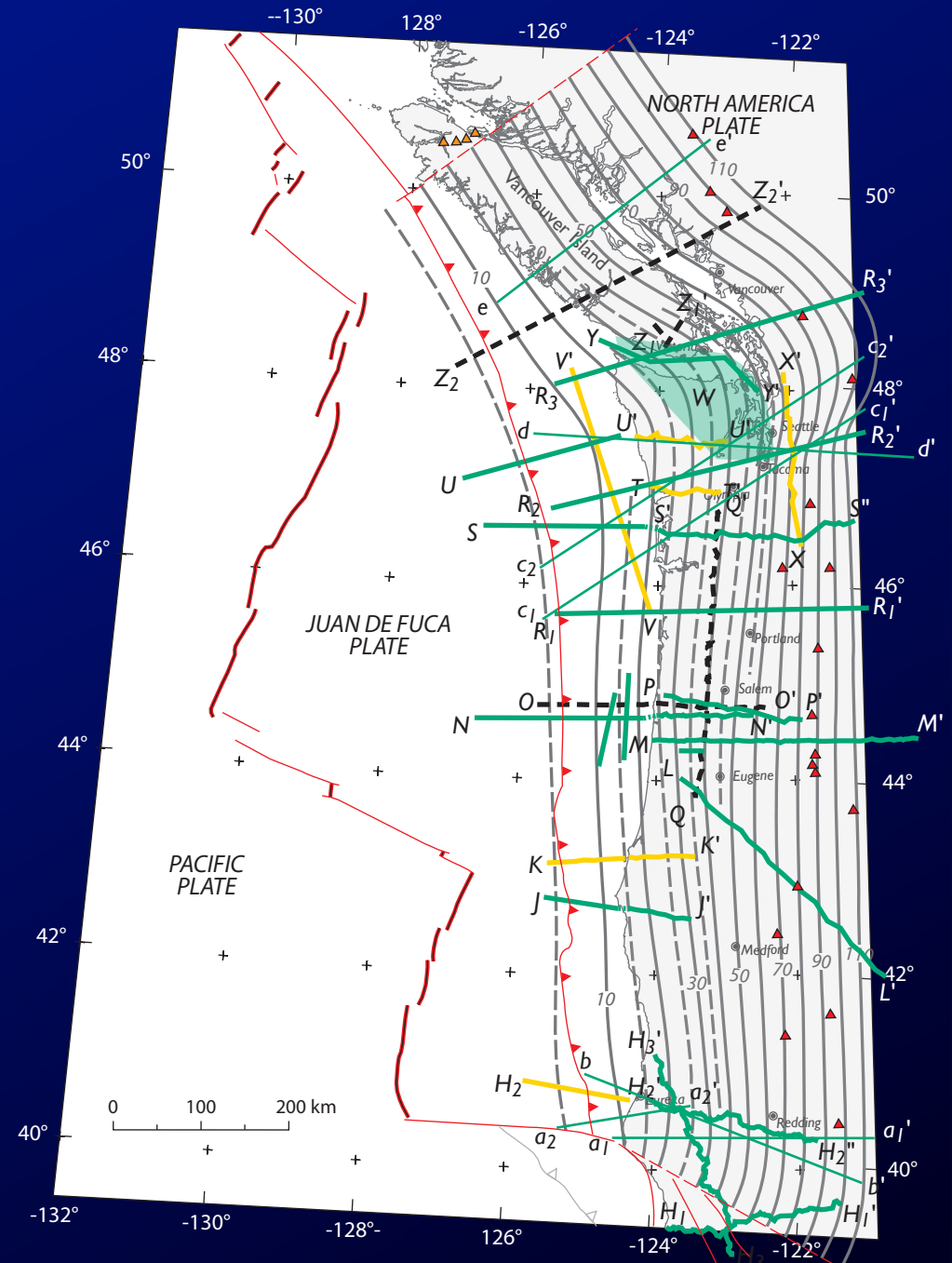


# LOCATION OF DATA USED TO CONSTRUCT SLAB-DEPTH SURFACE

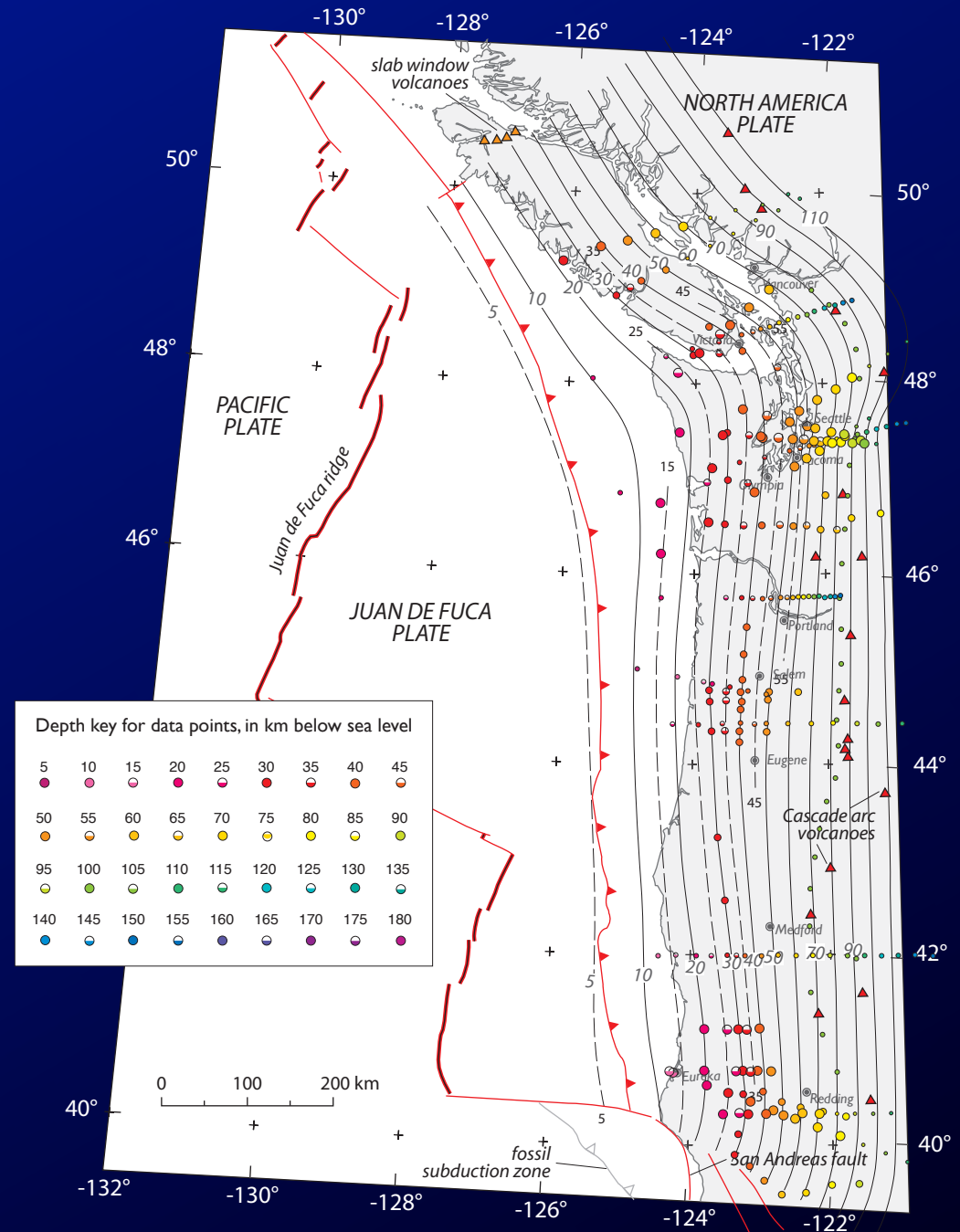
published model includes  
available constraints  
through ~2003



Modified from McCrory et al., 2004, Depth to the Juan de Fuca slab beneath the Cascadia subduction margin:  
A 3D model for sorting earthquakes, USGS DS-91

