Quantifying the influence of GIA on current and future sea-level change using 3D Earth models

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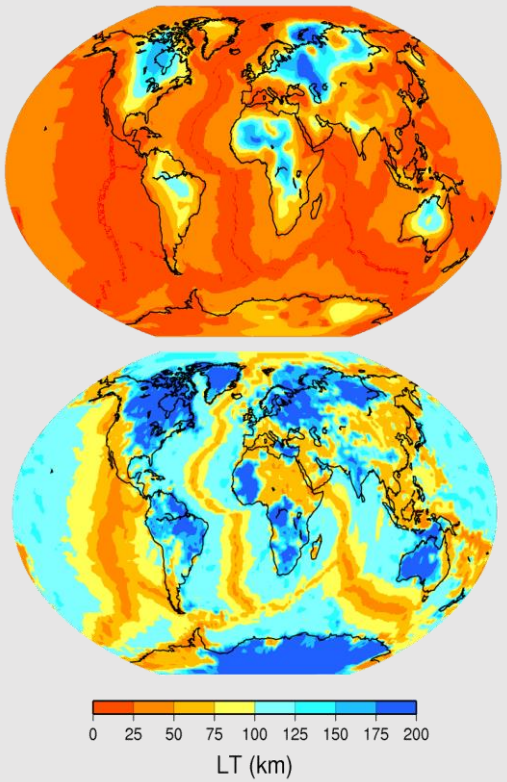
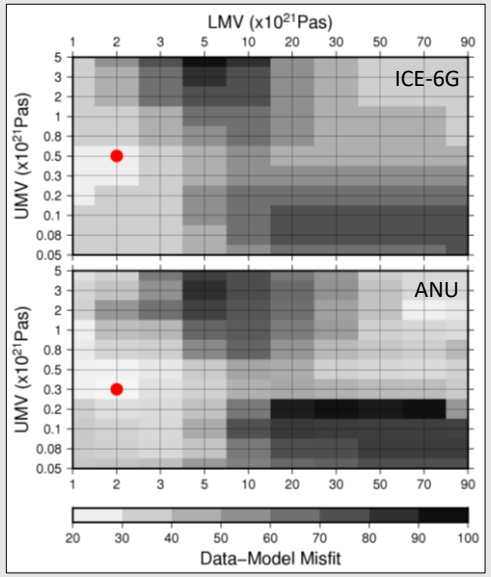
1. 3D GIA Model

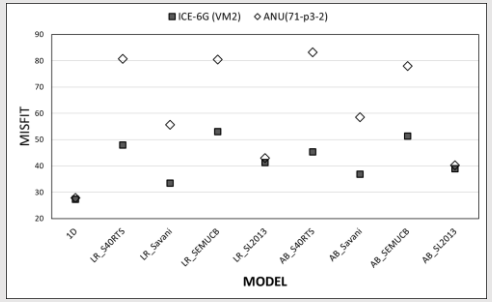
- Finite-volume formulation.
- Define 1D reference viscosity profile
- Add lateral structure based on mineral physics scaling relationships.
- Four seismic velocity models used.
- Two lithosphere thickness models used (Yousefi et al, GJI, 226(1), 2021; Afonso et al, GJI, 217(3), 2019).



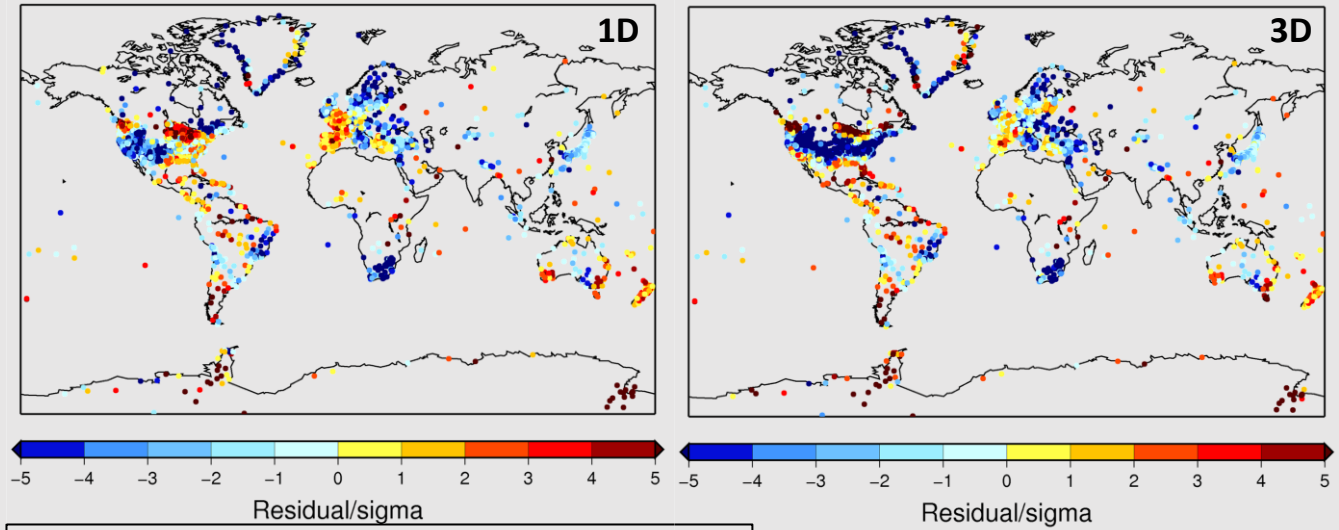
2. Constraining Model

- Use global VLM dataset of Schumacher et al., GJI, 214(3), 2018.
- First determine optimal 1-D viscosity structure.
- Add lateral structure based on chosen seismic and LT models.





3. Model Fits (ANU)



4. RSL Projections @2100 CE (ANU)