

Development of earthquake early warning system using low cost seismometer

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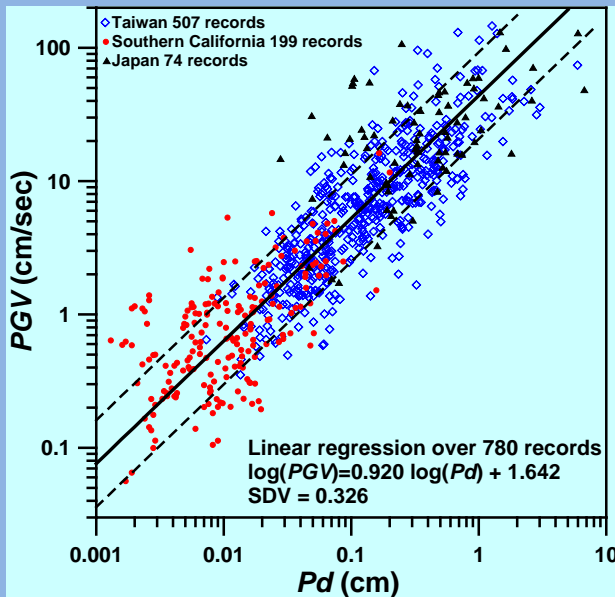
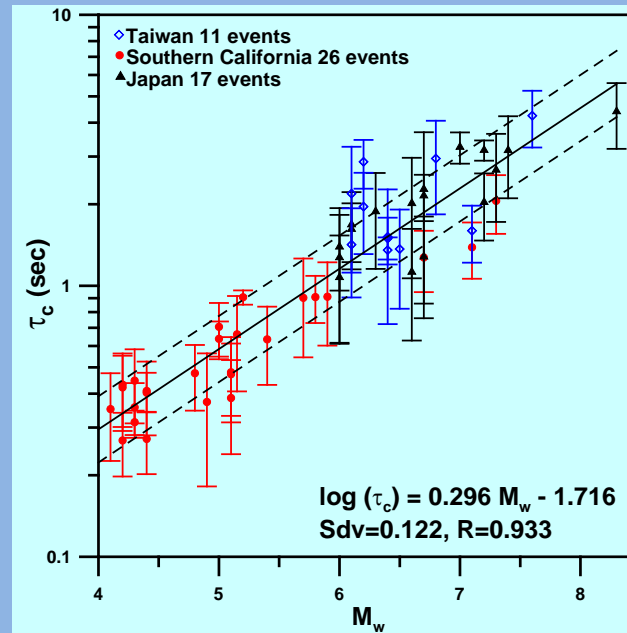
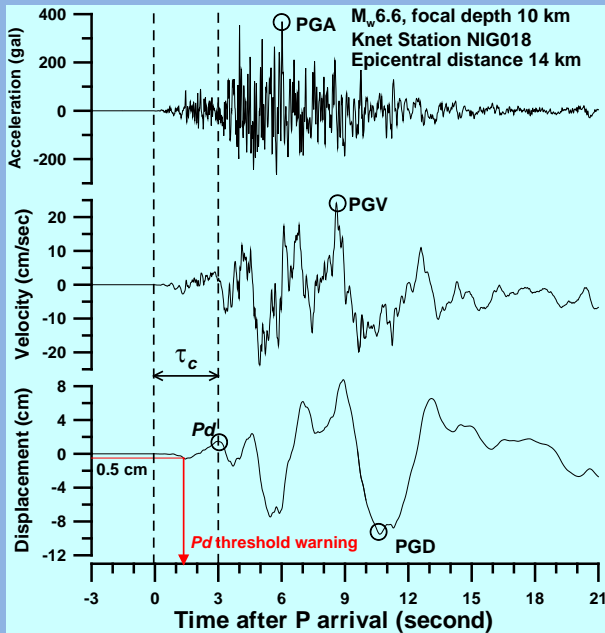
Palert - Features

- Pd technology embedded
- PGA PGV PGD output
- Network streaming ability
- NTP time synchronize
- Four kinds of trig modes
 - PD, PGA, STA/LTA, Displacement
- Support both TCP server and client
- Noise performance < 0.1 gal
- Intensity meter



