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Three-dimensional resistivity structure in Ishikari Lowland, Hokkaido, northeastern Japan – Implications to strain concentration mechanism

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Introduction

We show the calculated MT responses for the forward model assuming the presence of seawater (Figure S1). We also show the resistivity models estimated by an additional inversion analysis (Figures S2 and S3). Figure S2 shows the results of first-stage inversions with different smoothing parameters. Figure S3 shows the results of a first-stage inversion with reduced input data.

Apparent resistivity

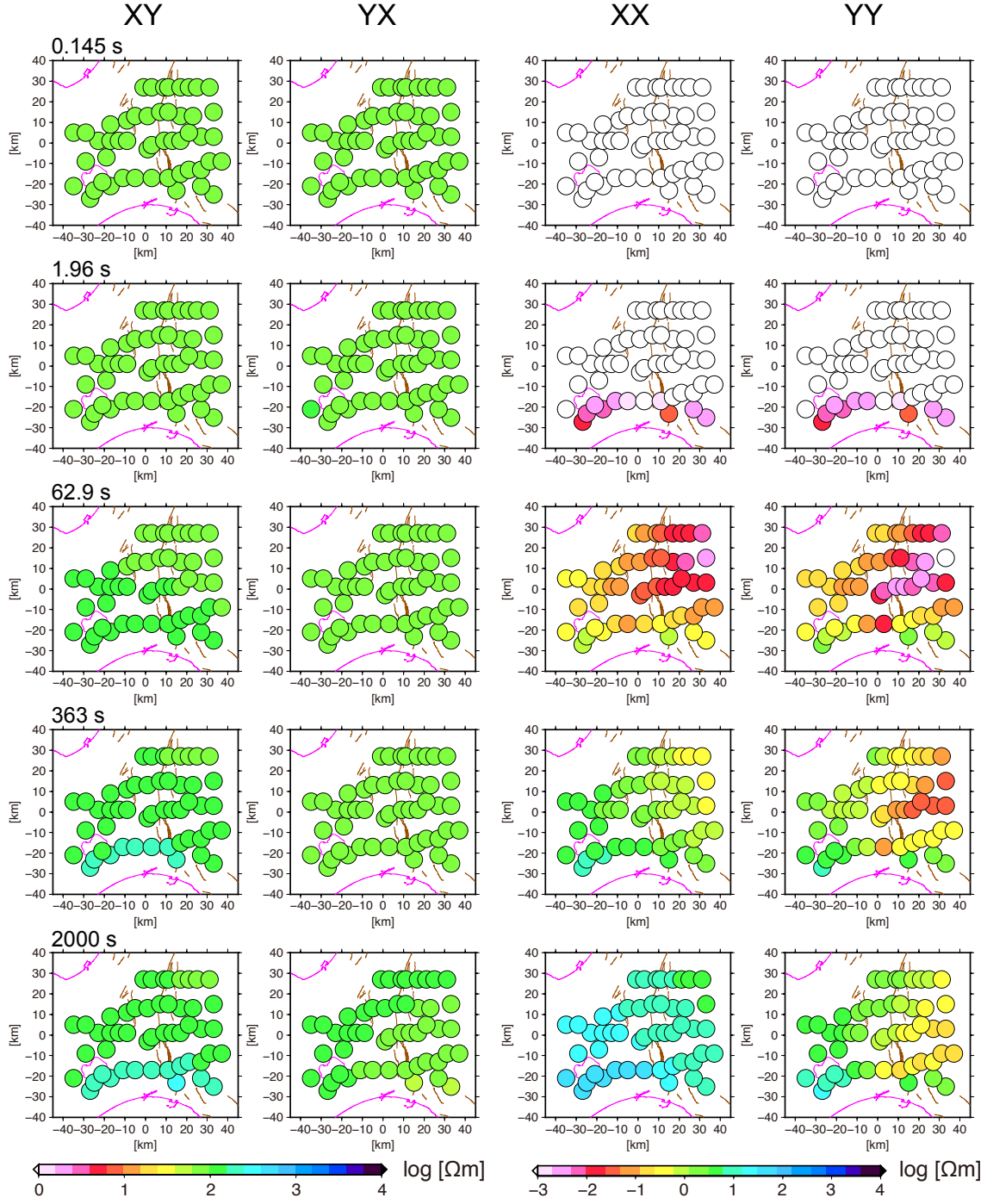


Figure S1. Apparent resistivity and impedance phase map of calculated responses using the seawater model (Figure 8a).

