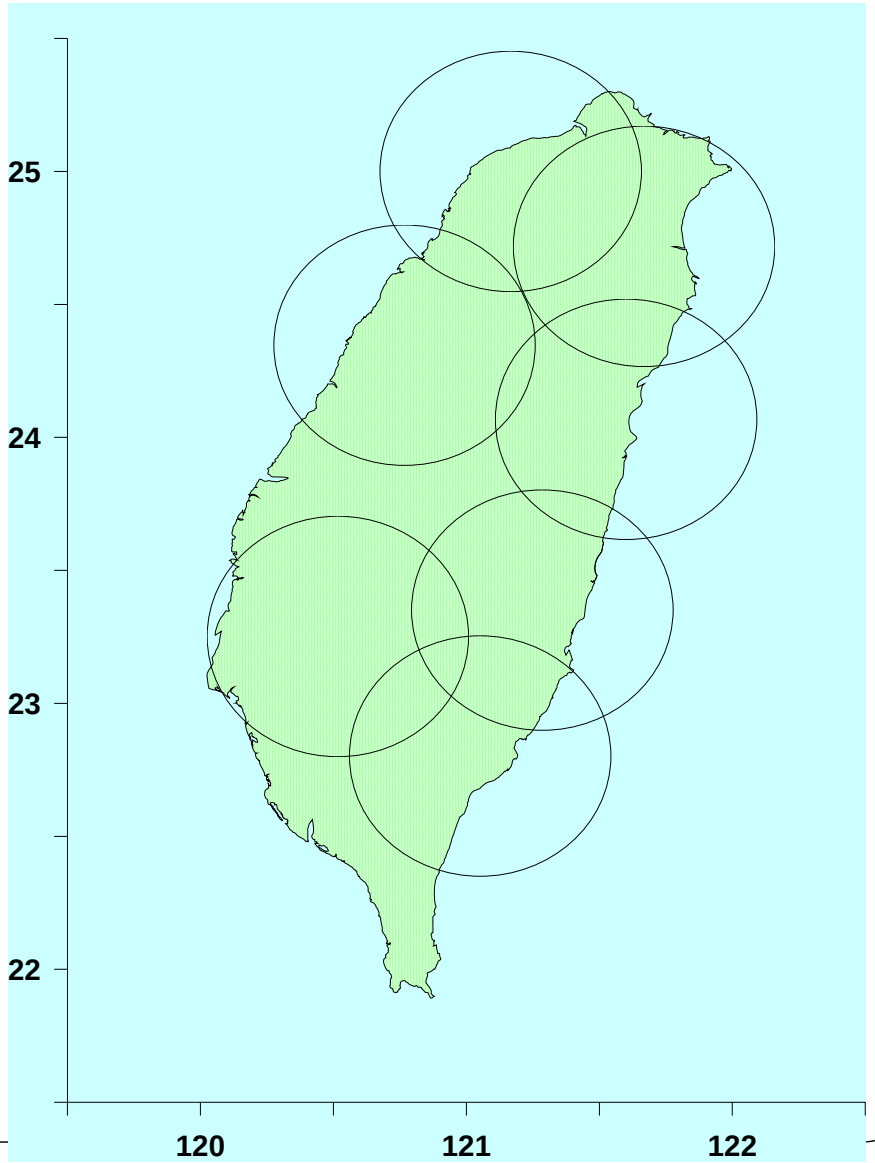


Applying GPS to detecting electric field abnormal signals

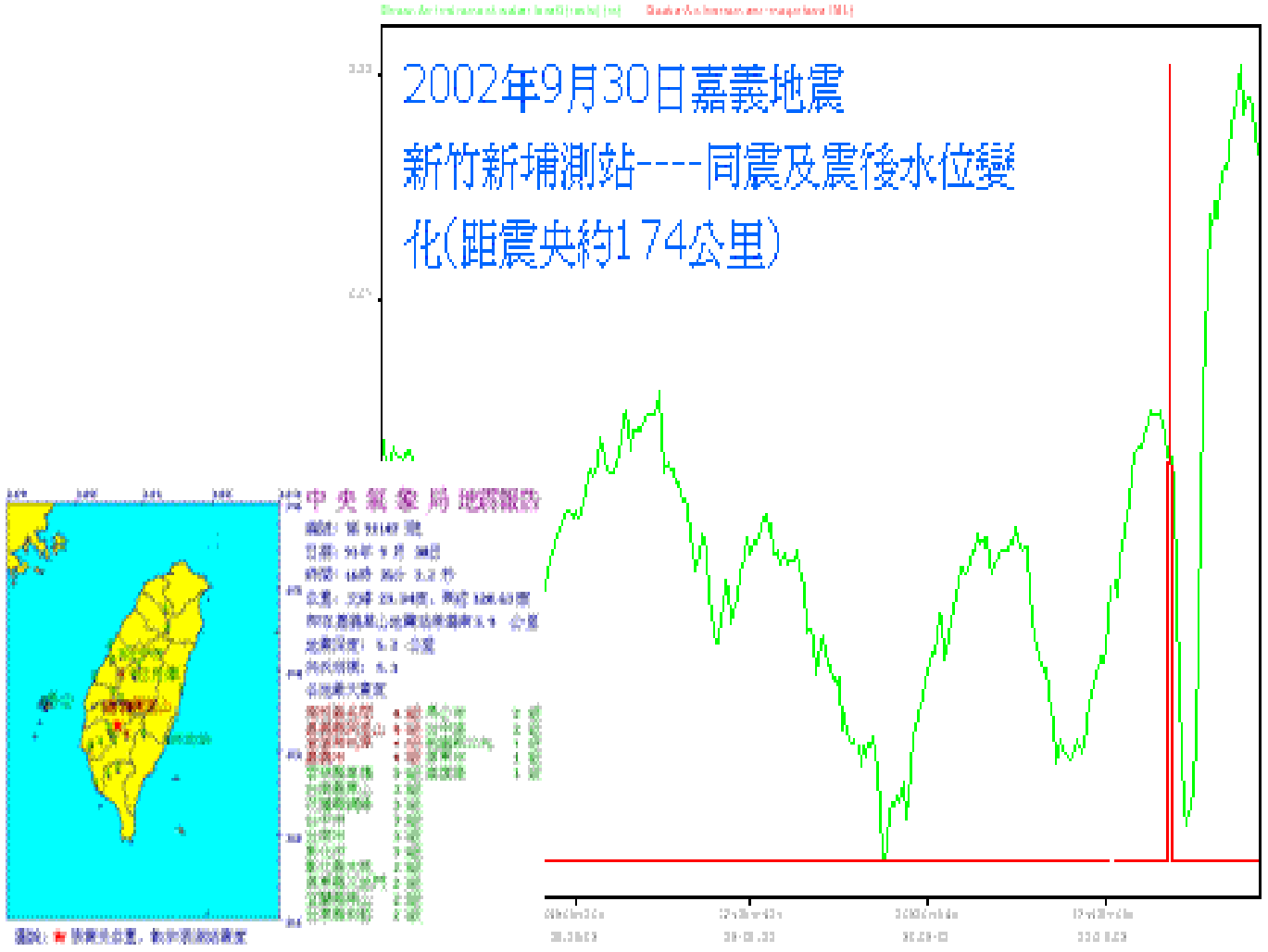


Low frequency changes of earth magnetic field

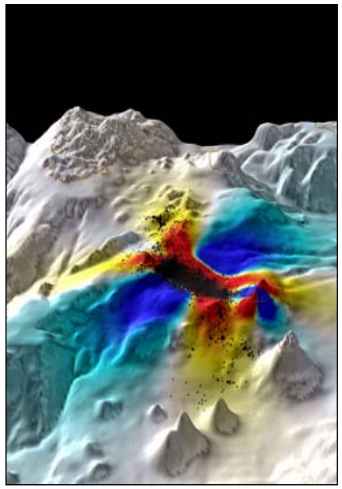
- There are 8 stations for detecting the changes of earth magnetic