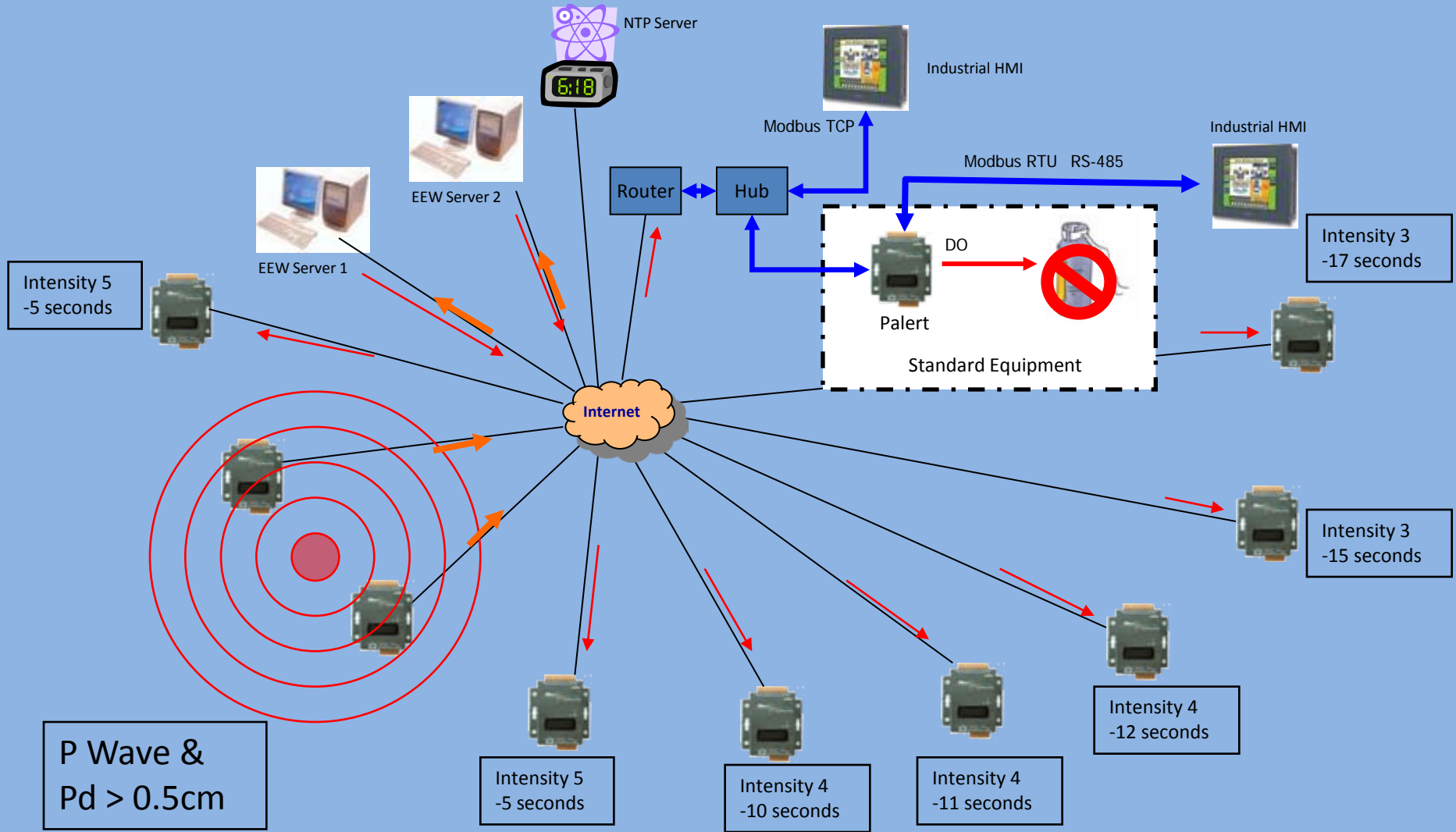


iTouch for
backup power
(4 hrs), display
and sound
warning



For both onsite & regional early warning purposes

Palert EEW Networking System



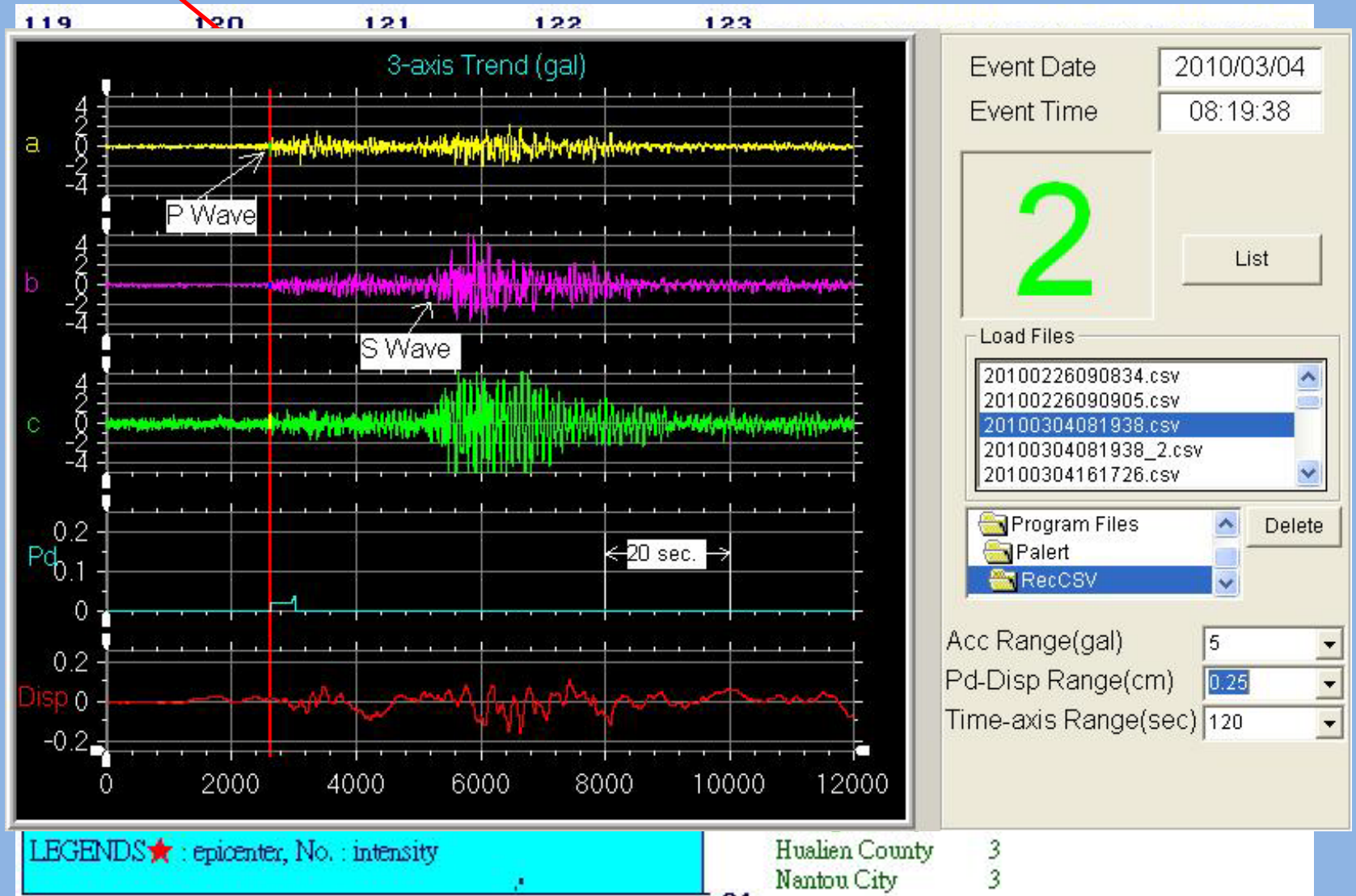
More...

