

# Inversion for the secret model

Code developer: Siripunvaraporn (2005)  
User: Tae Jong Lee<sup>1</sup> and Nuree Han<sup>2</sup>

<sup>1</sup>*Korea Institute of Geoscience and Mineral Resources, Korea*

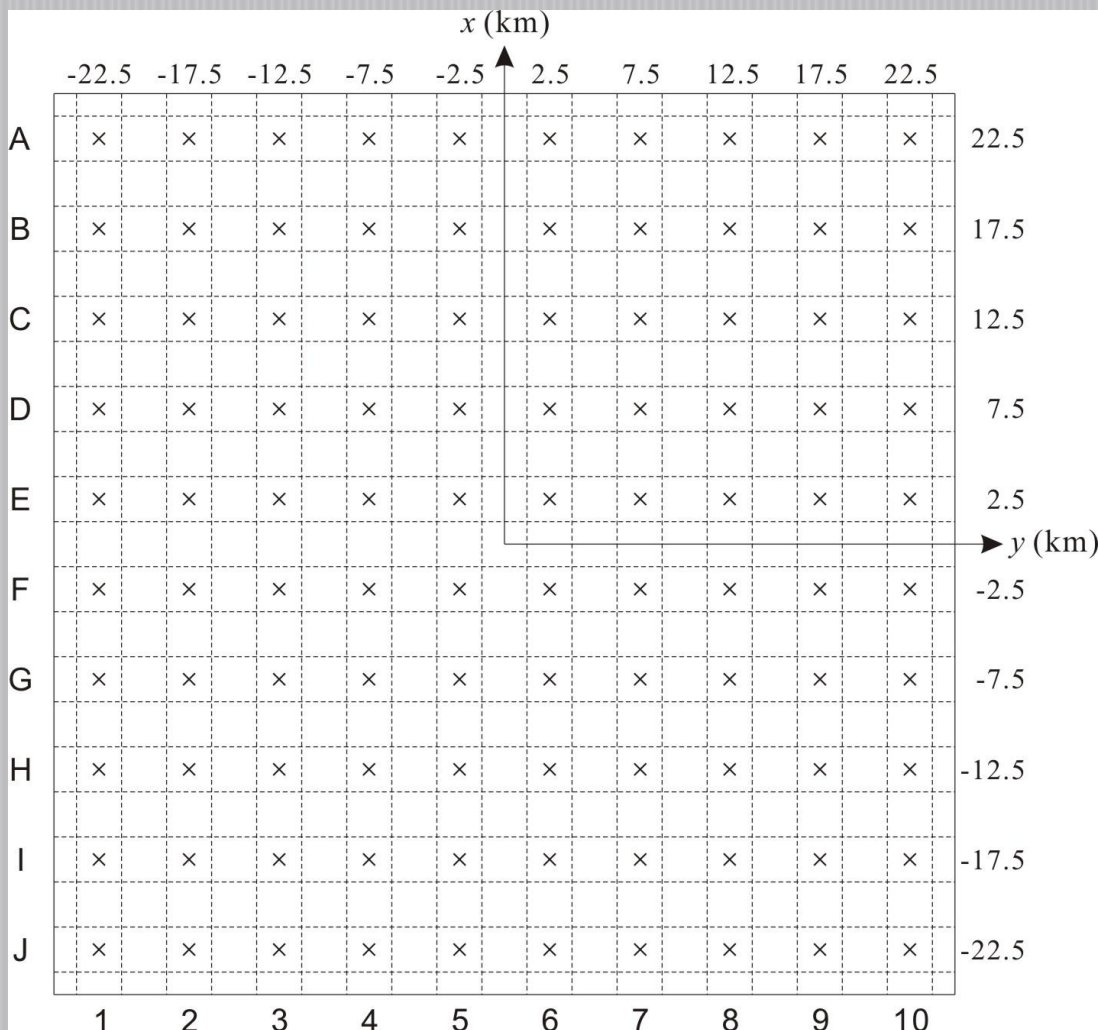
<sup>2</sup>*Seoul National University, Korea*



# Inversion parameters I

- Inversion Code: Siripunvaraporn (2005)
  - Finite difference method
  - Input data: Complex value of 4-components Impedance
- Data for Inversion
  - No. of Rx:  $10(x) \times 10(y) = 100$  sites
  - No. of periods: 6 (0.56 s  $\sim$  10,000 s)
  - No. of data: 100 sites  $\times$  6 periods  $\times$  8 components = 4,800
- Initial Model: 100 ohm-m half space