Water wills for earthquake precursors observation

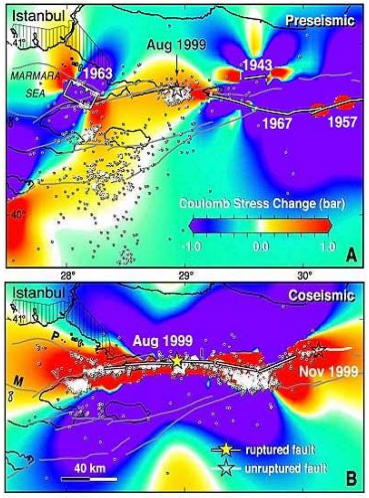


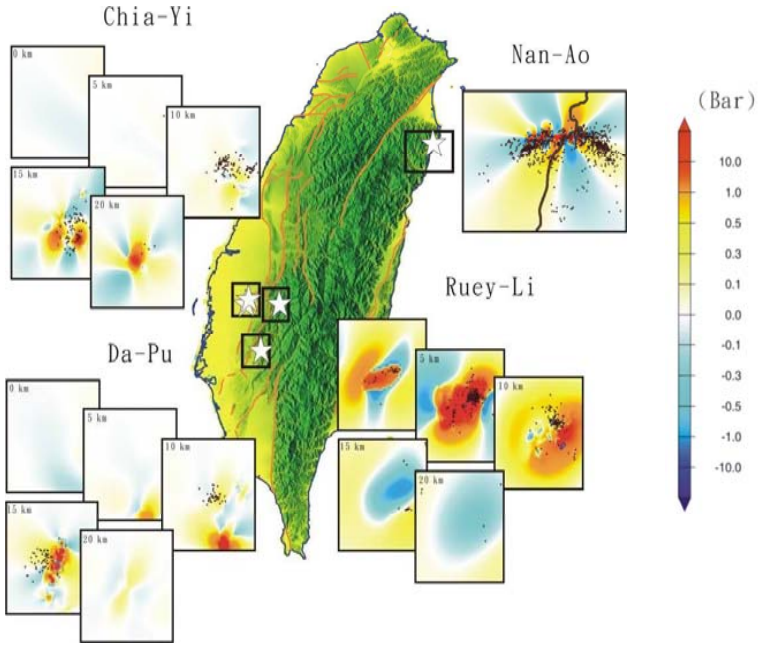
