

基于HHT提取昆明、下关重力固体潮的地震前兆信息

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摘要 在重力固体潮地震前兆分析中引入HHT时频分析新方法. 结合HHT的优越性、固体潮的特点和地震的非平稳过程特性, 设计重力固体潮地震前兆分析的瞬时频率特征参数; 以相应理论计算值作为参照背景, 研究固体潮的震前变化特征. 昆明、下关的震例分析表明, 的确存在瞬时频率特征参数的震前变化, 且具短期、同步正异常特征; 瞬时频率特征参数具有明确的物理意义, 其震前变化反映了地震非平稳过程对理论重力固体潮的影响.

关键词 [重力固体潮](#) [HHT](#) [瞬时频率](#) [地震前兆](#)

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The gravity tide of Kunming & Xiaguan based on the HHT

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Abstract HHT time-frequency method is introduced in new analysis of gravity tide. Based on superiority of HHT, the character of gravity tide and nonstationary processes of earthquake, we design characteristic parameters of instantaneous frequency of gravity tide. And we refer to corresponding theoretical values of gravity tide in the course of earthquakes analysis. The results of Kunming and Xiaguan show that there are some premonitory changes in the characteristic parameters of instantaneous frequency before earthquakes, which bear short-term and synchronization characters. The characteristic parameters of instantaneous frequency have clear physical significance. These premonitory changes express that the nonstationary processes of earthquake influenced the observation of stationary processes of gravity tide.

Key words [Gravity tide](#) [HHT](#) [Instantaneous frequency](#) [Earthquake premonition](#)

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