MIDDLE PALEOZOIC TECTONOMAGMATISM IN THE KUNLUN-ALTYN TAGH MOUNTAINS

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Preliminary results, from the Paleozoic tectonostratigraphic framework, tectonic deformation and styles, regional distribution and geochemistry of the Paleozoic granitoids and Ordovician volcanic rock distributed the Altyn Tagh and Central Kunlun range where limited geological researches were performed, allow new interpretations for the genesis and a more thorough understanding of a middle Paleozoic geodynamics in the range. These data and its regional correlation implied an ocean or back-arc basin possibly existed in the northern Tibetan Plateau during the Early Paleozioc. U-Pb, Ar/Ar and K-Ar dating of minerals have outlined a distinct ACM magmatism between 440-395Ma. Ar/Ar dating of Muscovite and biotite from the deformed granodiorite documented an intrusive event at 432Ma, Sm-Nd dating from the basic volcanic rock in the Altyn Tagh fault and Yaziquan suture from 481Ma to 435Ma. The undeformed, postorogenic microgranitic intrusives were dated at 383-362Ma, suggesting that an ocean basin or the back-arc basin closed between the Early Silurian and Late Devonian, and fromed active continental margin, the herein named Napeiquan, Mangyan and Yaziquan suture and dismembered ophiolite suite. The lack of the Silurian stratum and the appearance of the Late Devonian molasse basin also implied the convergent tectonics within the middle Paleozoic orogen and northward subduction.