Stress change detecting



2000 Izu Islands swarm,
by Toda et al.

1999 Izmit earthquake,
Parson et al.



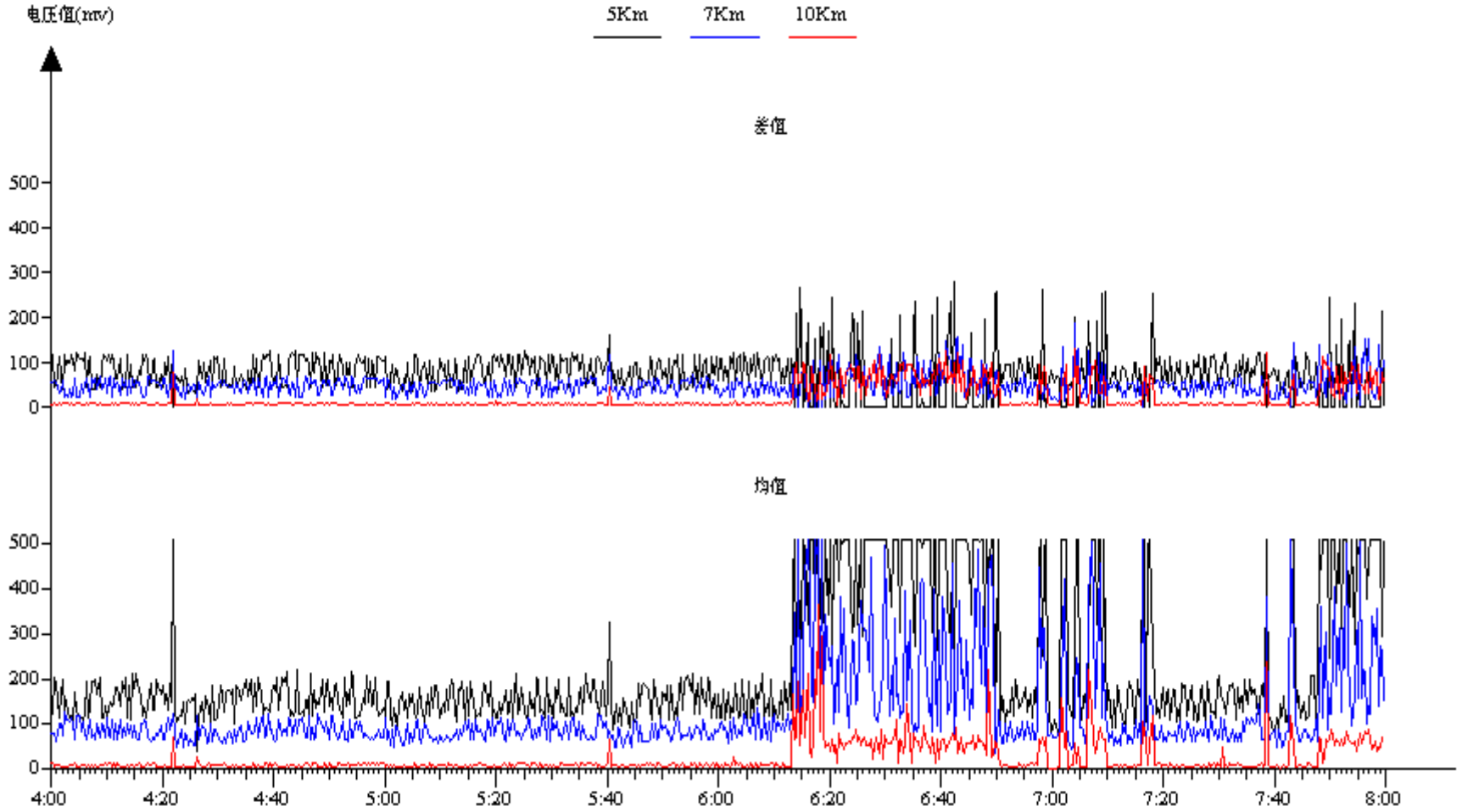