# DATA POINTS USED TO CONSTRUCT SLAB SURFACE IN »

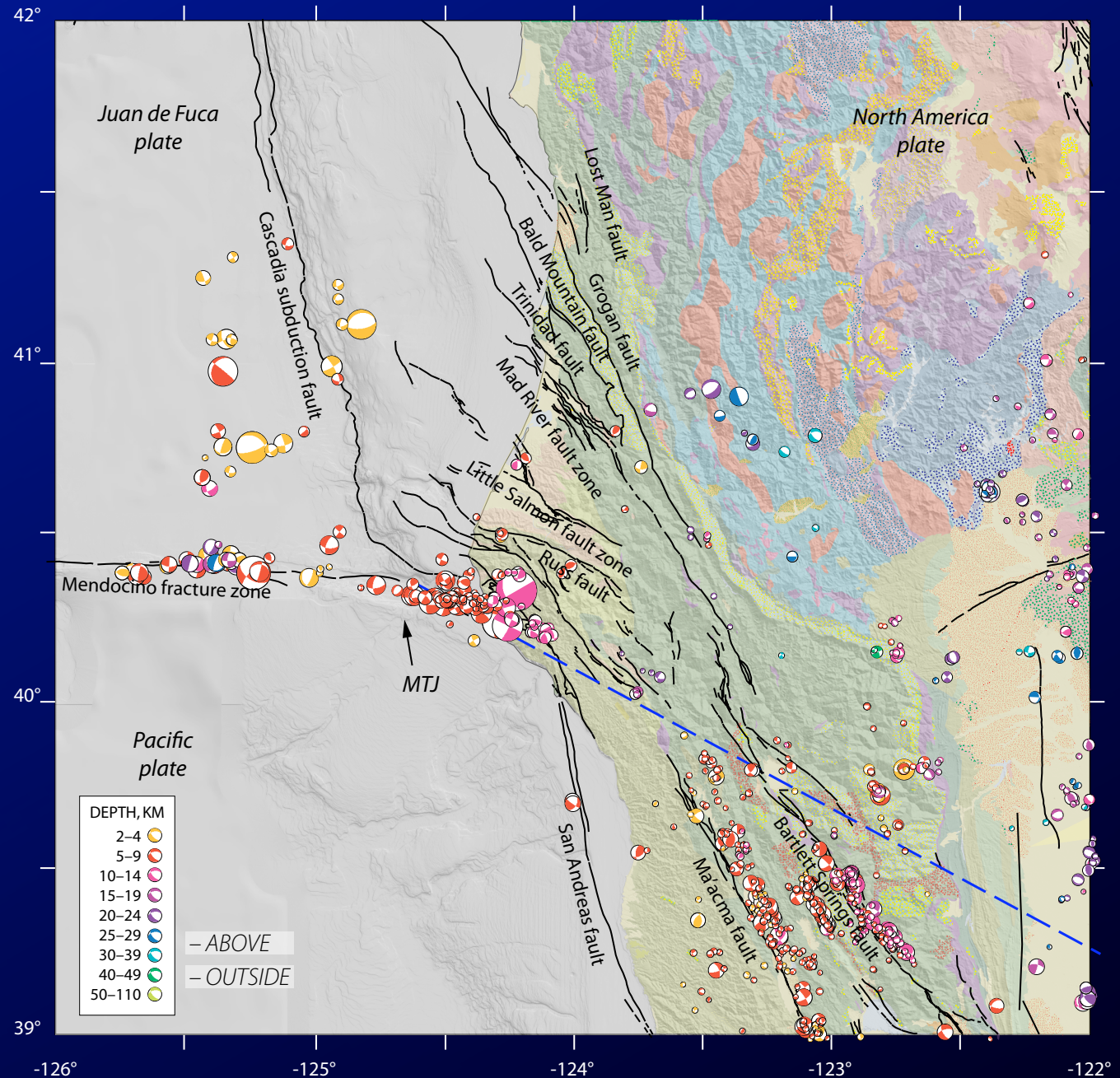
McCrory *et al.*, 2004,  
Depth to the Juan de Fuca  
slab beneath the Cascadia  
subduction margin:  
A 3D model for sorting  
earthquakes,  
*USGS Data Series 91*





# REVISIONS CURRENTLY UNDERWAY

slab surface too  
deep in parts of  
northern California  
» slab mechanisms  
leaking through

