Geological Magazine

Provenance and tectonic setting of the Upper Palaeozoic sandstones in western Inner Mongolia (the Shalazhashan and Solonker belts), China: insights from detrital zircon U–Pb ages and Hf isotopes

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Online Supplementary Material

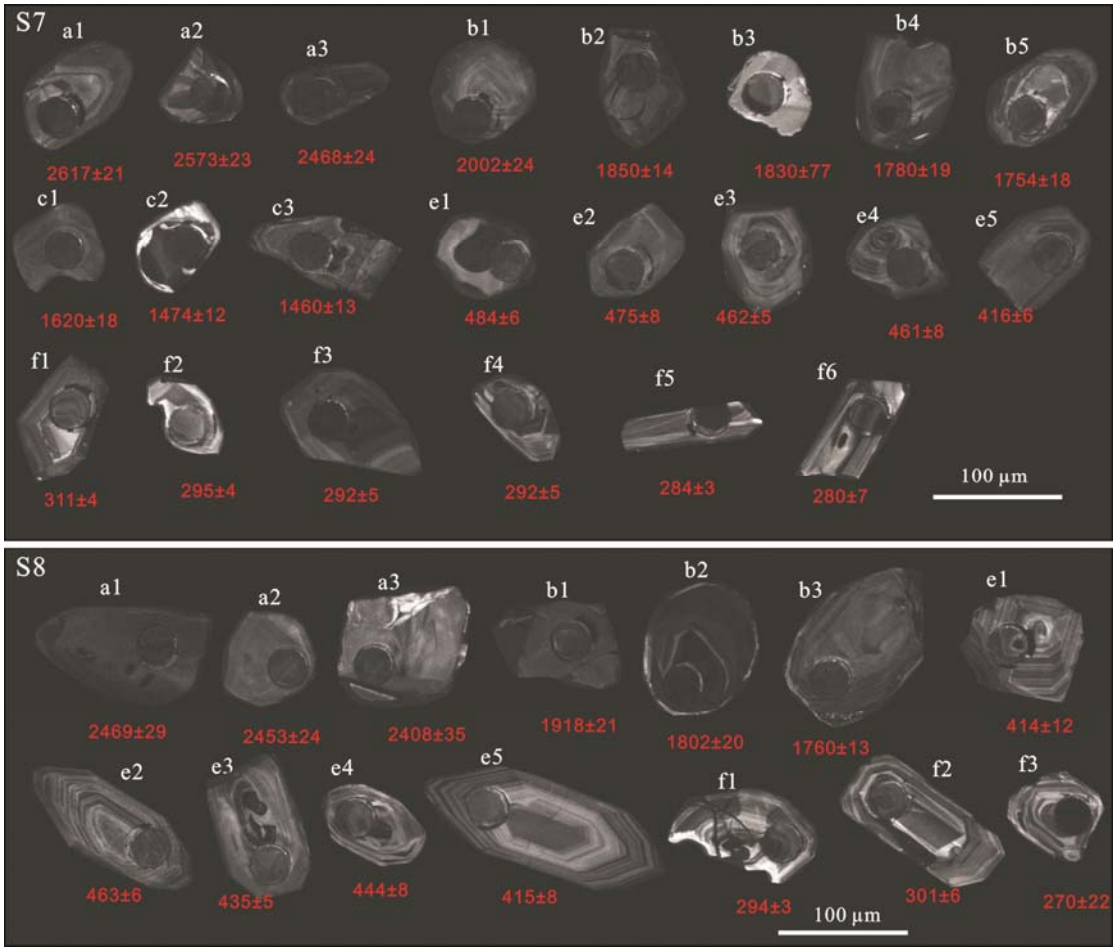

Figure S1. Representative CL images in the Mandula area showing internal structures of the six age groups of zircon grains. Combining with the trace elements in Figure 10, the zircon types are identified as: (Sample S7): a2, a3 = metamorphic zircons; b1, b2, b4, e2–e5, f1–f5 = magmatic zircons; a1, b3, b5, c1–c3, e1, f6 = complicated origins, probably magmatic zircons but reworked by metamorphic event or hydrothermal fluids. (Sample S8): b1 = metamorphic zircons; b3, e1–e5, f1–f3 = magmatic zircons (e5 = granitoid); a1–a3, b2 = probably metamorphic zircons.