- Two D/Os for equipments control or alarm
- Serial port RS-485 connectivity
- Recording data is possible by using PC Utility
- FTP upgrade firmware is possible

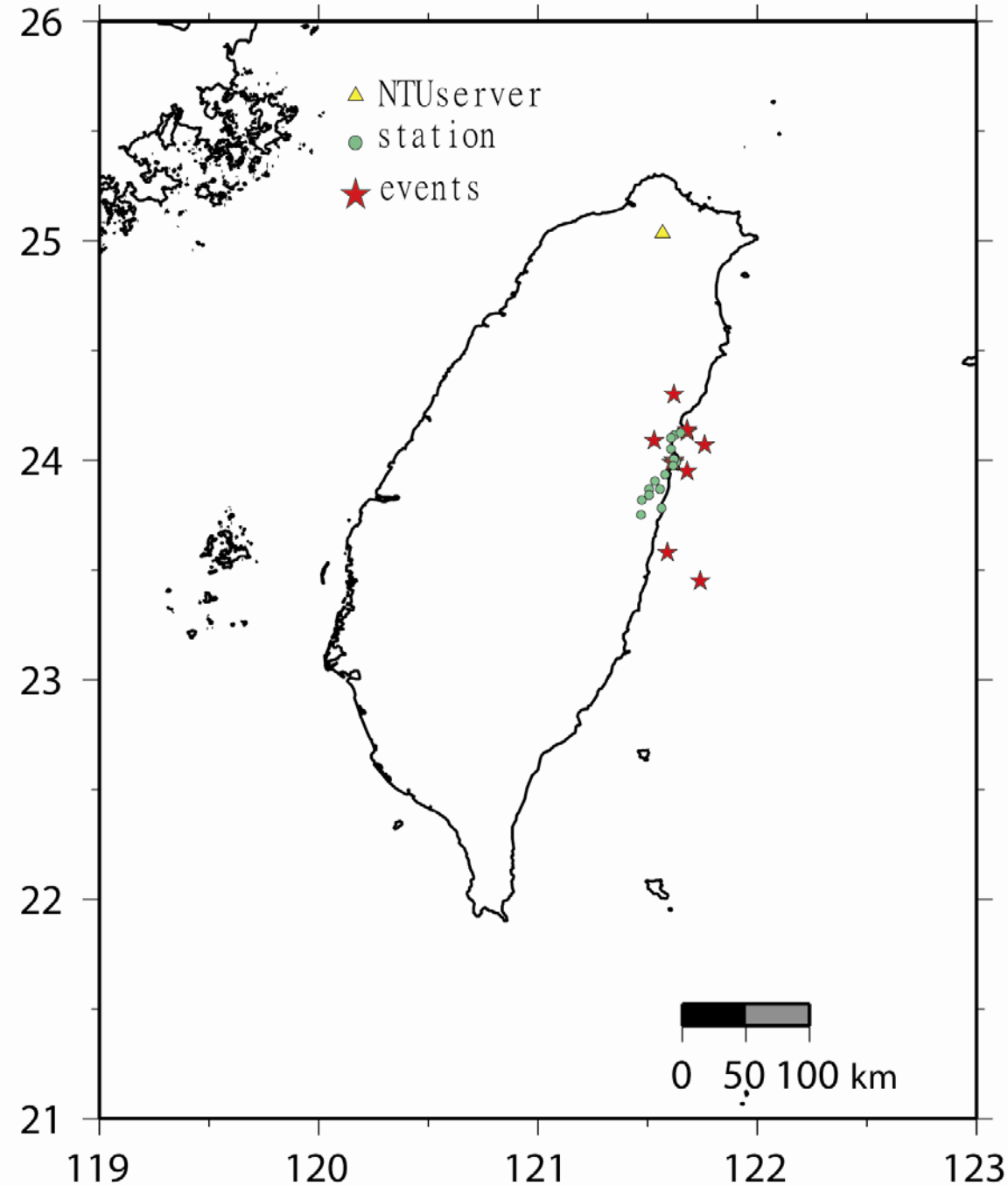
Palert Install location



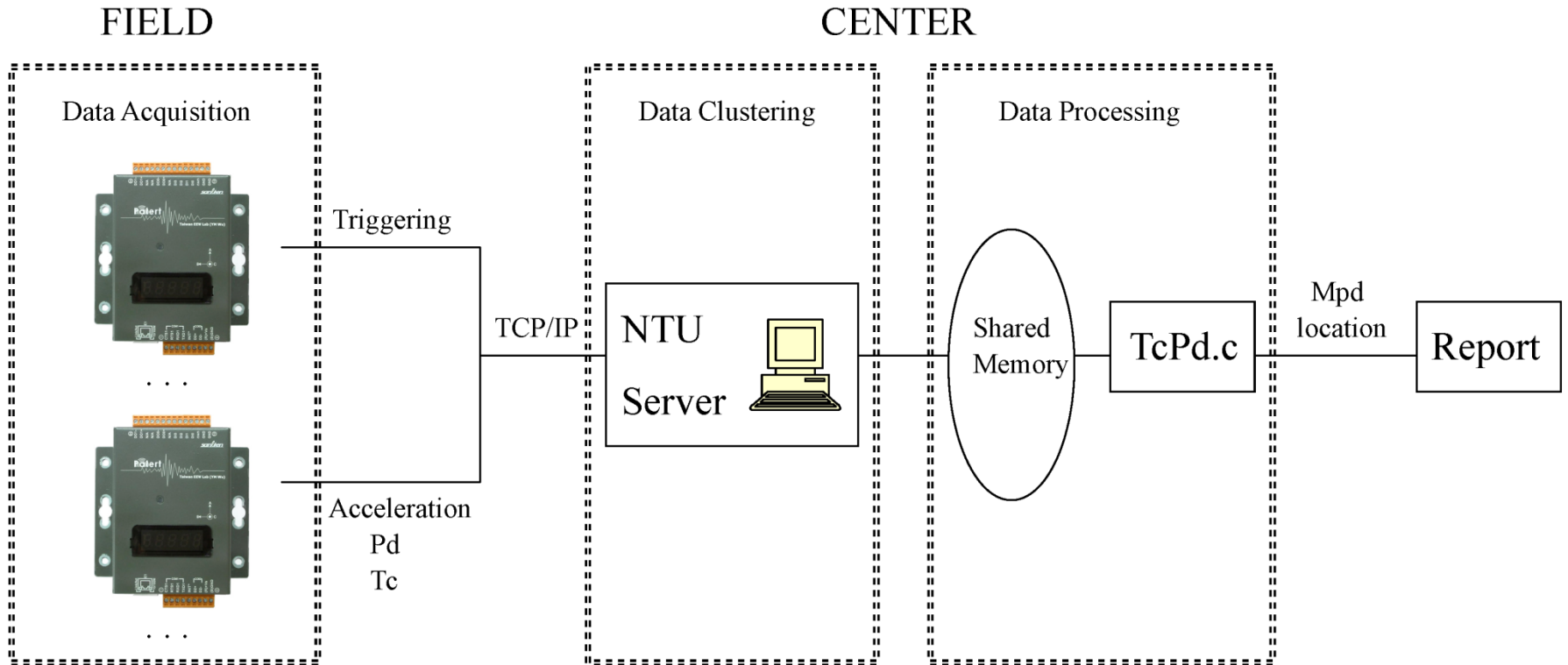
