Hans-Jürgen Götze<sup>1</sup>, Judith Bott<sup>2</sup>, Boris Kaus<sup>3</sup>, Magdalena Scheck-Wenderoth<sup>2</sup>, and Christian Schuler<sup>3</sup>

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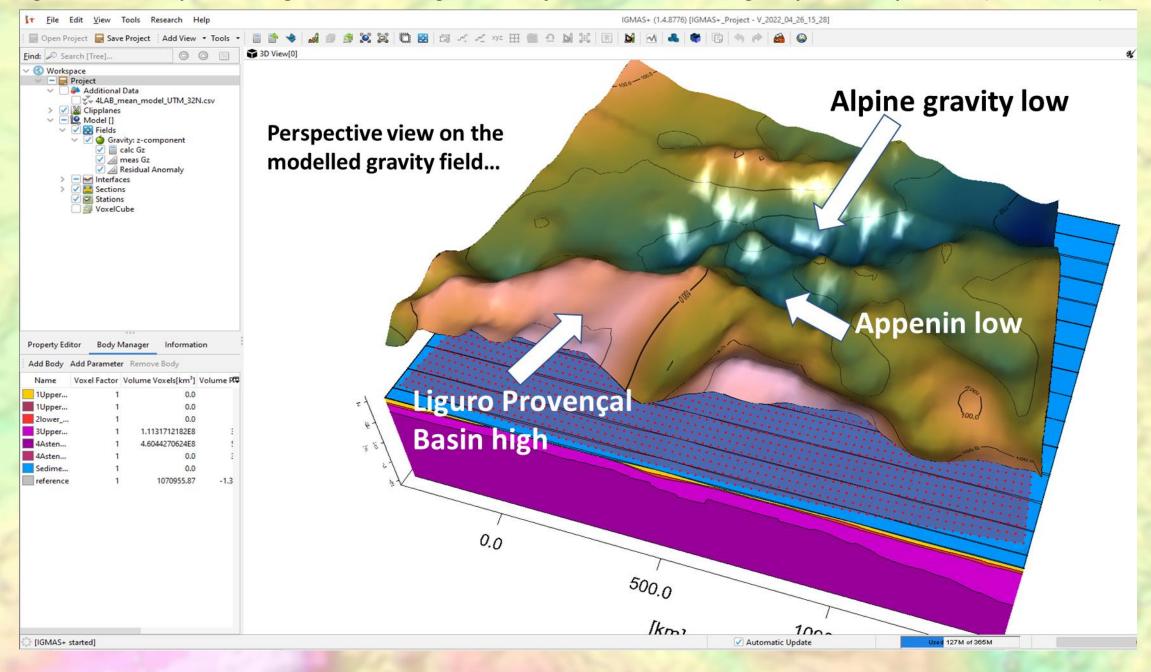
Contribution of SPP 1411 "Mountain building in 4D", subproject DEFORM & AlpArray

