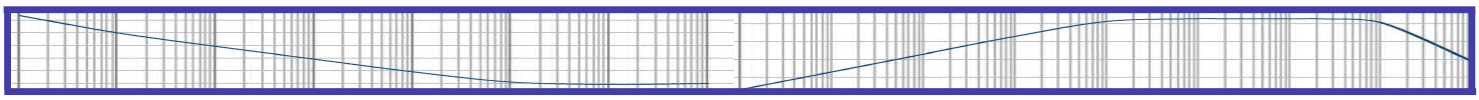
KMS Technologies

Innovating Solutions

3D modeling code WSINV3DMT



Product description

KMS Technologies in alliance with CurlE Geophysics Inc. is providing 3-D magnetotelluric modeling and inversion services both land and marine. The code used here is WSINV3DMT written by Dr. Siripunvaraporn, who also supports it with his team support.

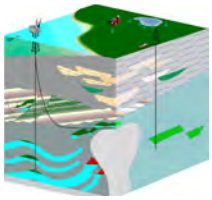
WSINV3DMT is currently used around the world with more than 100 installations both academically and commercially.

The software is made for parallel clusters to interpret 3D magnetotelluric data. It was developed over the past 10 years. The code is structured as a flexible system, adaptable to a range of EM geophysical data types, and supporting a range of inverse problem solution strategies, and regularization models. WSINV3DMT has so far been applied primarily to 2D and (especially) 3D magnetotellurics (MT). It is presently used by several service organizations.

Ancillary tools are available to support efficient inversion set up, and post-processing visualization.

Additional 3D products:

3D interpretation services



References

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Product specification & applications

Data input:

- Off-diagonal Impedance tensor (Zxy & Zyx)
- Full Impedance tensor (Zxx, Zxy, Zyx & Zyy)
- Vertical magnetic transfer function or Tipper (Tzx & Tzy)
- Tipper + Off-diagonal impedance tensor (Tzx, Tzy, Zxy & Zyx)
- Tipper + full impedance tensor (Tzx, Tzy, Zxx, Zxy, Zyx & Zyy)
- Any formats of data
- Geological constraints such as ocean, faults, etc.
- Static shift values for each site (optional)
- Topography or bathymetry

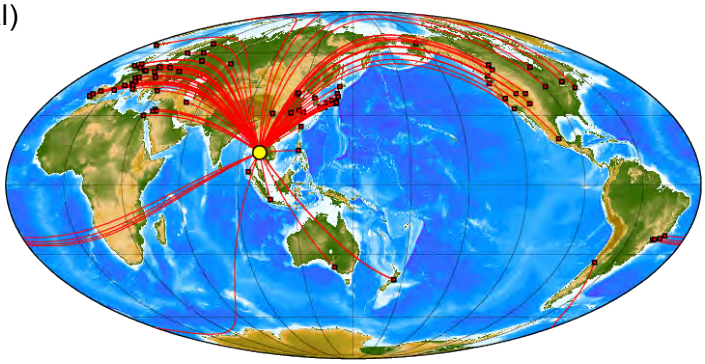
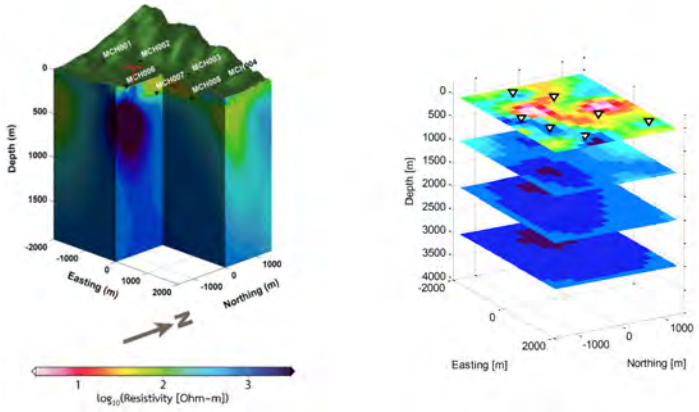


Figure 1: Global user base

Figure 2: A 3-D resistivity around the hot-spring in northern Thailand.



Standard outputs:

- 3D model with visualizer
- Models and inversion results
- Data match & risk estimates

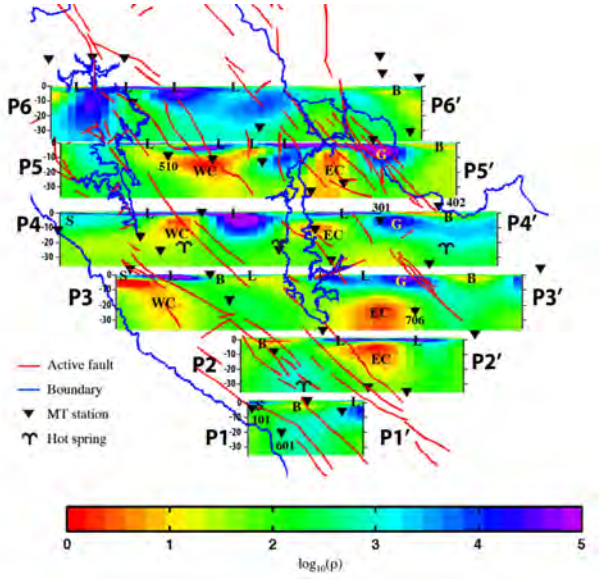


Figure 3: A 3-D resistivity model revealing a deep crustal structure and its tectonic evolution of the region in the western province of Thailand.