

COMPOSITION-AGE RELATIONSHIPS IN MONAZITES AND ZIRCONS FROM THE MAOWU ULTRAHIGH-PRESSURE ULTRAMAFIC BODY, DABIE MOUNTAINS, CHINA: IMPLICATIONS FOR TIMING AND MECHANISM OF UHP METAMORPHISM

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The timing of UHP metamorphism in the Dabie terrane is controversial, and most recent data comes from dating of zircons. Monazite has recently been recognized as useful for dating of multiple tectonic events due to its' preservation of multiple growth zones formed during prograde, peak, and retrograde metamorphism. We collected monazites and zircons from the Maowu ultramafic body in the Dabie UHP terrane to obtain new age constraints on UHP metamorphism. The Maowu is unique in that it contains unusually high concentrations of Light Rare Earth Elements (LREE), more than 3000 times mantle values (Liou and Zhang, 1998, The Island Arc, 115-134), and therefore contains abundant monazite. We examined zircon and monazite from Maowu UHP eclogites in thin sections and mineral separates. Backscattered electron images, electron microprobe compositional data, and high-resolution ion microprobe age data for zircon and monazite will be presented.