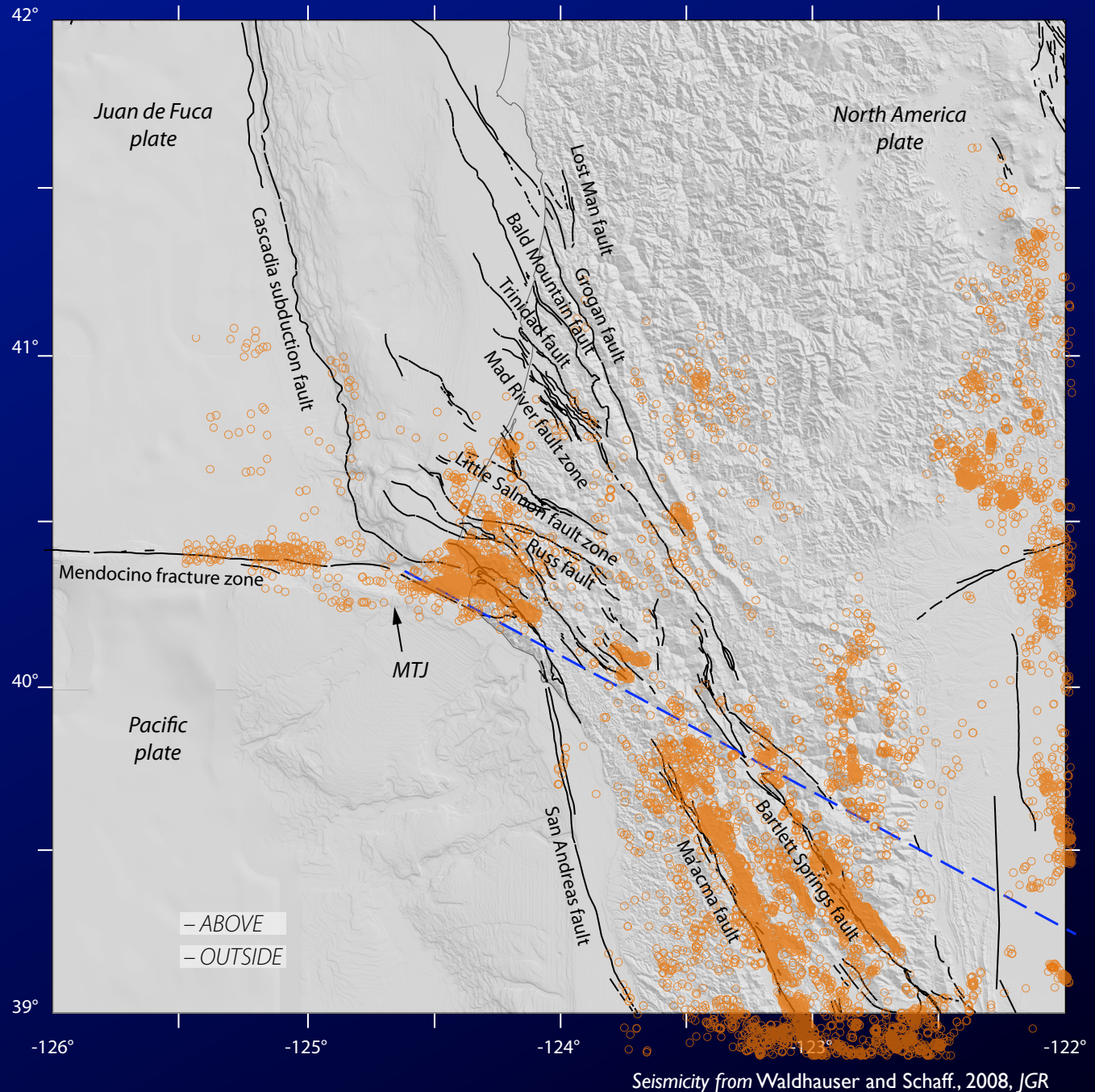


Modified from Pollitz et al., 2009, Remarks on interseismic deformation in the western United States, to be submitted to JGR



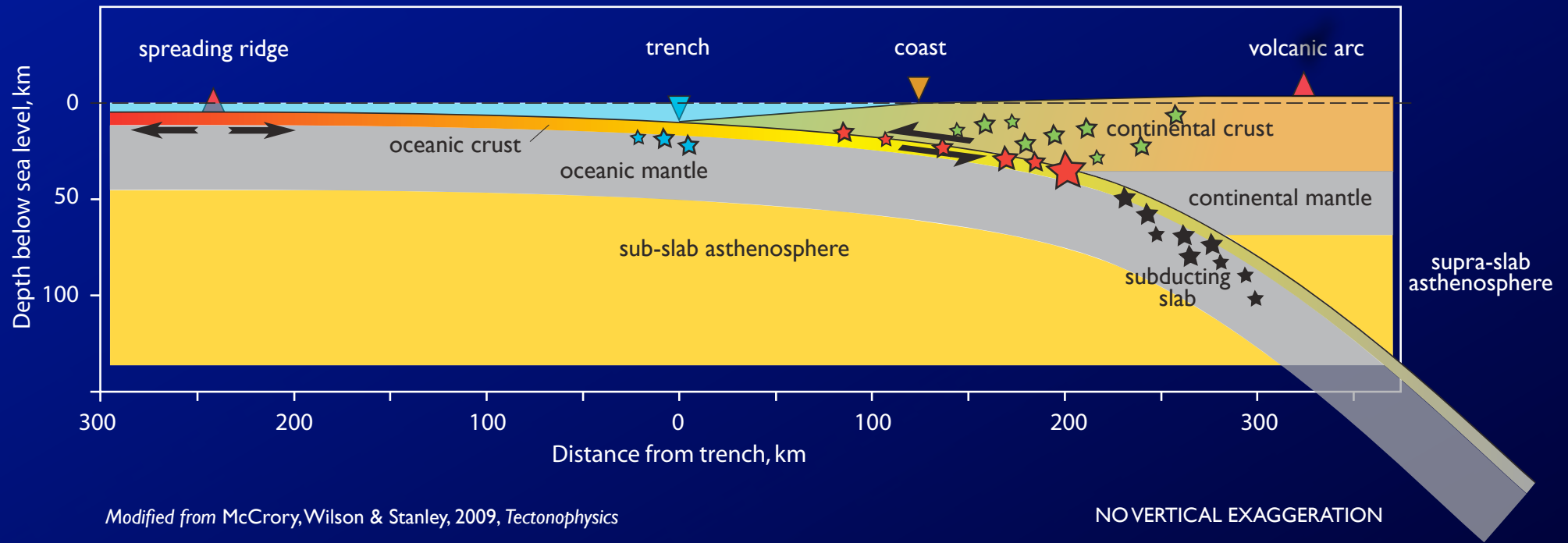
# REVISIONS CURRENTLY UNDERWAY

using 1983-2004  
NCSN DD catalog  
to update slab  
surface in northern  
California