Phase

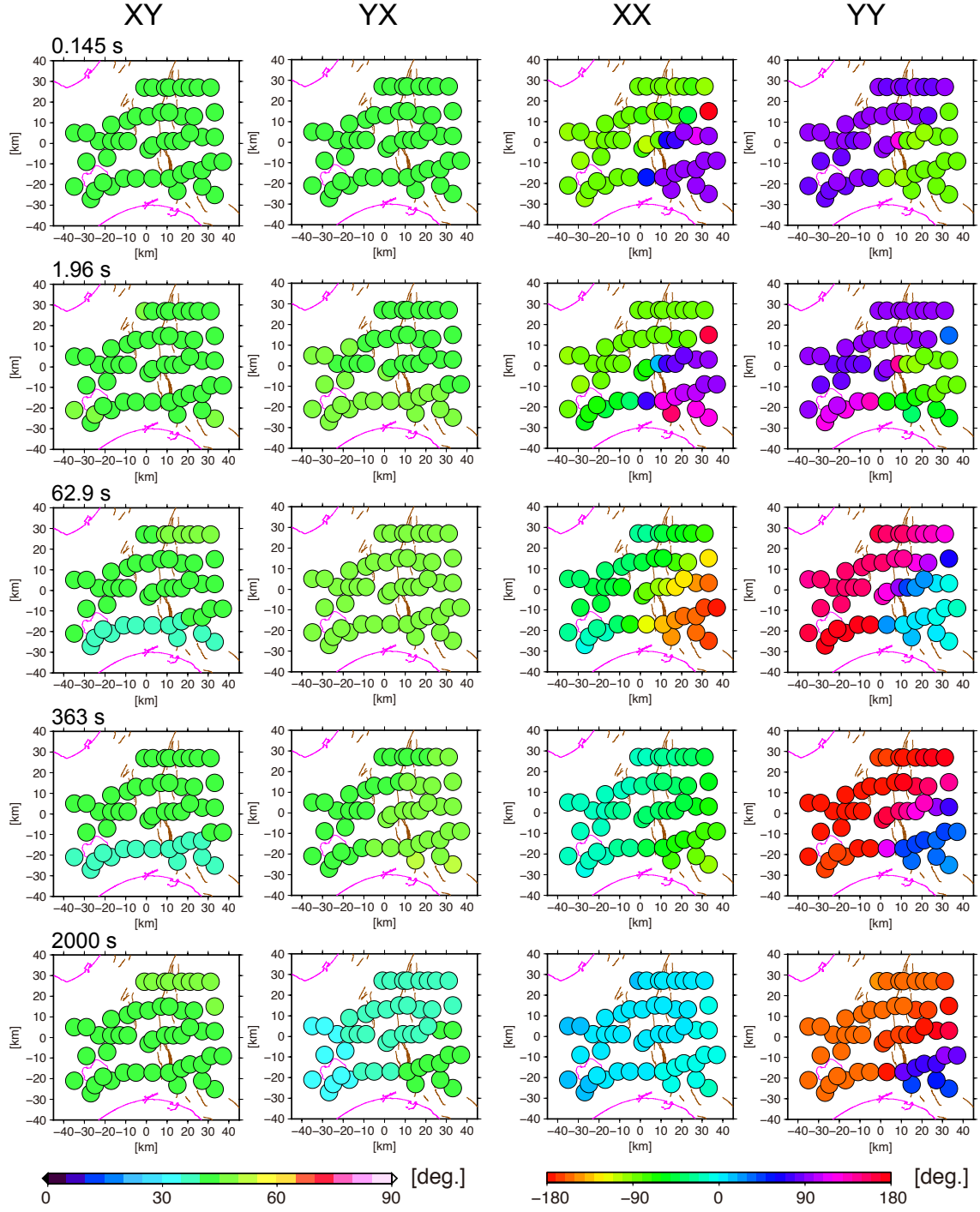


Figure S1. (continued)