PC Utility & Demo

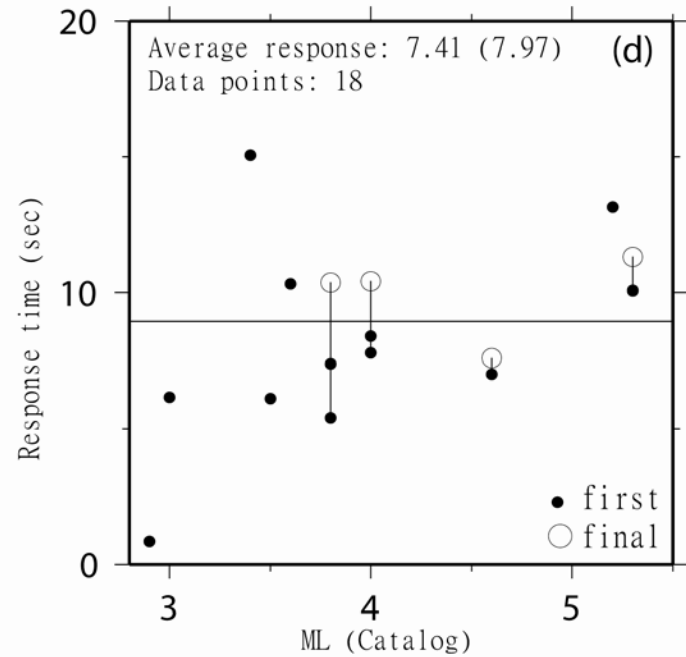
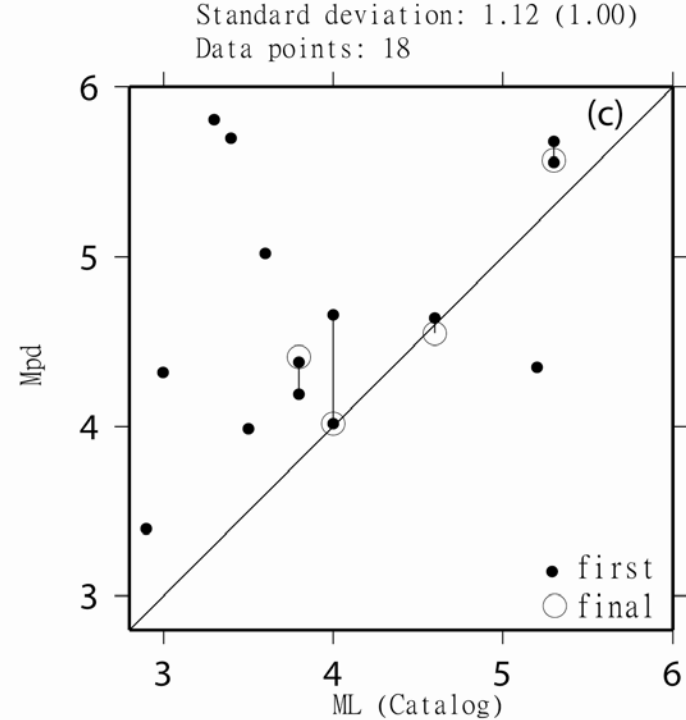
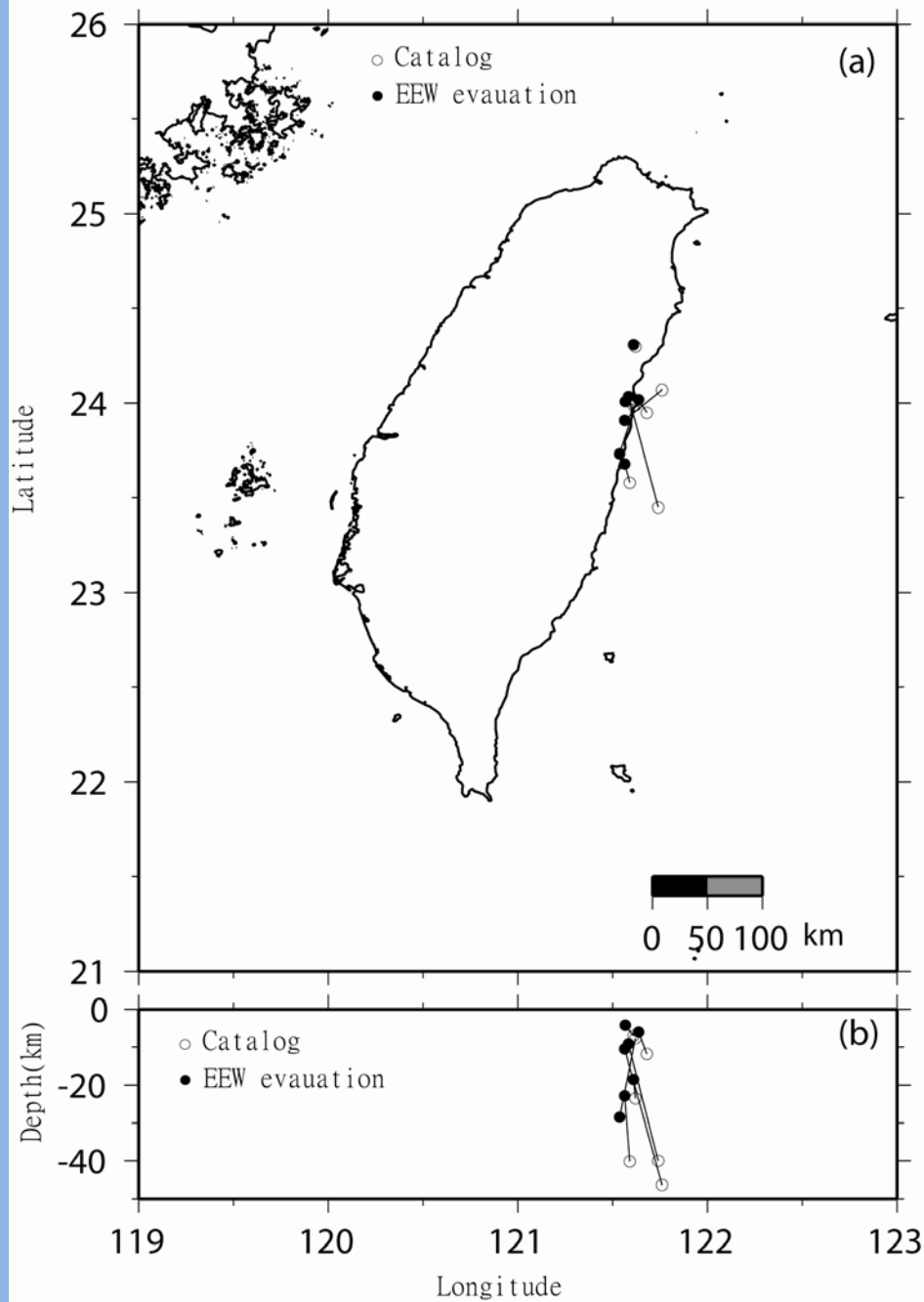