Interpretaiton

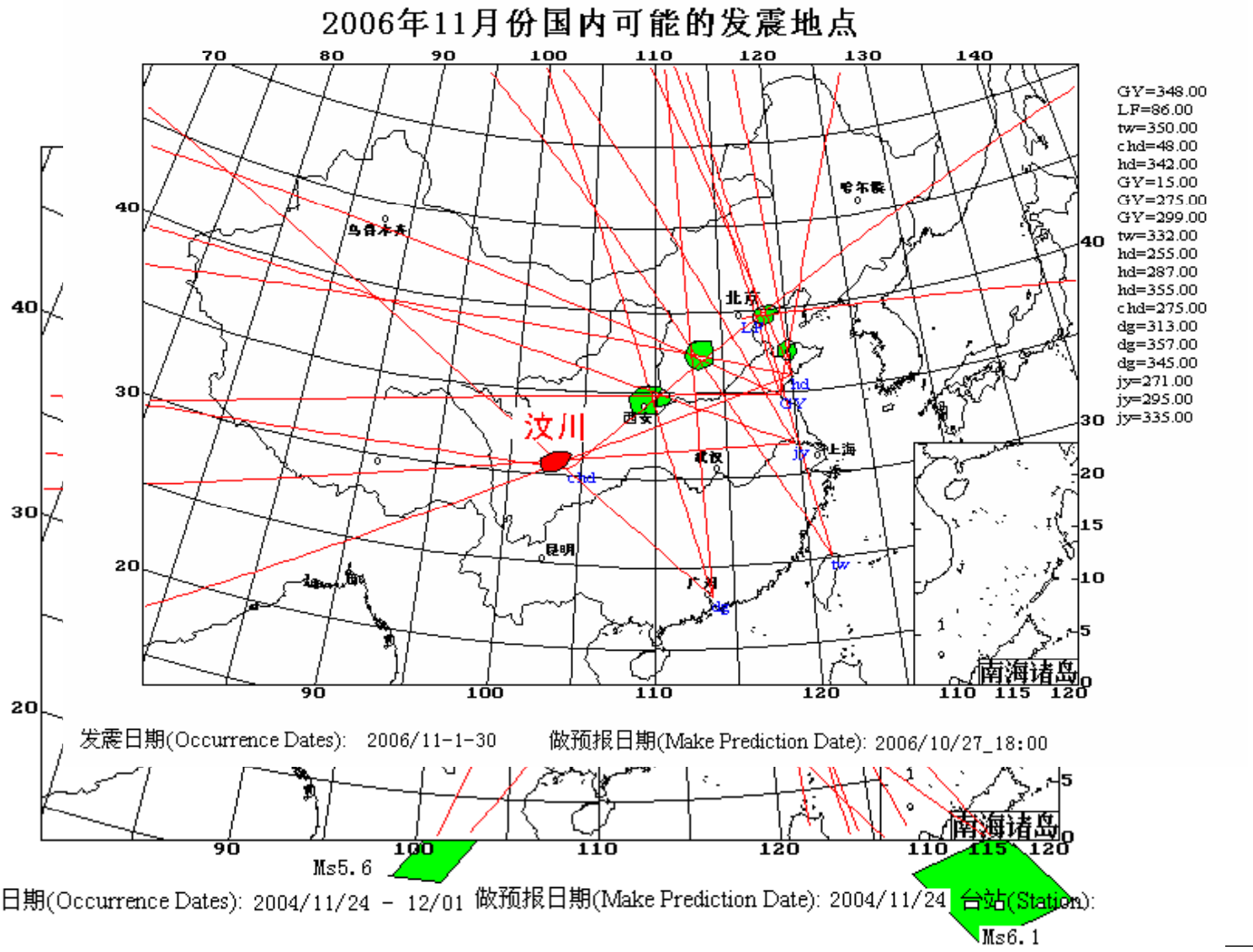
MDCB abnormal signal

記錄當地三種頻率的電磁波每20秒的平均強度

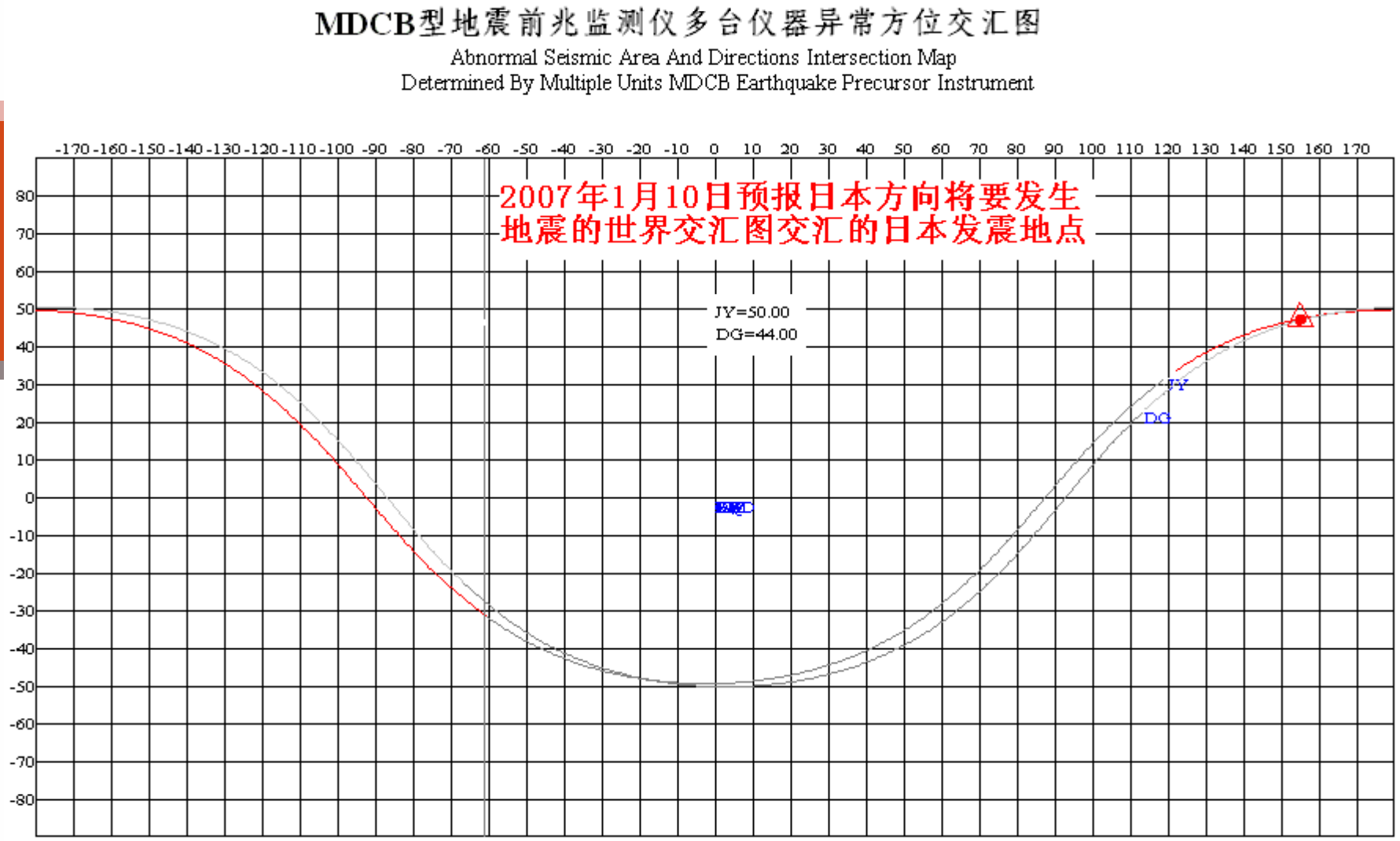
