

Comparison between the ISC Bulletin and the CWB Catalog for Earthquakes Occurred in the Taiwan Region

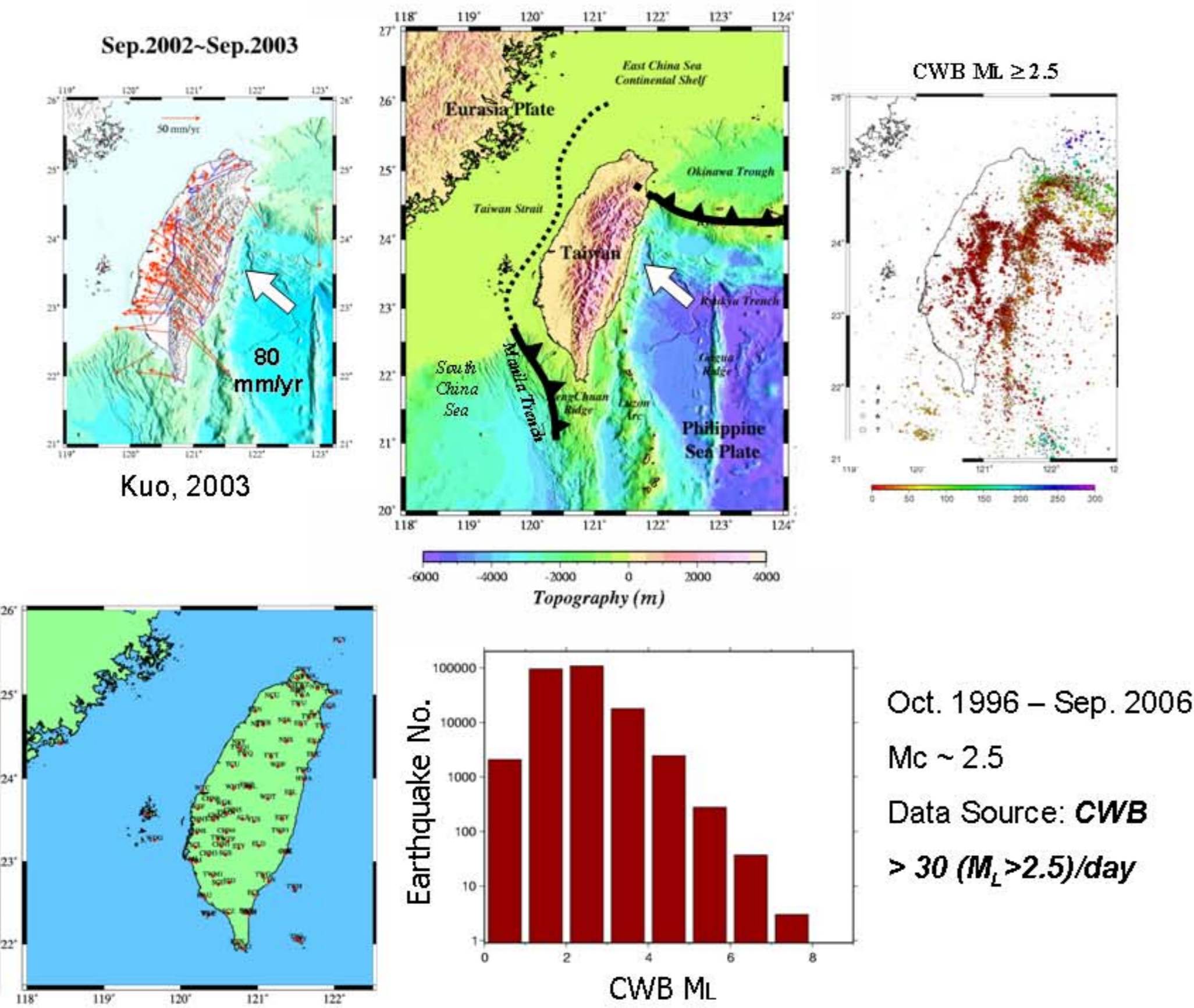
Wen-Tzong Liang¹ Mei-Yi Ho² Bor-Shouh Huang¹