Testing June-August 2010

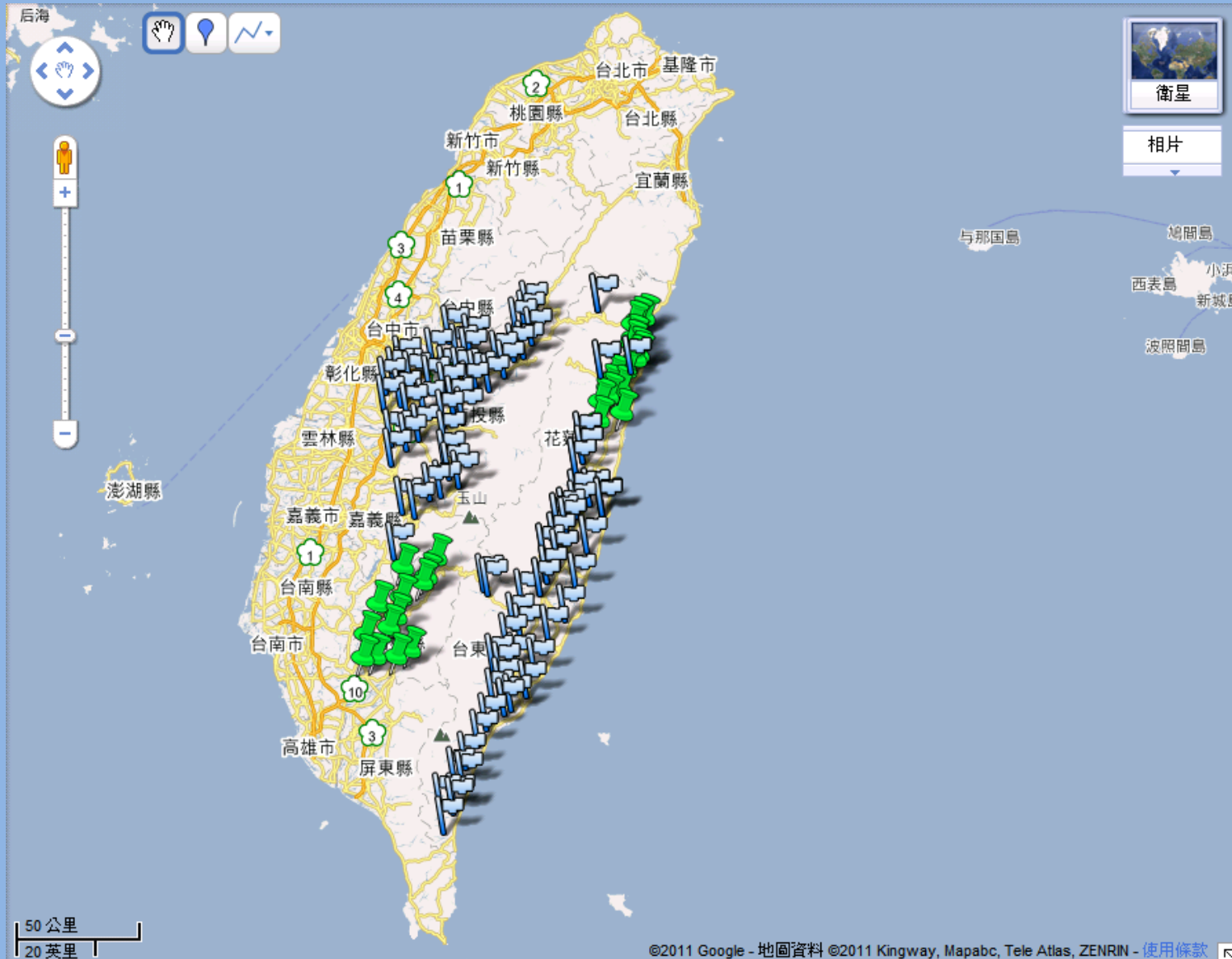


System configuration

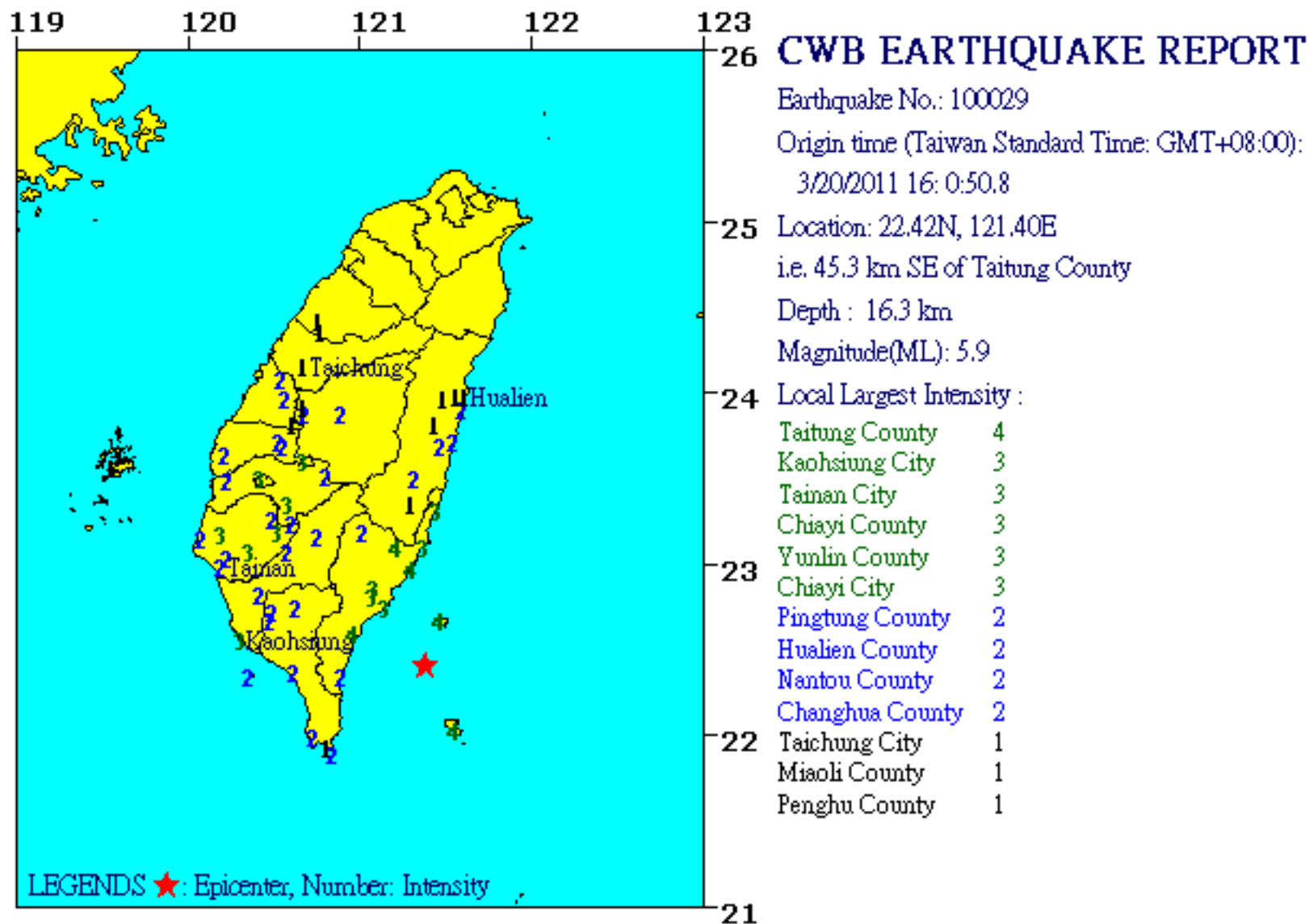