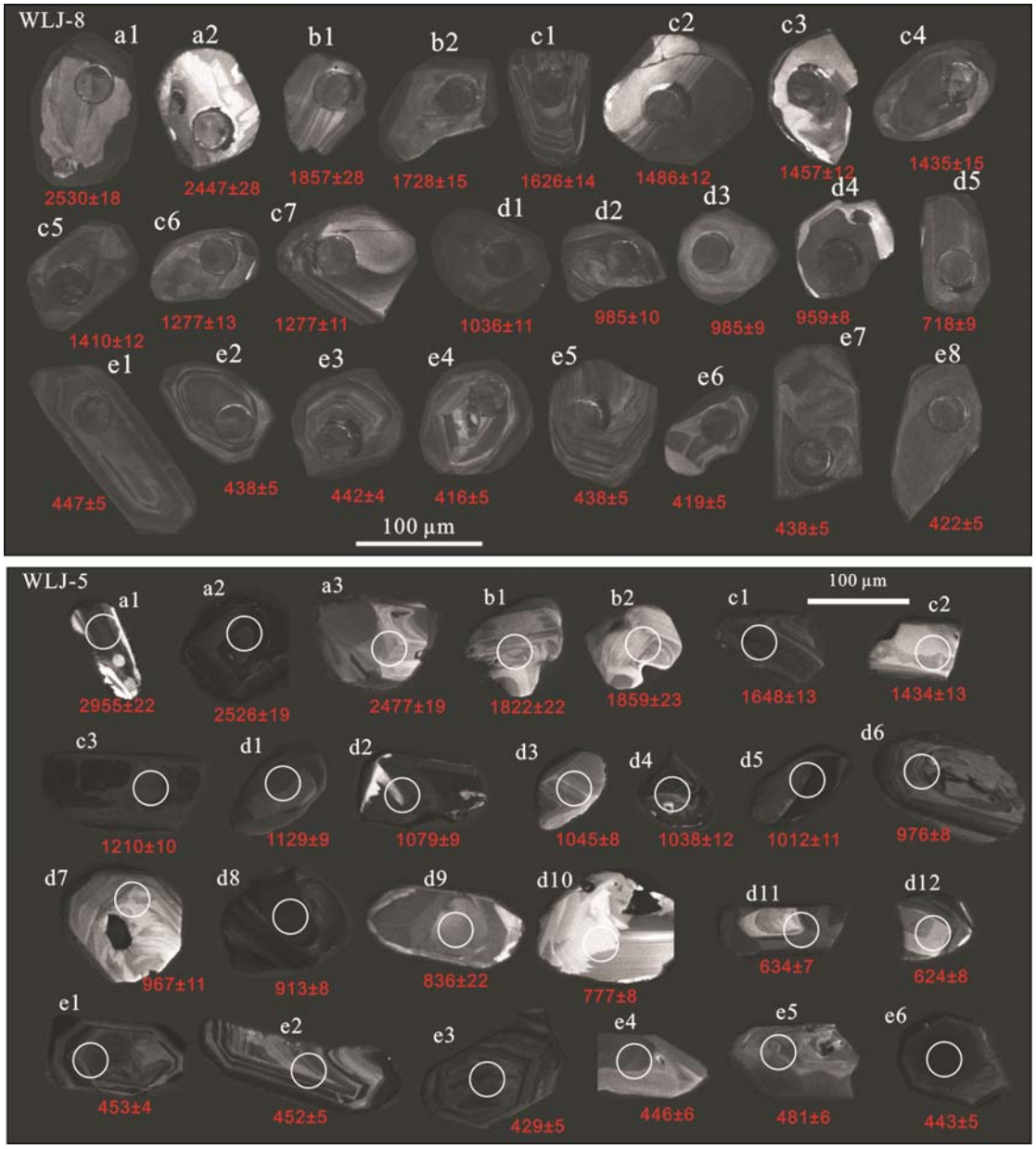

Figure S2. Representative CL images in the Quagan Qulu area showing internal structures of the six age groups of zircon grains. Combining with the trace elements in Figure 10, the zircon types are identified as: (Sample WLJ-8): a1, d3 = metamorphic zircons; b1, c1, e1–e5 = magmatic zircons; a2, b2, c2, c4–c7, d1, d2, d4, d5, e6–e8 = complicated origins, probably magmatic zircons but reworked by metamorphic event or hydrothermal fluids. (Sample WLJ-5): e6 = metamorphic zircons; a2, a3, b1, b2, d3, d7, d12, e1–e3 = magmatic zircons; a1, c1–c3, d1, d2, d4–d6, d8–d11, e4, e5 = complicated origins, probably magmatic zircons but reworked by metamorphic event or hydrothermal fluids.

