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内陆湖泊流域的化学风化及气候变化—以内蒙古岱海为例 [点此下载全文](#)

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摘要:

利用湖泊沉积物中Rb/Sr值来反映受古气候制约的流域陆地化学风化率的变化, 并恢复了岱海近400a以来以小冰期为特征的、具有100a准周期(经谱分析)的气候波动历史。通过磁化率、粘土矿物含量和种类的综合分析, 确证了湖泊沉积物Rb/Sr值的变化可以用来重建流域内化学风化率与其相应的古气候演化过程, 是湖泊沉积记录中具有比磁化率更明显气候意义的有效代用指标。

关键词: [封闭湖泊](#) [化学风化率](#) [铷/银值](#) [古气候变迁](#) [湖泊沉积物](#) [磁化学](#)

Chemical Weathering and Paleoclimatic Change in Watershed Recorded in Lake Sediments--A Case Study of the Daihai Lake, Inner Mongolia [Download Fulltext](#)

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Abstract:

According to different geochemical behavior between rubidium and strontium during chemical weathering, variations of Rb/Sr ratios in the lake sediment sequence can be used as a good indicator of chemical weathering in watershed. We reconstructed the paleoclimatic change history in the Daihai Lake area during the last 400 years determined by the variations of Rb/Sr ratios in the lake sediment sequence, including the Little Ice Age and two post-glacial rebound. Spectrum analysis shows that the variation of Rb/Sr ratios has quasi periodicity of 100 years, and so does the paleoclimatic change. Combined analysis of magnetic susceptibility, clay minerals and contents yields paleoclimatic records which are more explicit than magnetic susceptibility which has been used as a good paleoclimatic indicator by many researchers.

Keywords: [closed lake](#) [Rb/Sr ratio](#) [chemical weathering](#) [paleoclimatic change](#)

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