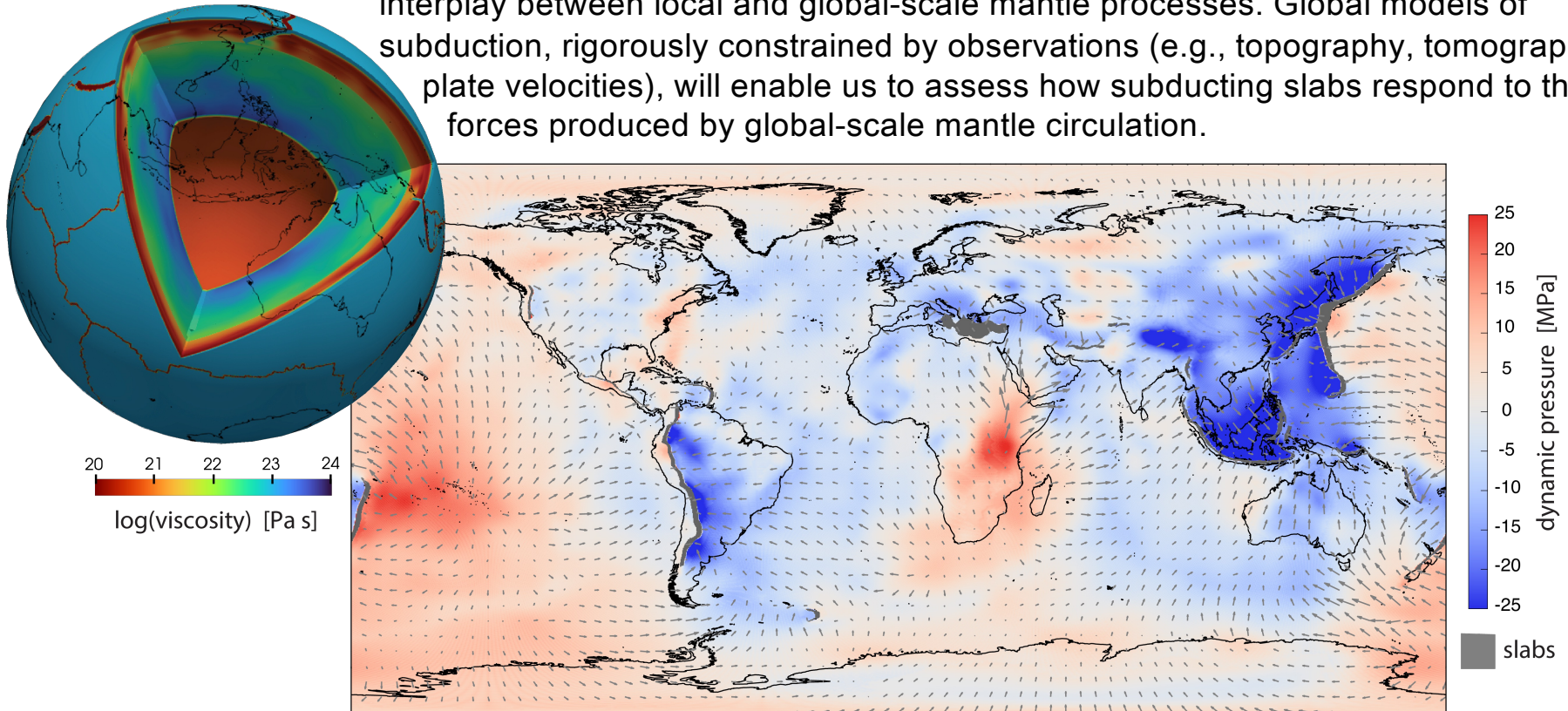


# Constraining interactions between subducting slabs and global-scale mantle flow in the Western Pacific

Centered on the Western Pacific region, we will develop a framework to describe the interplay between local and global-scale mantle processes. Global models of subduction, rigorously constrained by observations (e.g., topography, tomography, plate velocities), will enable us to assess how subducting slabs respond to the forces produced by global-scale mantle circulation.



A global convection model with high resolution slabs, mantle structure, and weak plate boundaries. Right panel shows the resulting mantle pressure distribution and flow field at a depth of 200 km.