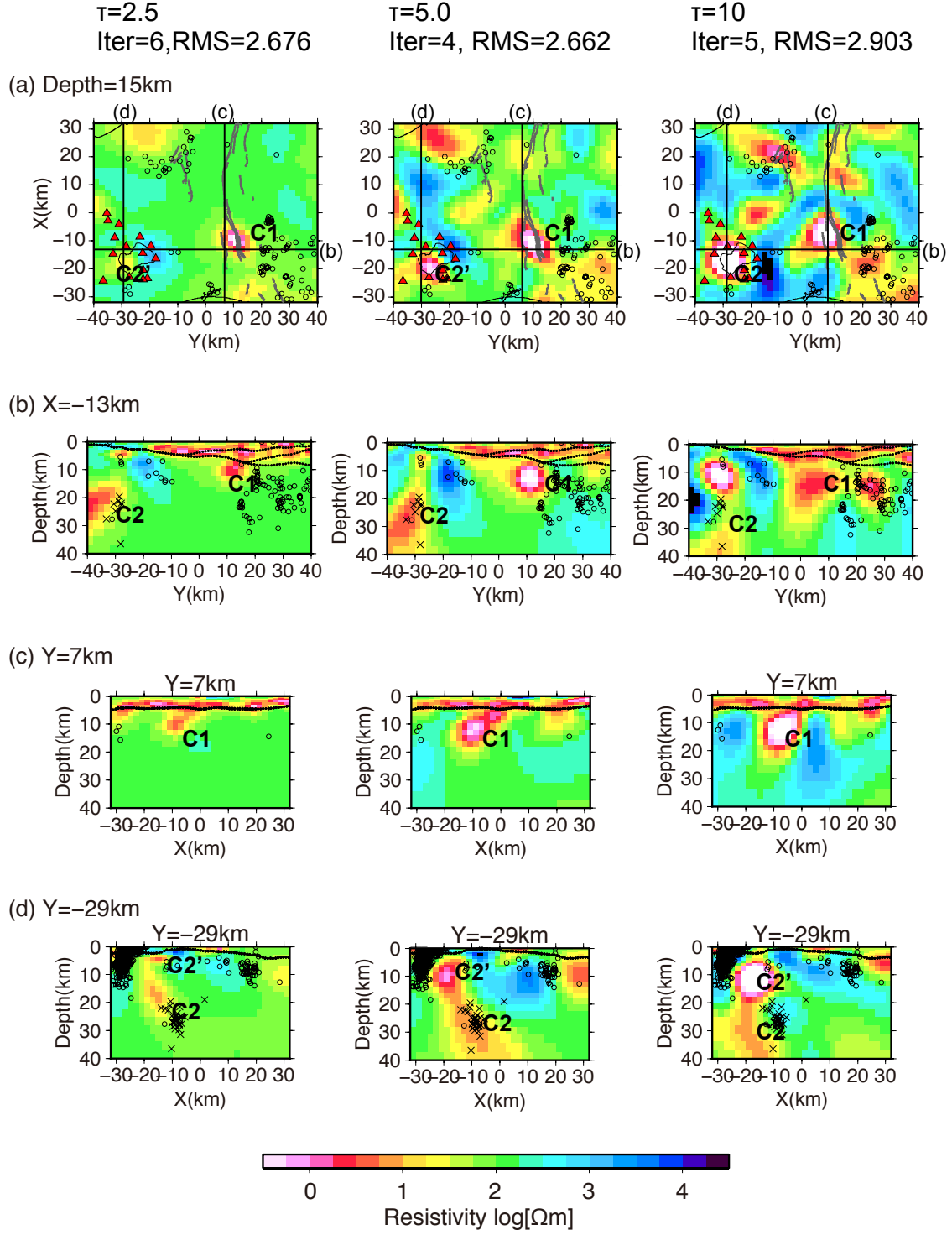


Figure S2. Resistivity models estimated by first-stage inversion with different smoothing parameters, $\tau=2.5, 5.0$ and 10 .