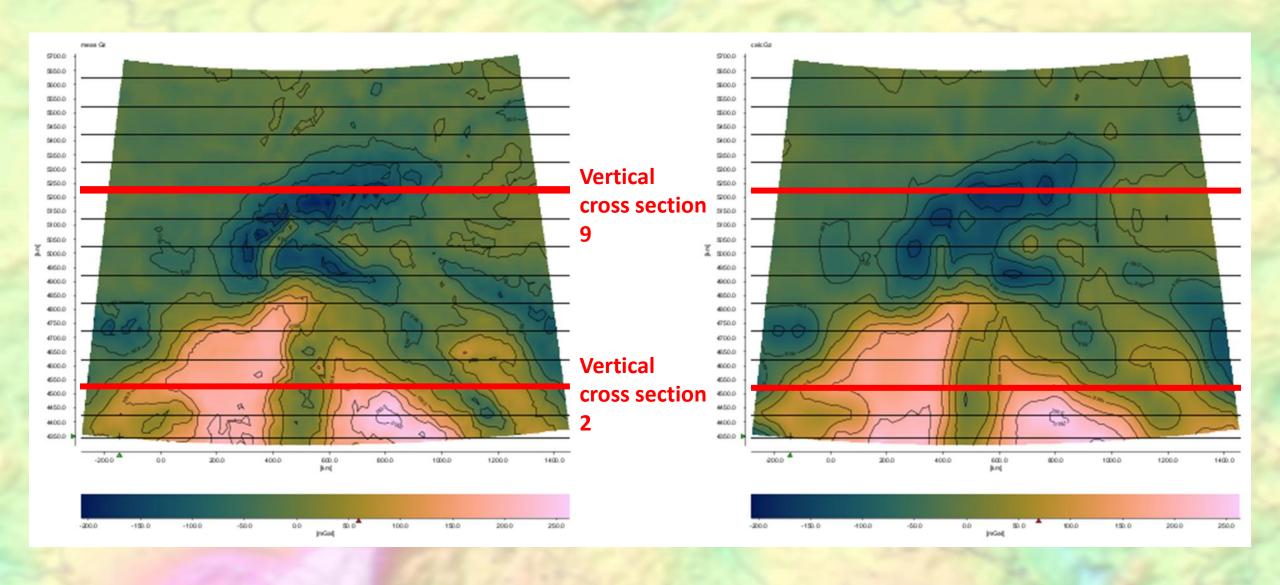
## **DISPLAY MATERIAL**











### Based on the manuscript of:

Kumar, M. Cacace, M. Scheck-Wenderoth, H.-J Götze, B.J.P. Kaus. Present-day upper-mantle architecture of the Alps: insights from data-driven dynamic modelling (under review, Geophysical Research Letters)

we compiled a 3D density model of of the Alps and surrounding areas including masses of the Liguro-Provençial basin



software.

https://igmas.git-pages.gfz-potsdam.de/igmas-pages/

We display 2 vertical cross sections:

cross section 2 crossing the Liguro-Provençial basin in the South and cross section 9 in the area of the Alps in the North.

#### New insights in the lithospheric configuration of the Liguro Provençal Basin derived from gravity field interpretation (EGU22-2908) ð It File Edit View Tools Research Help JE xyz ⊞ 📵 Ω 🕍 🖫 🔟 Search [Help]... ☐ Open Project ☐ Save Project ☐ Add View ▼ Tools ▼ v 🖃 🙀 Project 100.0 200.0 400.0 500.0 600.0 800.0 900.0 1000.0 1200.0 1300.0 1400.0 -100.0 300.0 700.0 1100.0 Additional Data [km] ₹ 4LAB\_mean\_model\_UTM\_32N.csv ✓ Model [] ✓ ✓ Fields Fields Visit (1) The state of the sta 200.0 🗸 🖩 calc Gz ✓ ✓ Meas Gz 150.0 A Residual Anomaly Interfaces 100.0 Sections 🖊 🛂 Stations WoxelCube 50.0 -50.0 -100.0 Vertical model cross section 2 -150.0 Property Editor Body Manager Information Anomaly View + meas Gz • calc Gz Add Body Add Parameter Remove Body 200.0 100.0 0.0 100.0 200.0 300.0 400.0 500.0 800.0 900.0 1000.0 1100.0 1200.0 1300.0 1400.0 Volume Poly... Density[t/m³] □ Name 2.5646493587... 2.75 1Upper\_crust 2.72 3.8192947929... 1Upper\_crust\_new 3.0 2.4780443266... 3.3268231368... 3.37 5.5191336459... 3.3 3.3 4.2461787187... 140.0 8.899361445E7 2.2 reference -1.406732796... 2.9 180.0 **EAST WEST** Section - 2 Used 329M of 589M $\bigcirc\bigcirc\bigcirc$ [IGMAS+ started] ✓ Automatic Update

