

Supplemental Material

Data sources for zircon ages from Himalayan orogen included in Figure 2C.

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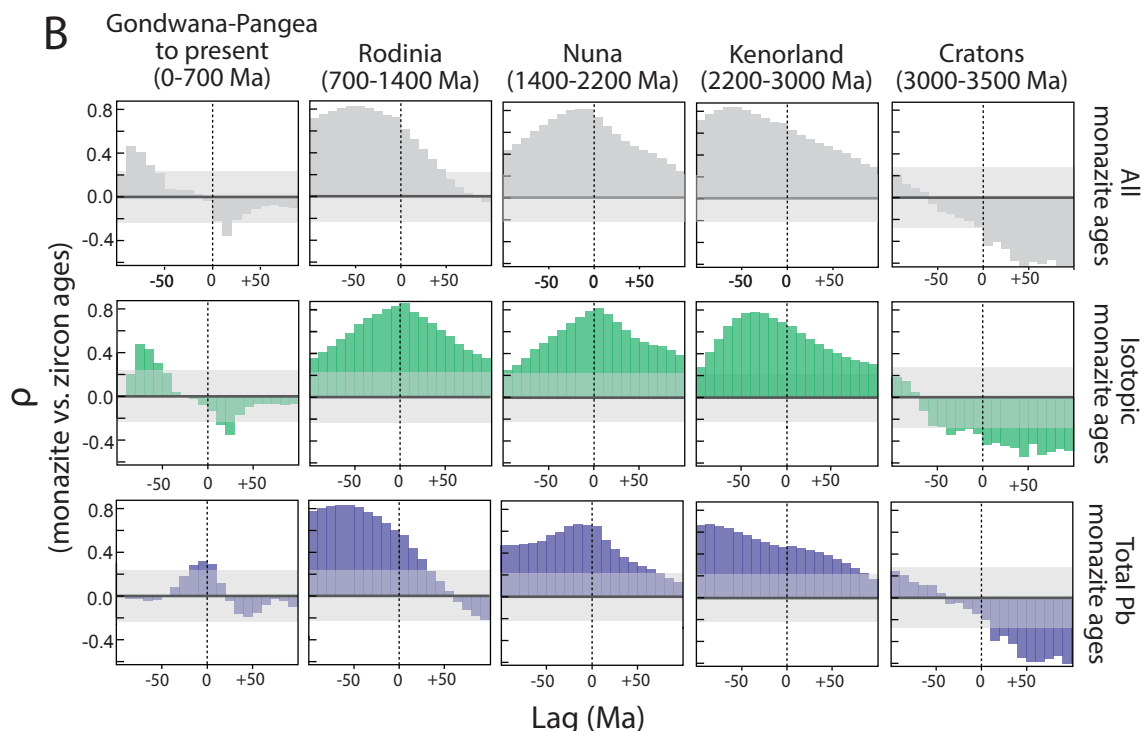
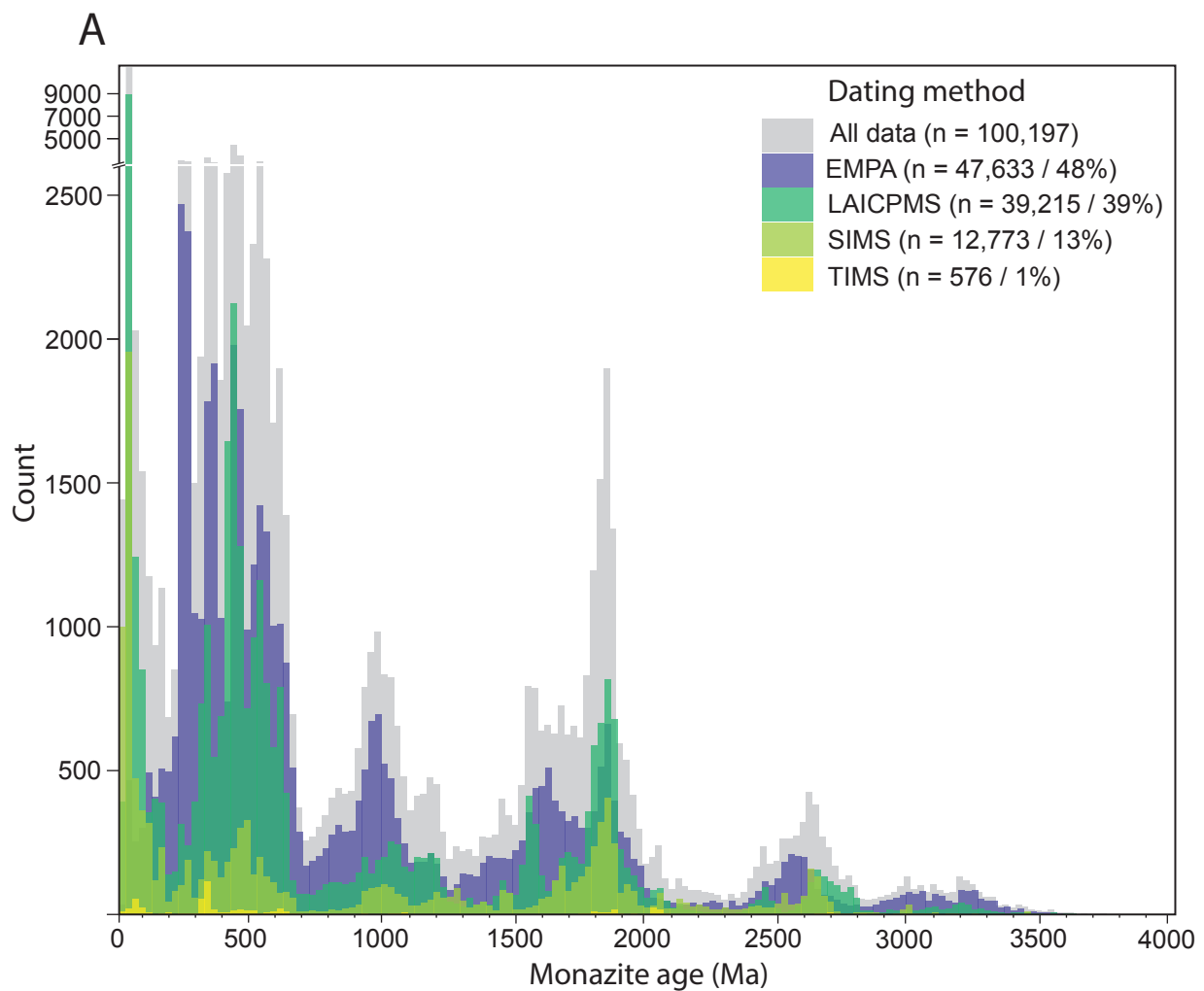


Figure S1: **A:** Stacked histograms of monazite ages from global compilation classified by dating method. EMPA — Electron microprobe analyzer; LAICPMS — Laser ablation inductively coupled plasma mass spectrometry; SIMS — Secondary ion mass spectrometry; TIMS — Thermal ionization mass spectrometry. **B:** Results of cross-correlation analysis comparing all monazite ages (All data), monazite isotopic ages (LAICPMS, SIMS, TIMS data), and monazite total Pb ages (EMPA data) to detrital zircon ages (zircon ages from Puetz and Condie, 2019). The similarity of histograms and results of cross-correlation analysis demonstrate that our interpretations based on comparing zircon and monazite age distributions are not dependent on the type of monazite dating technique included in the analysis.