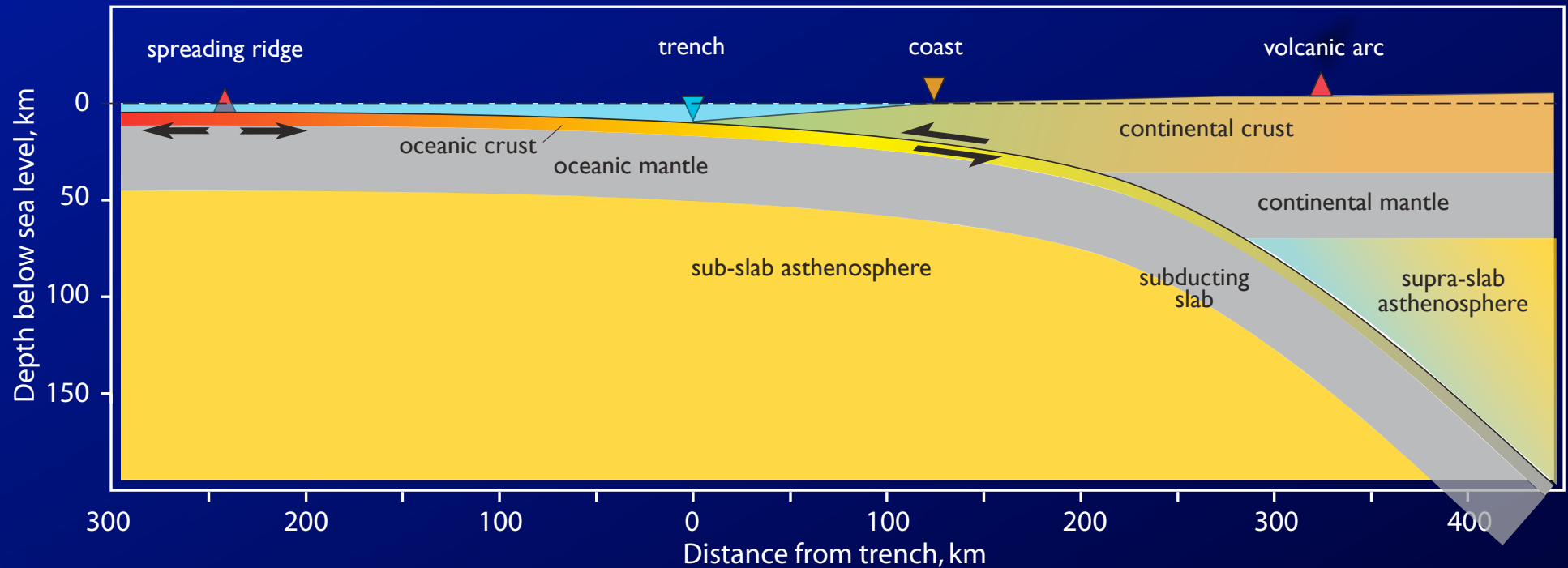


# PACIFIC - JUAN DE FUCA - NORTH AMERICA PLATE SYSTEM, BEFORE CA. 28 MA



side view of a subduction boundary

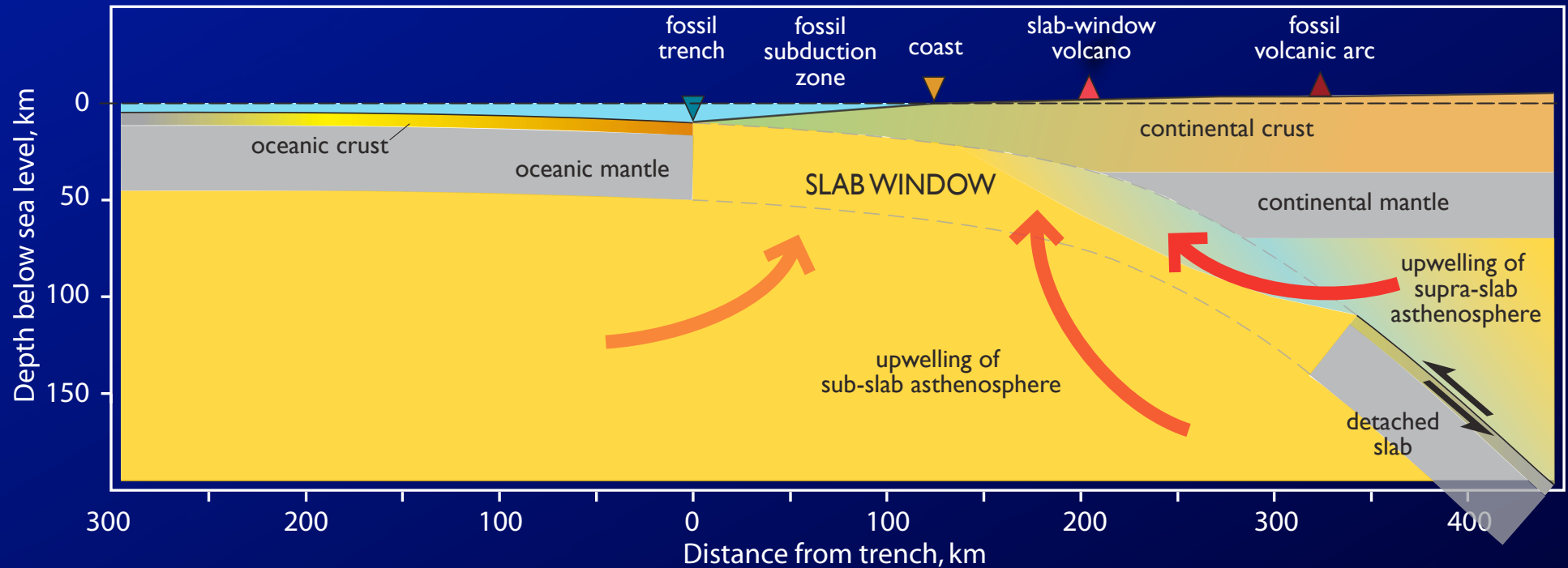
## PACIFIC - JUAN DE FUCA - NORTH AMERICA PLATE SYSTEM, BEFORE CA. 28 MA