# Modeling and Inversion meshes

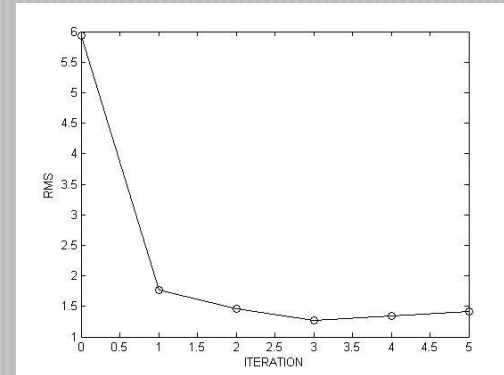
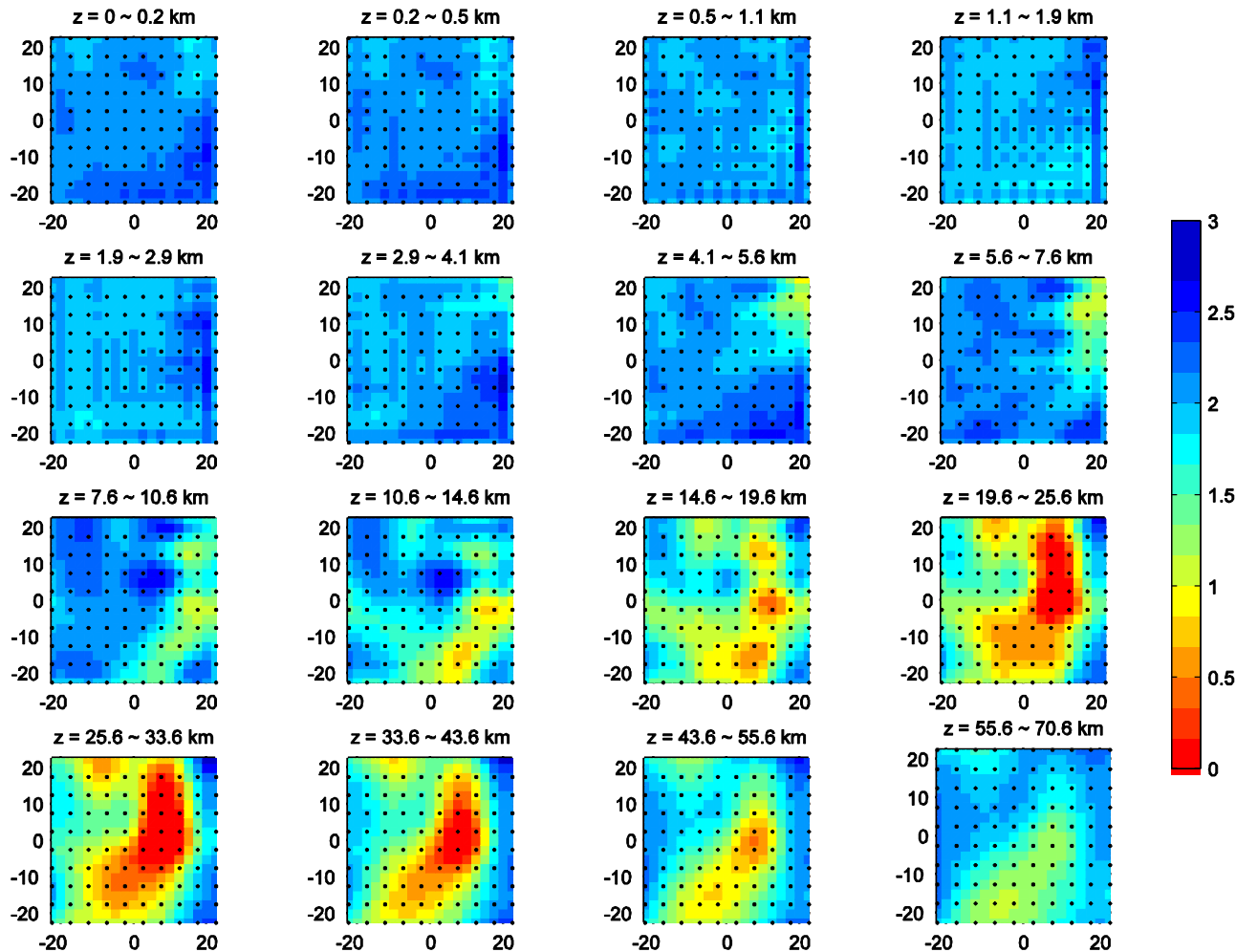


- Modeling = Inversion
  - 35×35×20
  - The smallest mesh size
    - Horizontal: 2.5 km
    - Vertical: 0.5 km

# Inversion parameters II

- Number of iterations: 5
- Computation time
  - 12 Hours
  - PC with Intel CoreDuo2 processor (2.66 GHz)

# Reconstructed images



- *rms* misfit
- Initial: 5.98
- Final: 1.276

# Data fits