此為有地震前兆的曲線特徵



MDCB earthquake precursor and predication



2008/5/12日Wunswang Earthquake

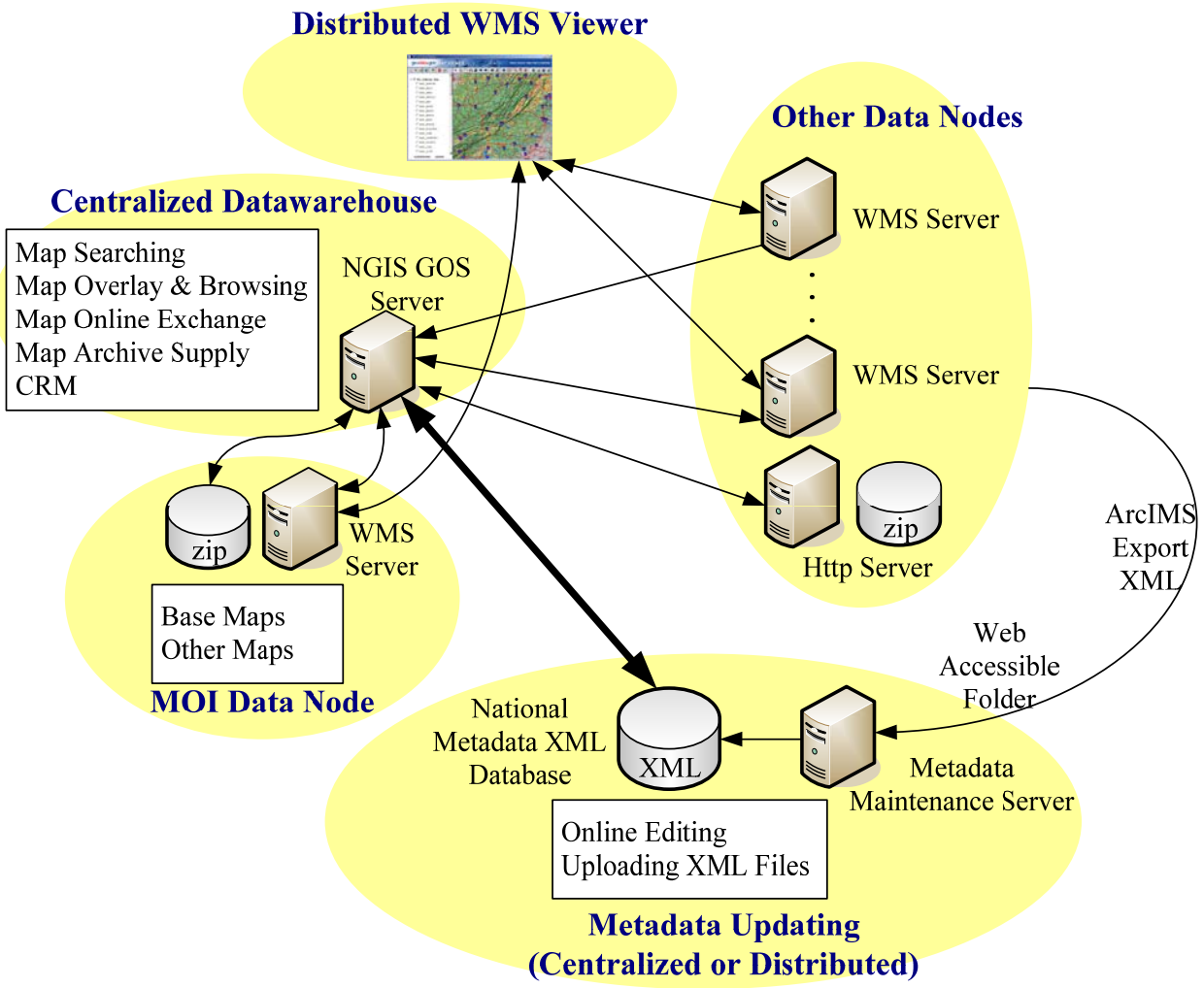