## SIDE VIEW OF CALIFORNIA SUBDUCTION BOUNDARY BEFORE FORMATION OF A SLAB WINDOW



# PACIFIC - JUAN DE FUCA - NORTH AMERICA PLATE SYSTEM, AFTER CA. 25 MA

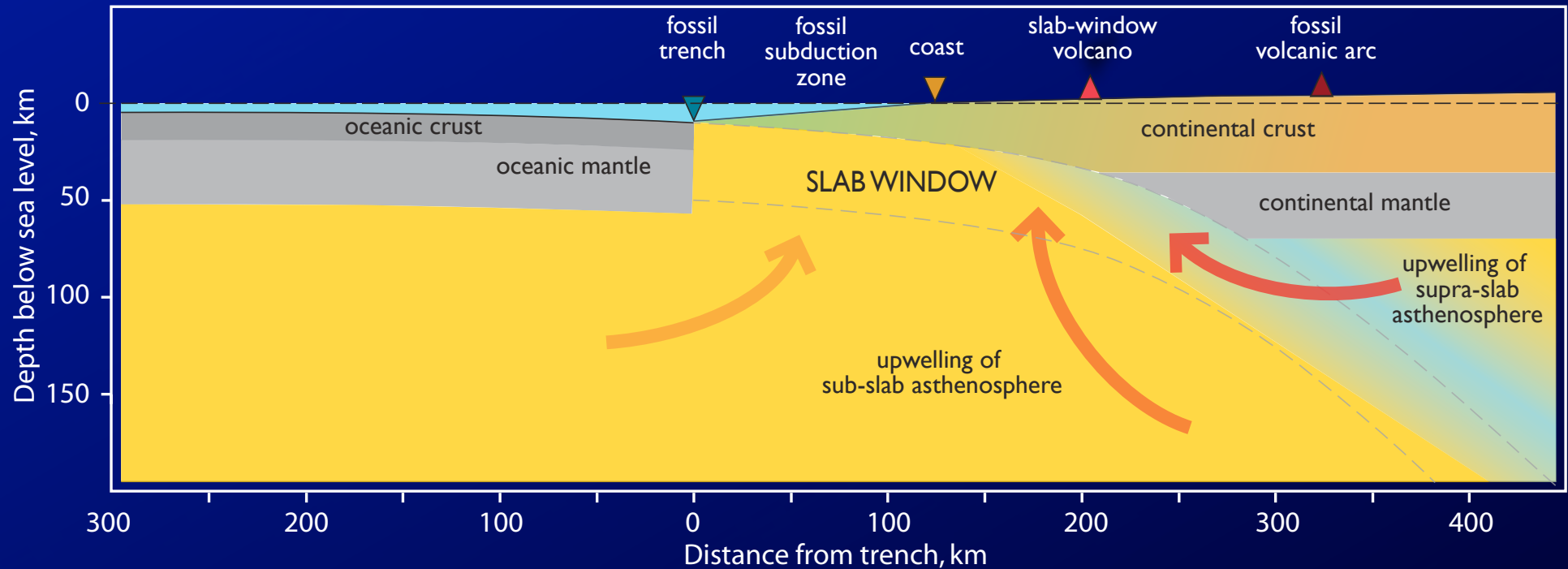


Modified from McCrory & Wilson, 2008, *Tectonophysics*

NO VERTICAL EXAGGERATION

## SIDE VIEW OF CALIFORNIA CONTINENTAL MARGIN AT NORTH EDGE OF SLAB WINDOW

## PACIFIC - NORTH AMERICA PLATE SYSTEM, AT PRESENT



Modified from McCrory & Wilson, 2008, *Tectonophysics*