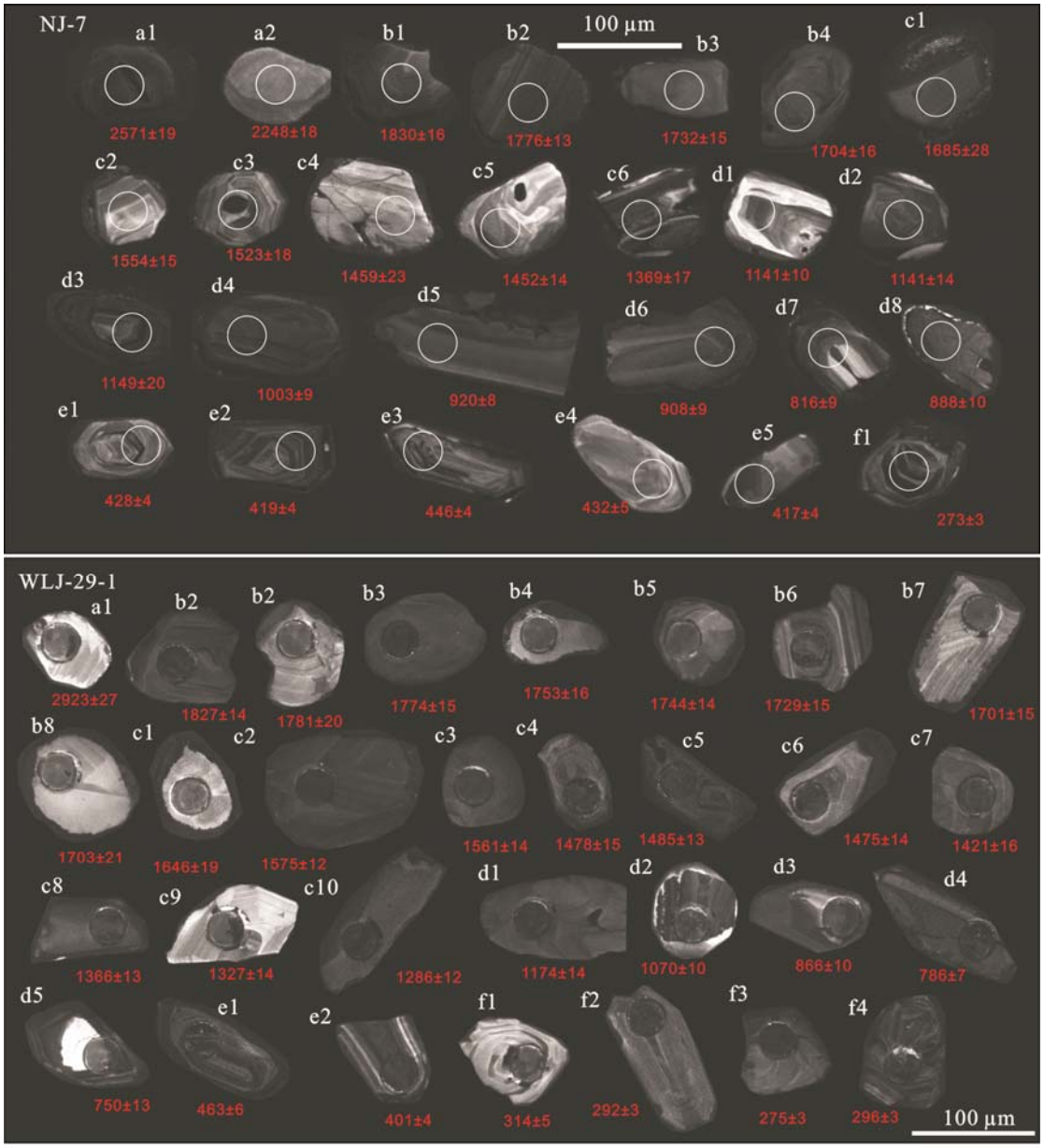

Figure S3. Representative CL images in the Enger Us area showing internal structures of six age groups of zircon grains. Combining with the trace elements in Figure 10, the zircon types are identified as: (Sample NJ-7): b1, b2, b4, c2–c5, e1–e3, f1 = magmatic zircons; b3, c6 = metamorphic zircons; a1, a2, c1, d1–d8, e4, e5 = complicated origins, probably magmatic zircons but reworked by metamorphic event or hydrothermal fluids. (Sample WLJ-29-1): b1, b2, b6, b7, c7, c9, e1, e2, f1–f4 = magmatic zircons; c6, d2, d4 = metamorphic zircons; a1, b3–b5, b8, c1–c5, c8, c10, d1, d3, d5 = complicated origins, probably magmatic zircons but reworked by metamorphic event or hydrothermal fluids.