Data and Functions Sharing

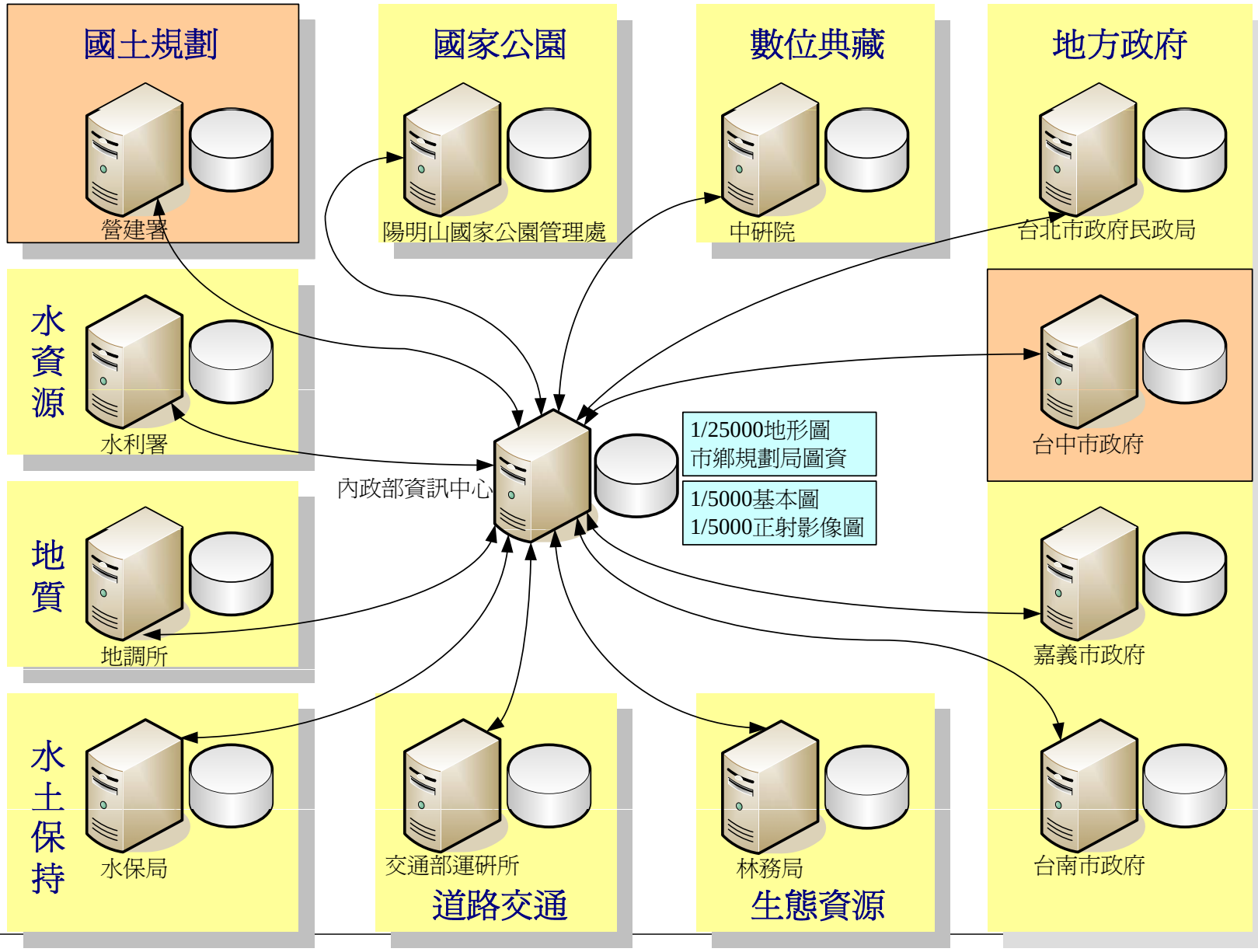
TGOS in the TSDI
(a platform for sharing GIS data and functions)

