

A comparison between both eclogites from Altyn Tagh and northern Qaidam in northwestern China
----another HP-UHP(?) metamorphic belt truncated by strike-slip fault in China?

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Recently, two eclogites within quartz-feldspathic gneisses or pelitic gneisses characterized by amphibolite-facies parageneses were newly discovered separately in Altyn Tagh and northern Qaidam. They occur respectively as lens or boundins within Altun Group which previously mapped as metamorphic basement of Tarim block and Takendaban Group which mapped as metamorphic basement of Qaidam block. Our studies indicate that the eclogites in both Altyn Tagh and northern Margin of Qaidam basin show strong similarities in geological setting, occurrence, mineral assemblage, geochemical and protolith feature, P-T condition of formation, retrograde metamorphism, associated country rock and almost consistent metamorphic age(500-503Ma and 495Ma respectively given by Zircon U-Pb dating).Therefore, the both eclogites from Altyn Tagh and northern Qaidam may result from same Caledonian continental subduction and collision ,which were originally formed in same continent-continent collision orogenic belt and was subsequently displaced by Altyn Tagh fault which is considered as the longest sinistral strike-slip fault of Asia. The both eclogites may be the product of a HP-UHP (?) metamorphic belt offset by large scale stike-slip fault ,similar to the case of the Dabie-Sulu HP-UHP metamorphic zone which was truncated by the Tanlu sinistral strike-slip fault, and the offsets along the Altyn Sinistral Strike-Slip Fault is about 400km.