1. Institute of Earth Sciences, Academia Sinica, Taiwan Email: wli@earth.sinica.edu.tw

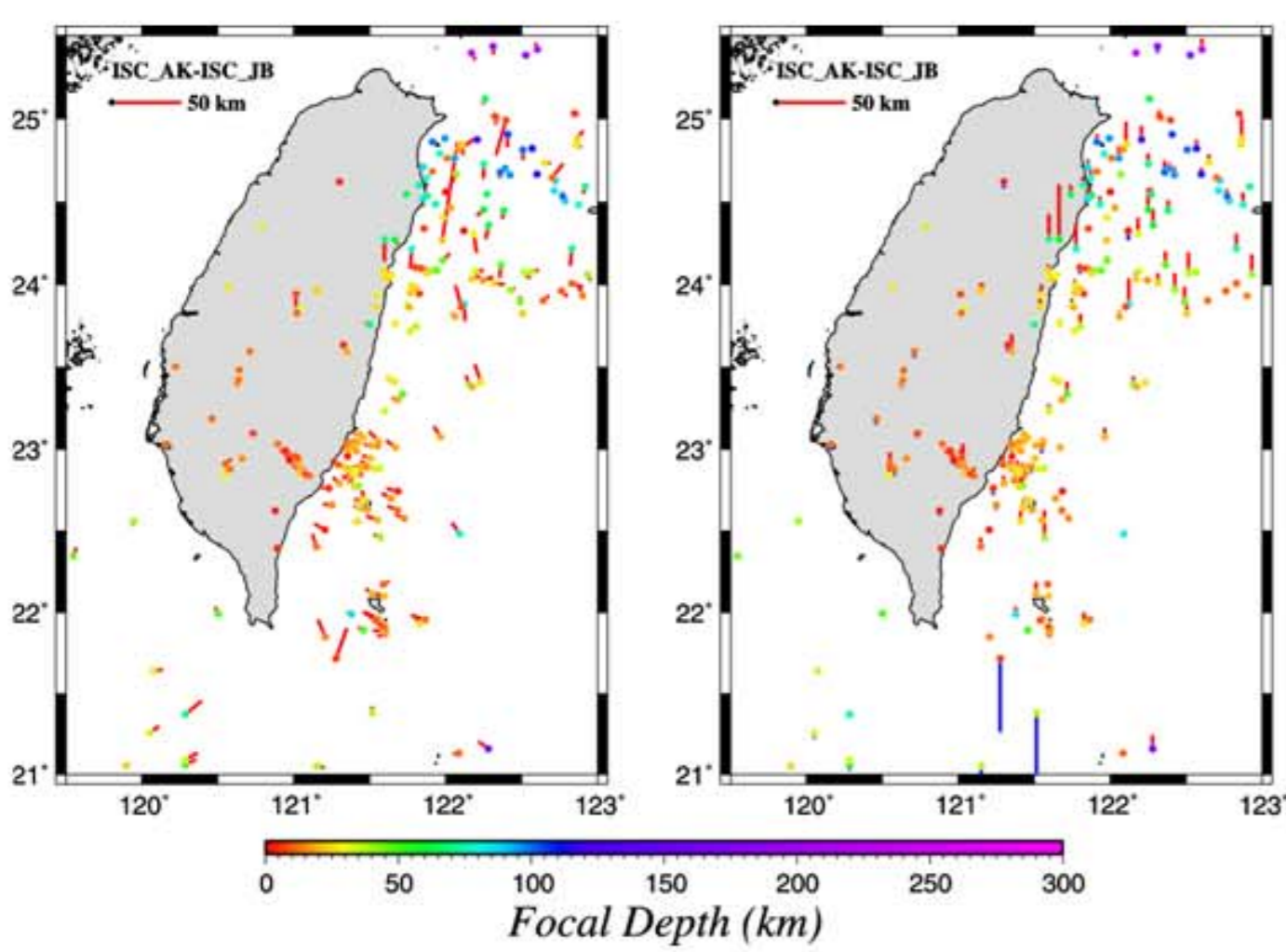
2. Central Weather Bureau, Taipei, Taiwan