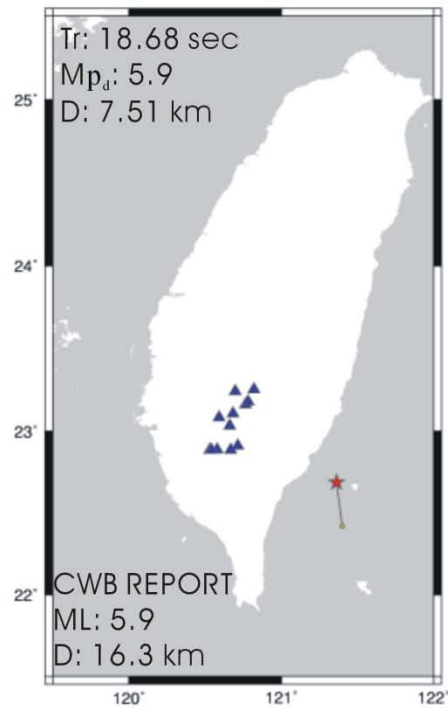
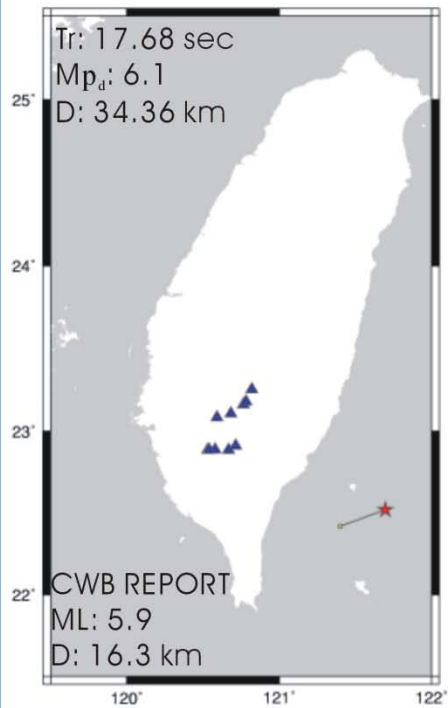
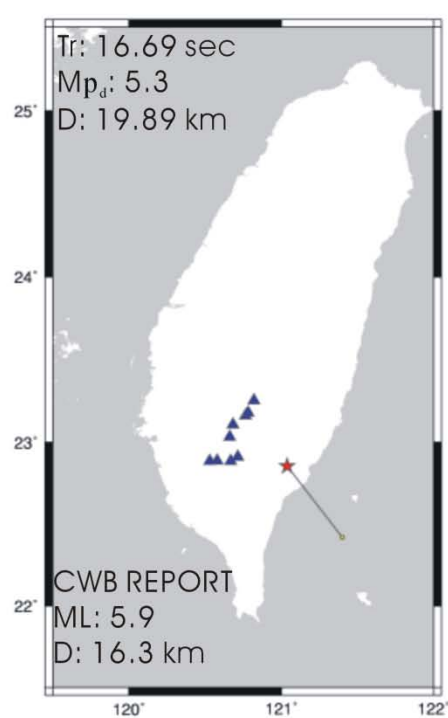
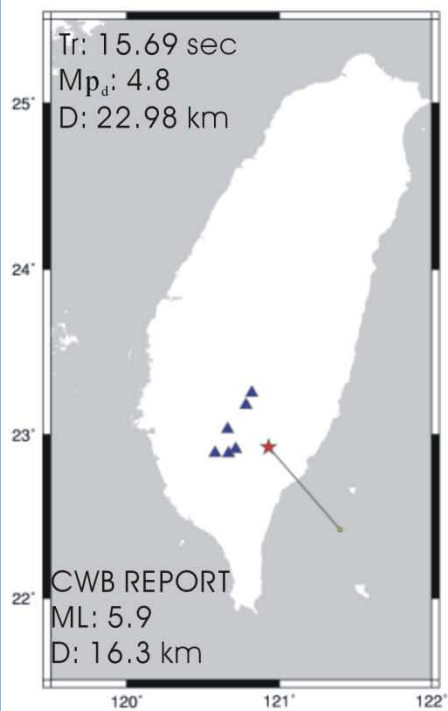


