**Yellowstone Hotspot/Cascade Volcanism**

**Farallon Plate Split by Pacific Plate**  
Subduction of spreading ridge develops S-S boundary, leading to N-S propagation of S-S slab. Pacific Plate  
Wrenching+removal of Eastward compression slab still back causes extension at Basin and Range

**Roll Back of Flat Slab**  
Create Metamorphic Core Complex as slab returns to normal dip. Evidence of timing left in westward moving volcanics

**Flat Slab**  
Deformation jumps east (Mantle Wedge has moved)  
Laramide (Modern Rockies). In Coastal Basement rocks  
Brittle, brittle deformation, left CO Plateau undeformed (change was rapid)

**Oblique Convergence**  
N-S displacement of Arc Sequence blocks

**Granite Intrusions**

**Development of Long lasting accretionary wedge**

**Weak Crust  
“MudPile” Basin in NV**

**Establish Arc Volcanics**

**Western Pacific  
Andean Style**

Ocean crust subducts rather than being thrust over  
NA, no more inland arcs accreting end of  
Passive margins (West Pacific) Now Andean Style

**Sonoma Arc Collision**

Aids in remaining material to west coast, like Havilla & Antler, but with a very complete arc sequence

**Truncation**

Removed sediments from Antler, Havilla & Sonoma  
caused the difference in deformation styles and  
invasion through basement vs sediment.  
REcull in evolution at western US

**Western Pacific Style**

Island arcs accreted and thrust over passive margin

---

**CROSS-SECTIONS**

**Laramide Deformation**

**Flat Slab**

**Mantle Wedge**

**Brittle Def. in Precambrian Basin Rock**

**Go Cal**

**Truncation**

**Synthetic Arc (Ge Sierra Nevada)**

**Antithetic**

**Foredeep**

**Continental (Convergent)**

**Western NV (Andean Style)**

**Western NV, Transition to Andean**

**Sonoma Belt**

**Antler + overlap**

**WESTERN NV (Now-up-off) Western Pacific Style**