ABSTRACT

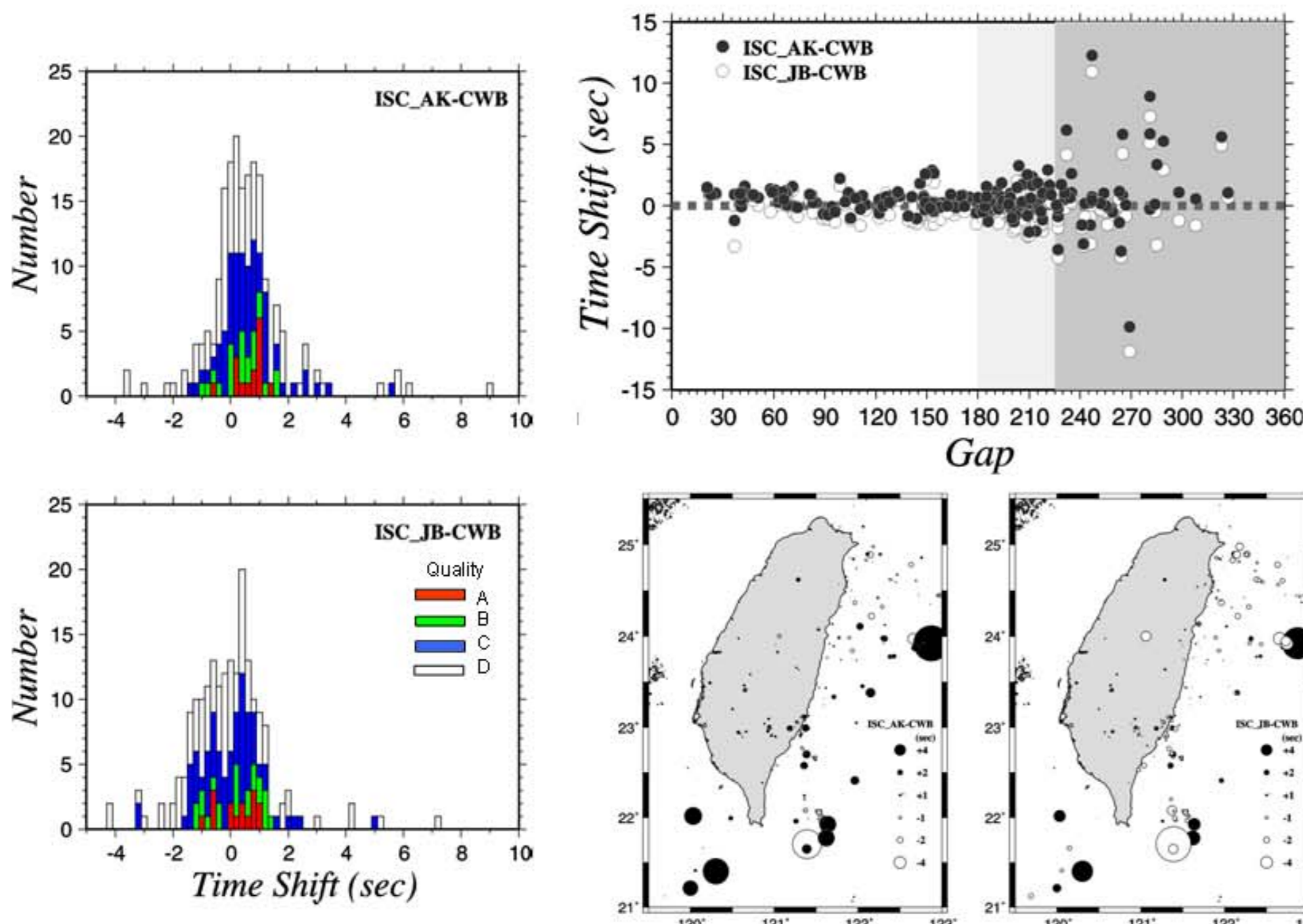
To help ISC to evaluate the performance of location procedures by using various earth models, we compare the ISC bulletin with the Central Weather Bureau (CWB) catalog for earthquakes occurred in the Taiwan region. We found that the difference in location results between various datasets shows interesting patterns regarding plate boundary zones. Both horizontal and vertical shifts toward high velocity region (sea plate and subduction direction) are found in the comparison between ISC and CWB catalogs.