Currently installation in Taiwan



Result of the recently M5.9 earthquake

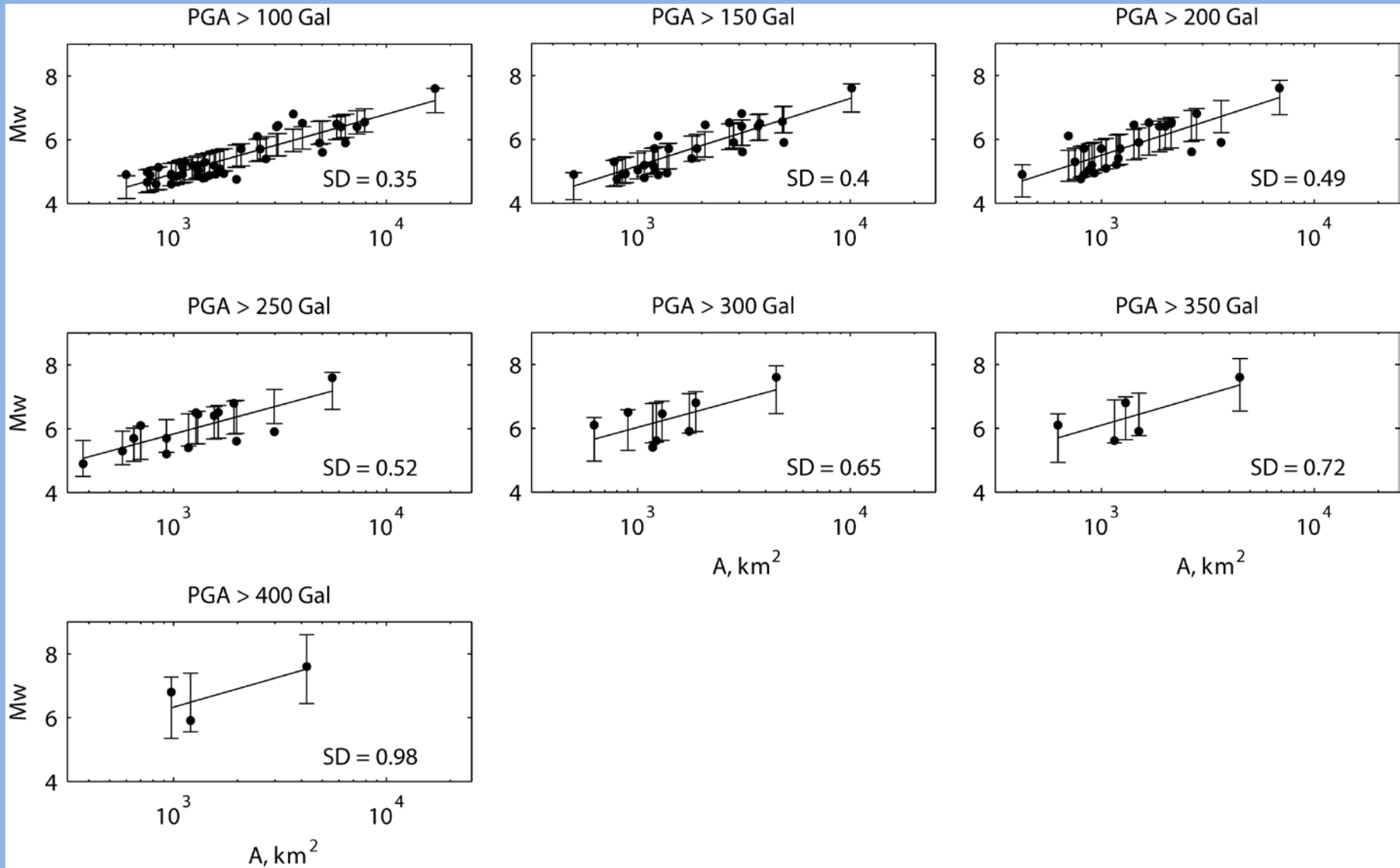


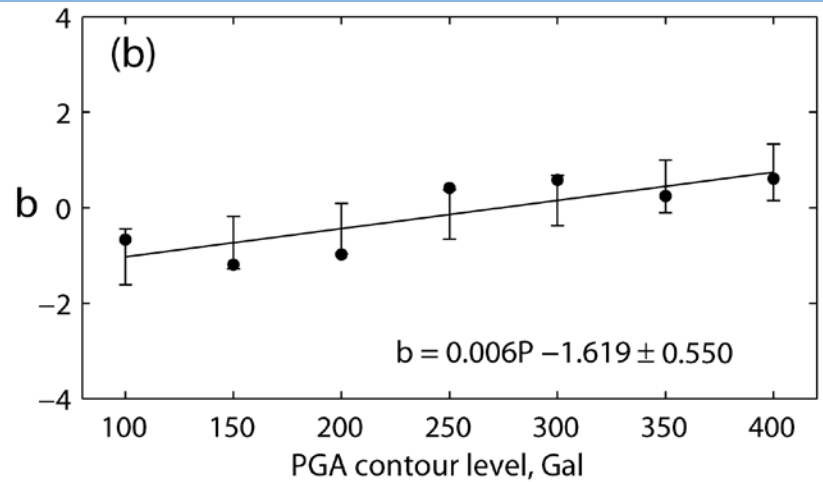
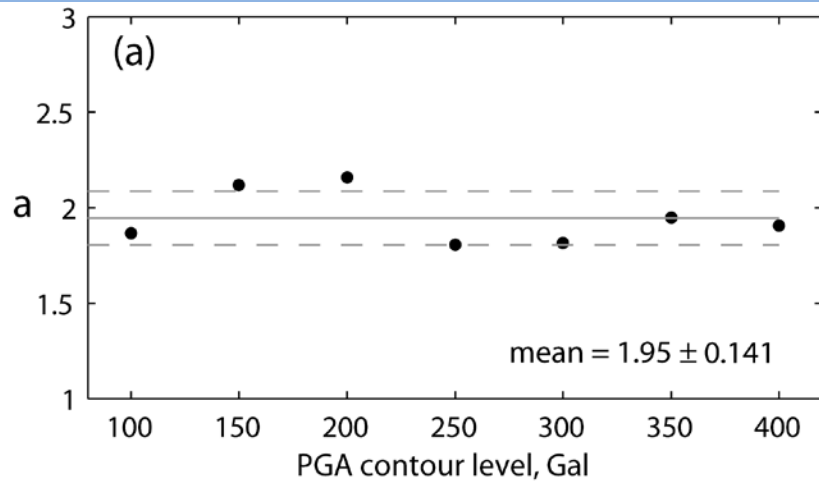


Next step

- Within two years 300 sets *Palert* will install in elementary schools of Taiwan region. It will be helpful for the education of seismic hazard mitigation to our young generation.
- Not only for earthquake early warning! Real-time shaking map could be achieved for rapid reporting purpose by using *Palert* array.

$$M_w = a \log A + b$$





$M_w = 1.95 \text{ Log } A + 0.006 P - 1.619$
Determination large earthquake
magnitude using real-time shaking
map!

Thanks for your attention!