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青海南山隆起的沉积证据及其对青海湖—共和盆地构造分异演化的指示

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摘要：

青海南山的隆起对解析青海湖—共和盆地地区构造和区域环境演化过程具有重要的意义。通过共和盆地西北部晚新生代地层的野外地质调查，发现上新世地层中存在一期角度不整合面。角度不整合面上、下地层中沉积碎屑矿物发生了突变：上部地层碎屑组成与现代南山基本一致，而不同于其下沉积地层。常量元素含量、风化特征等地球化学特性的变化，进一步证实了青海南山可能并不是下伏地层的物源区。结合地层变形特征及区域地质资料可以推断，温泉右行走滑断裂的运动致使柴北缘—南山俯冲断裂的再次活动是造成共和盆地向青海湖盆地下俯冲、青海南山隆起的主因。该俯冲运动使其南侧的地层发生掀斜（倾向西南），原来地貌特征发生了明显的变化，并形成了上新世地层顶部的角度不整合面。之后，青海湖与共和盆地最终成为两个独立的盆地，青海南山成为两侧沉积地层的物源区，两者均开始了截然不同的演化过程。

关键词：青海南山 角度不整合面 常量元素 风化作用 俯冲断裂 活动构造

Sedimentary Evidences of the Uplift of the Qinghai Nanshan (the Mountains South to Qinhai Lake) and Its Implication for tructural Evolution of the Lake Qinghai—Gonghe Basin

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Abstract:

The time of the uplift of the Qinghai Nanshan (the Mountains south to Qinhai Lake) is important in understanding structural evolution of the Lake Qinghai—Gonghe Basin. An angular unconformity within the Pliocene stratum was found during field exploration in northwestern part of the Gonghe Basin. Abrupt change in the detrital minerals is further confirmed by major elements and proxies of weathering intensity before and after this tectonic event, suggesting that the underlying and overlying sediments have different provenances. Combined deformation of sediments and regional information, it can be deduced that an existed thrust, Qaibeiyuan—Qinghai Nanshan northwest dipping thrust was reactivated along the region of the southward range front of modern Qinghai Nanshan by Late Cenozoic right lateral movement of Wenquan fault. The mountains range is thus a tectonic ramp that thrusted southward over the Gonghe basin. The movement of Qinghai Nanshan changed the geomorphology of the basin and the sediments in the southward range front were tilted to southwest. After the unconformity, the Qinghai Nanshan has served as a watershed boundary and then became a new provenance of the Lake Qinghai and Gonghe Basin.

Keywords:Qinghai Nanshan (the Mountains South to Qinhai Lake) angular unconformity major elements weathering thrust active structure

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