

**Roles of continental mid-lithosphere discontinuity in the craton instability under  
variable tectonic regimes**

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**1. Datasets of the numerical models as shown in manuscript and supporting  
information**

Model-1-Reference-wet-olivine.zip

Model-2-Reference-antigorite.zip

Model-3-Extension-wet-olivine.zip

Model-4-Extension-antigorite.zip

Model-5-Compression-wet-olivine.zip

Model-6-Compression-antigorite.zip

Model-7-MantleFlow-wet-olivine.zip

Model-8-MantleFlow-antigorite.zip

Model-9-MantlePlume-wet-olivine-T400D200.zip

Model-10-MantlePlume-antigorite-T400D200.zip

Model-11-MantlePlume-antigorite-T400D100.zip

Model-12-MantlePlume-depleted-antigoriteT400D200.zip

Model-13-MantlePlume-depleted-antigoriteT400D300.zip

Models-Variable-MantlePlume-fertile-wet-olivine.zip

Models-Variable-MantlePlume-fertile-antigorite.zip

Models-Variable-MantlePlume-depleted-antigorite.zip

**2. Dataset of the nature of the MLD in Figure 1**

Dataset-MLD.zip

**3. Database of the water capacity of mantle rock and shear-wave velocity (Vs) in  
Figure S1, Figure S2**

Database-WaterCapacity.zip

Database-Vs.zip