- http://ngisdata.moi.gov.tw

System Structure of NGIS Geospatial One-Stop



The Members Jointing in NGIS Geospatial One-Stop

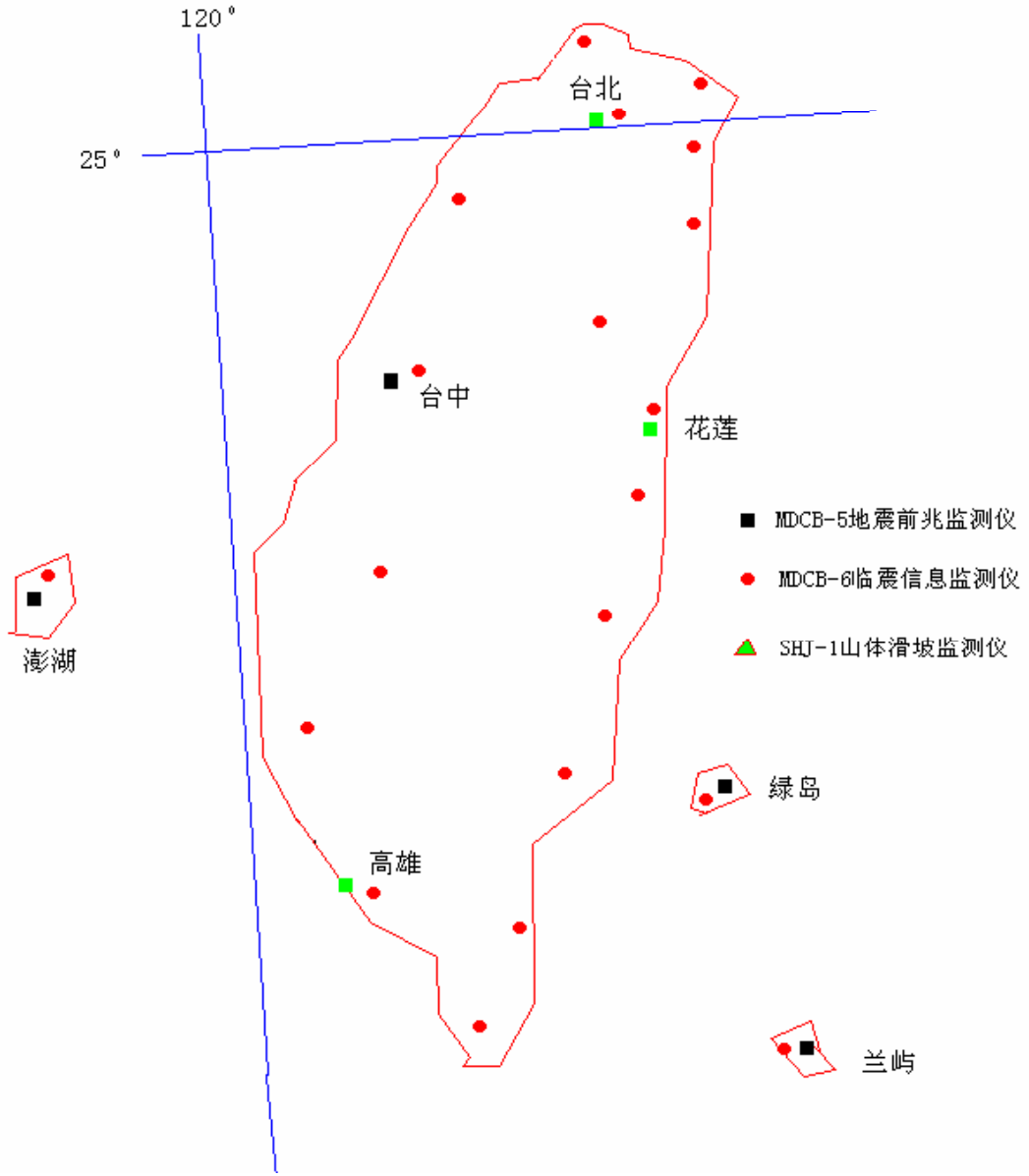


Promoting and Installation

MDCB Monitoring setting plan

4台DCB_5
型大区域应
力场监测仪

20台MDCB-
6型区域应
力场监测仪



- Minimzing cost and size (make them easier to be applied)
- Practically forcasing and Verificaiton
- Engaging with the formal Disaster Mitigation DSS