NO VERTICAL EXAGGERATION

## SIDE VIEW OF CALIFORNIA CONTINENTAL MARGIN AT MODERN MENDOCINO TRIPLE JUNCTION



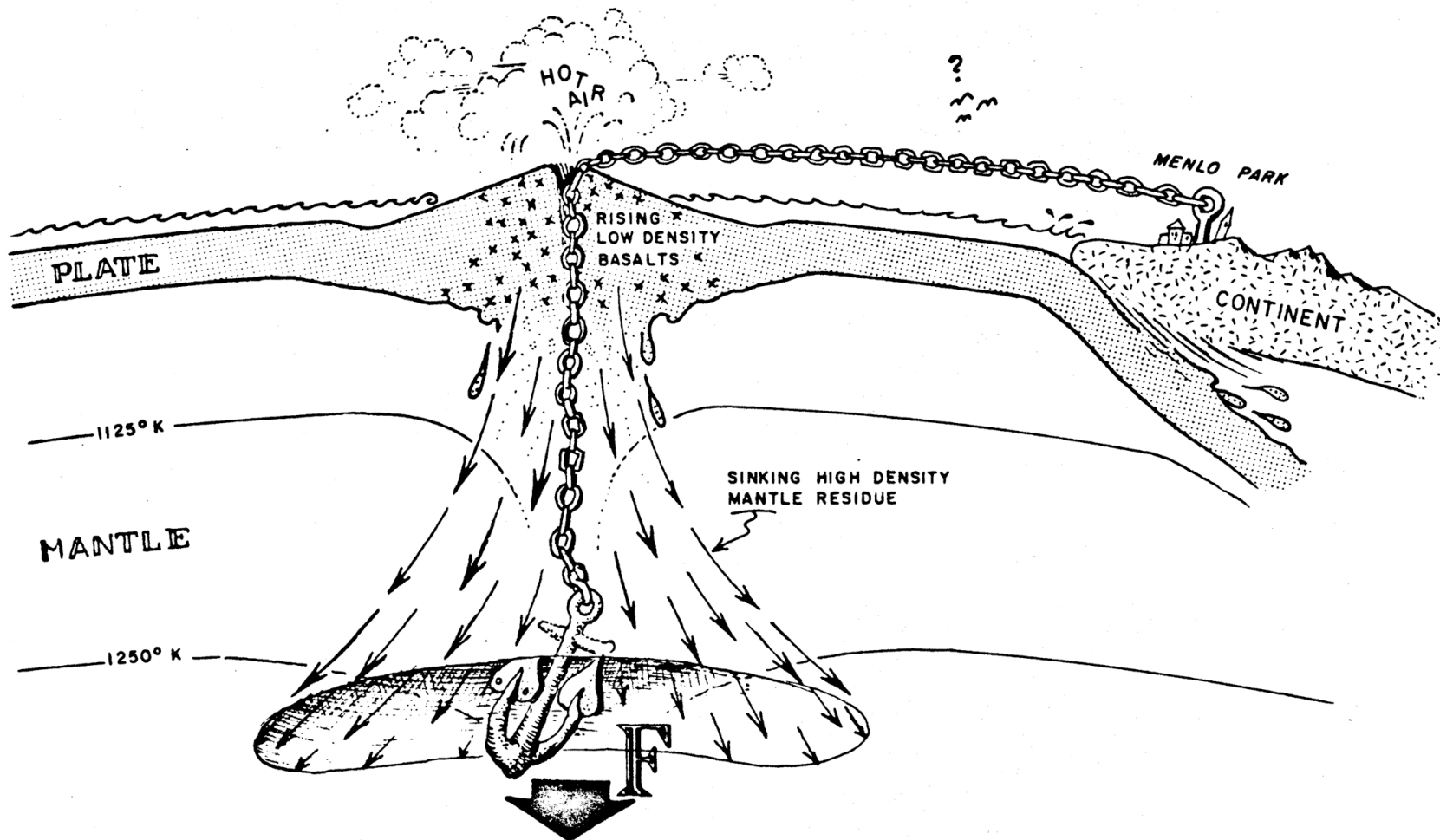
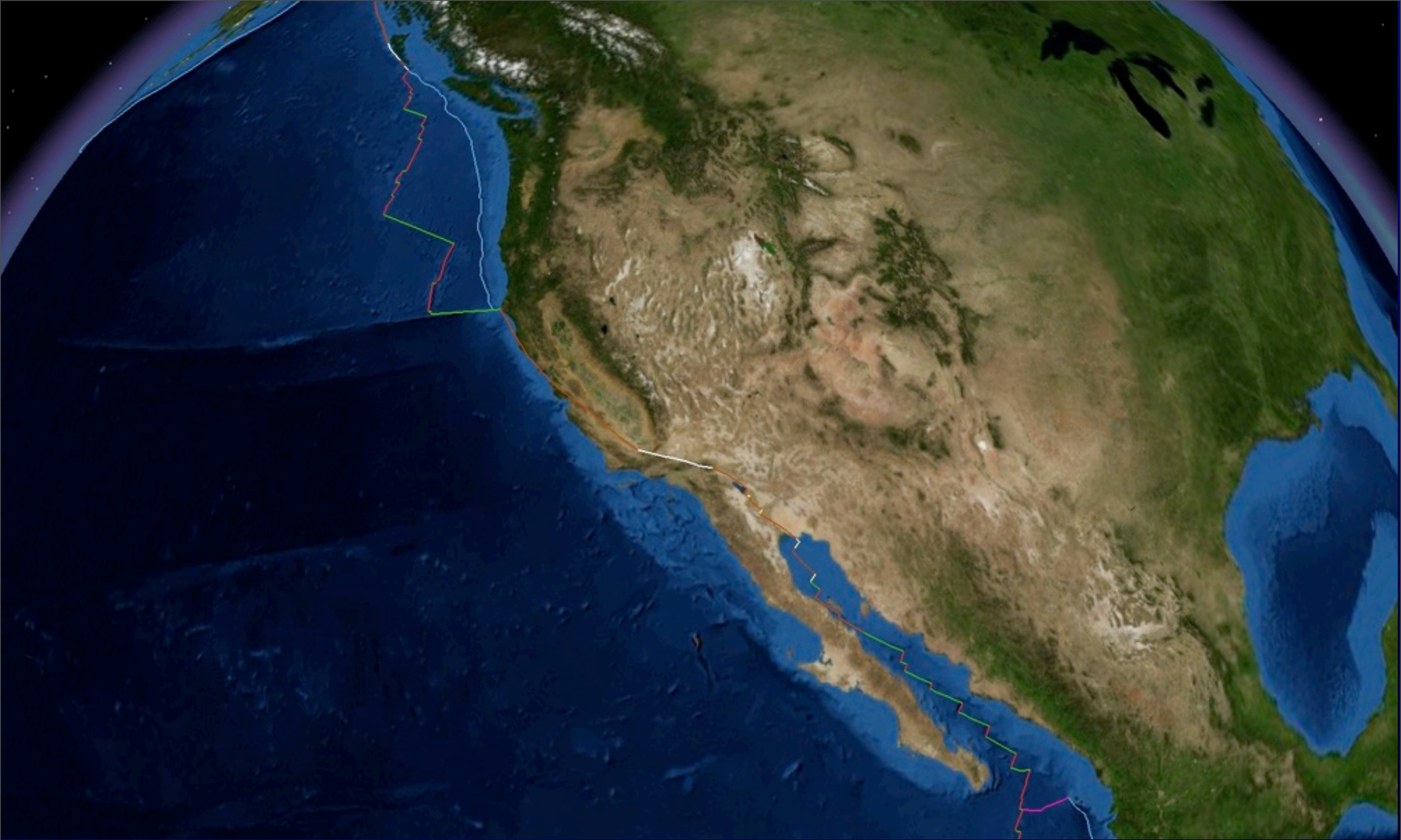


Fig. 2. Gravitational anchor theory, showing the origin of Hawaii [Shaw and Jackson, 1973]. According to this hypothesis, even the motion of California can be explained (although the motions of Californians remain as mysterious as ever).

Cartoon from Holden & Vogt, 1977, *Eos*.









A photograph of a rustic wooden bridge crossing a narrow stream. The bridge is constructed from several long wooden planks, with two prominent, weathered metal beams running down the center. The stream is calm, reflecting the surrounding greenery. On the right bank, there is a large pile of driftwood. The background shows a dense forest of tall trees on a hillside.

# INTO THE FUTURE