

## **Insight into continental growth from along-strike analysis of the Sierra Nevada-Peninsular Ranges Late Cretaceous Cordilleran batholith flare-up**

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New and published data clearly delineate the continuity of the Cordilleran mid-Cretaceous (100-85 Ma) Sierra Nevada-Peninsular Ranges batholith flare-up event from northwestern Nevada to the southern tip of Baja California over a strike-length of 2500 km. Outcrops define a belt dominated by a series of large, nested, generally inward-younging intrusive suites with more mafic peripheries relative to more felsic cores. Plutons throughout the belt are inferred to have been generated by melting of deep crustal sources based on REE fractionation patterns and elevated Sr/Y ratios, and the consanguinity of intrusion is well-documented by more than 150 widely distributed zircon U/Pb ages. Wallrock hosting the belt varies dramatically along strike from basinal early Mesozoic oceanic arc terranes in the north and south to more fertile continental lithosphere in the southern Sierra Nevada segment, as reflected by along strike variation in Sr-Nd tracer isotopic data.. Oxygen isotope data show that contributions of supracrustal source materials to the source region of the magma generation varied greatly along strike. Age probability distribution of inherited zircon grains from the Peninsular Ranges segment closely match detrital zircon age distributions from batholith derived forearc sediments as well as Catalina Schist metasedimentary rocks demonstrating crustal recycling of forearc subduction erosion products into source melt regions over short (<10 Ma) time scales.