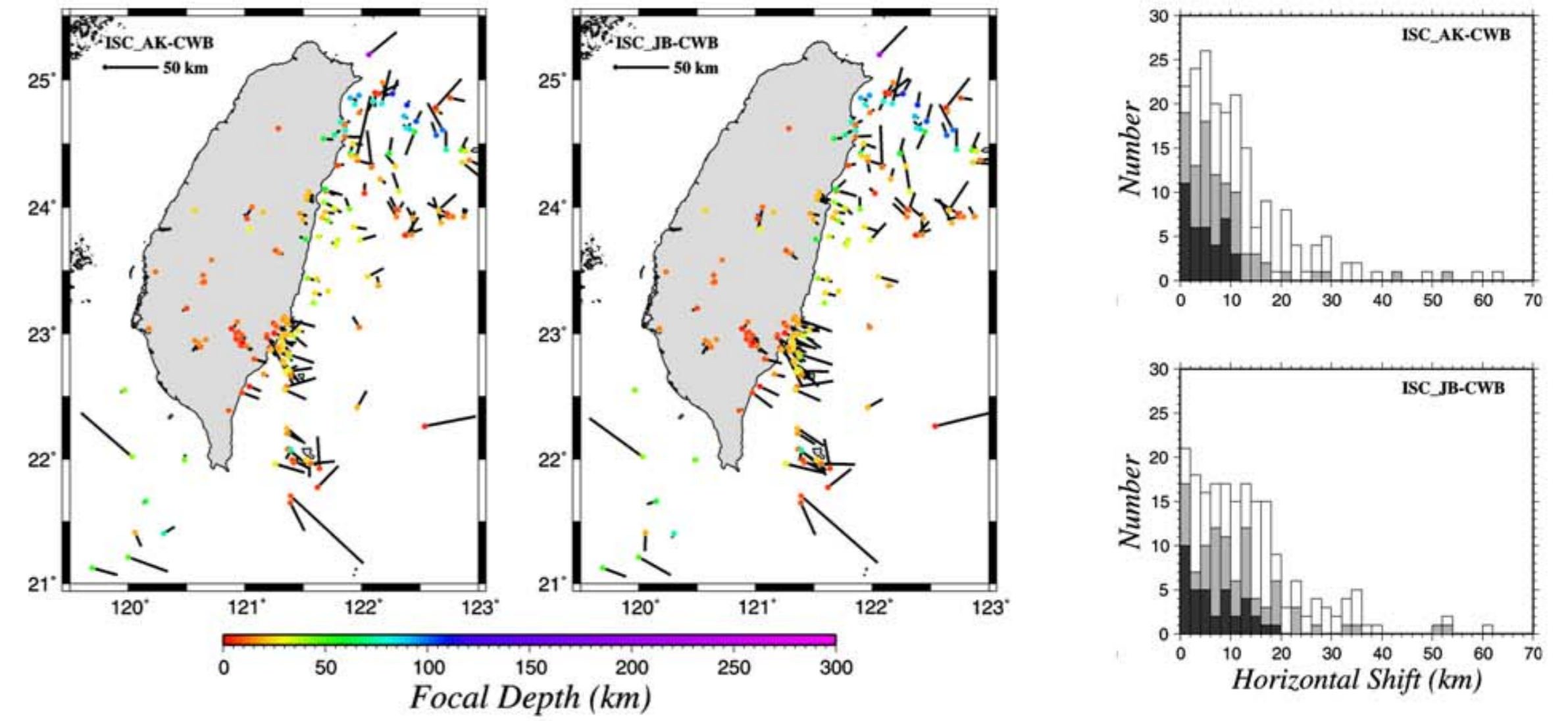
Events in the ISC Bulletin



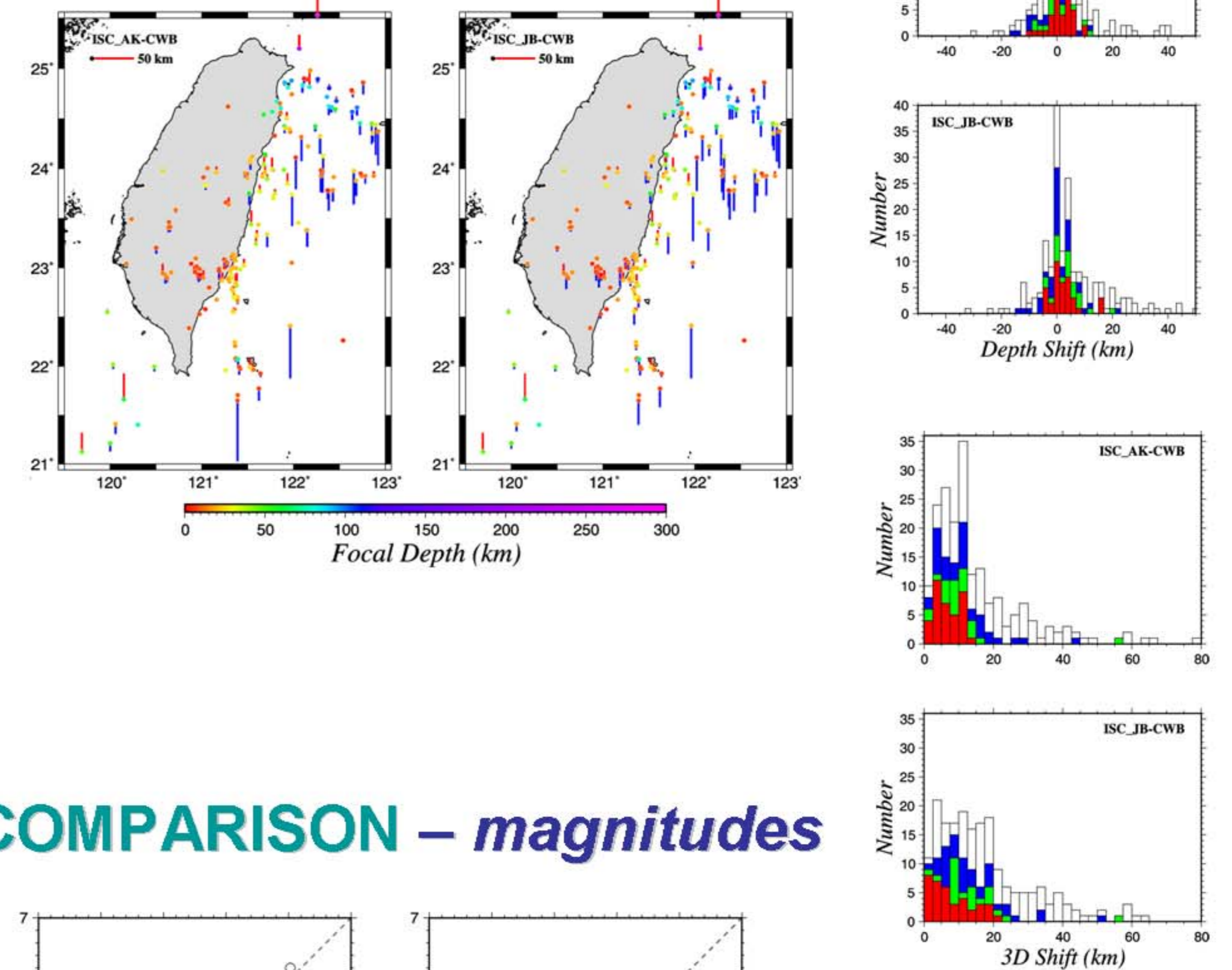
COMPARISON – time shift



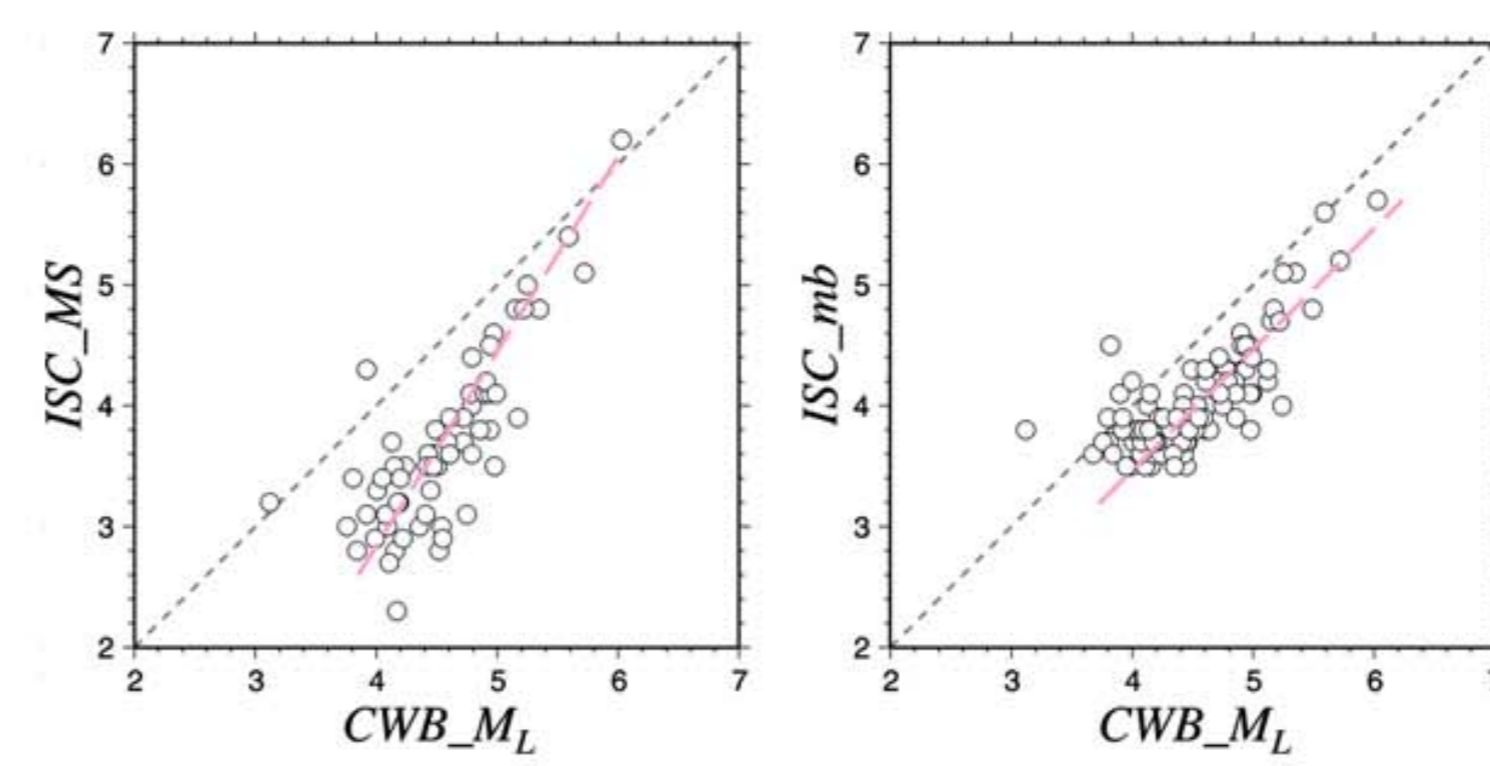
COMPARISON – horizontal shift



COMPARISON – depth shift



COMPARISON – magnitudes



Concluding remarks

- Smaller spread of shifts on origin time and hypocenter for results of **ak135**
- Horizontal shifts toward sea side and subduction direction
- Gap dependent shift amount
 - Velocity contrast or
 - Detecting ability
- Under-estimated ISC magnitudes