$\tau=5.0$

Iter=4, RMS=2.592 (RMS for initial model=15.53)

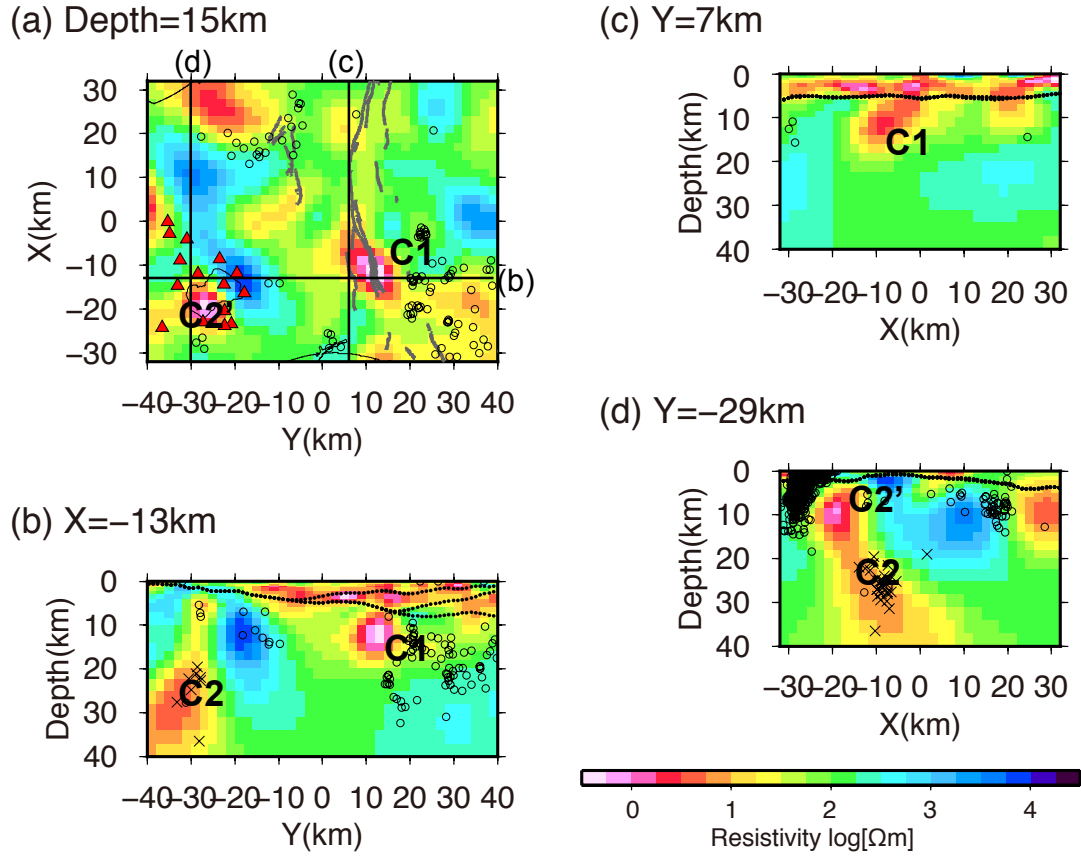


Figure S3. Resistivity models estimated by first-stage inversion without measured data at station ISK160. This model can be compared with the $\tau=5.0$ model in Figure S2. Because the input data is reduced, the RMS residual naturally becomes lower than that for the other inversions.