多重分形模型在区域地球化学异常分析中的应用探讨

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中文摘要:地球化学异常分析是地球化学勘查中的重要环节，对有效发现异常至关重要。但是，在以往研究中，研究者们多重视对成矿元素及其伴生元素正异常的研究，忽视对由元素贫而形成的负异常的研究。元素的负异常在地球化学勘查中具有与正异常同等重要的作用，以往没有重视负异常的原因之一是缺乏有效发现此类异常的方法，尤其是确定负异常上限的方法。本文以北山地区1: 20万峡东幅水系沉积物测量Ba数据为基础，探讨了应用多重分形模型确定贫化元素负异常上限的可行性。结果发现，利用含量-面积法、含量-求和法确定的Ba异常上限，有效圈定了辉铜山矿床产出地段Ba的负异常，取得了预期成果。

中文关键词:分形模型 含量-面积法 含量-求和法 负异常上限

A Tentative Discussion on the Application of Multi-fractal Models to the Analysis of Regiona Geochemical Anomalies

Abstract:As an important step in geochemical exploration, the analysis of geochemical anomalies is of great significance in the effective discovery of anomalies. However, i previous studies, researchers only focused on the investigation of the positive anomalies of metallogenic elements and their accompanying elements, and paid less attentic the study of the negative anomalies formed by the depletion of elements. As a matter of fact, negative anomalies play the same important role as positive anomalies in geochemical exploration. The absence of effective methods for discovering negative anomalies, especially the method for determining the upper limit of the negative anomal was one of the factors responsible for the ignoring of these anomalies in the past. Based on the stream sediment data obtained from 1:200,000 geochemical survey in Xiad of Beishan area, the authors probed into the feasibility of the application of multi-fractal models to ascertaining the upper limit of the negative anomaly. The result shows that upper limit of Ba could effectively delineate Ba negative anomaly in the Huitongshan copper deposit.