

湖北省巴东县桐木园山坡型泥石流的形成机理及预警指标  
——以2003-03-31强降雨过程为例

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摘要: 2003年3月31日, 巴东县在连续强降雨作用下出现多处山体斜坡地质灾害, 造成大量房屋破坏和人员伤亡。通过现场综合调查, 笔者认为灾害比较严重的桐木园斜坡灾害体属于典型的山坡型泥石流, 着重剖析了该山坡型泥石流的变形特征及其成灾机理, 并探讨了斜坡浅表层松散岩土体快速变形的临界降雨阈值和预警指标。

关键词: 山坡型泥石流; 成灾机理; 雨强; 预警

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Formation mechanism of debris flow on the Tongmuyuan slope and its early warning index—  
—A case study of the hard rain process on March 31, 2003 in Badong County, Hubei  
Province

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Abstract: Several slope geohazards induced by continuous rainstorm occurred in Badong County on March 31, 2003, which resulted in destruction of many houses and casualties. On the basis of field investigation, the authors believe that the severe hazard mass on the Tongmuyuan slope belongs to a typical slope-type debris flow, i. e. the debris flow on slope. Its deformation characteristics and corresponding formation mechanisms are analyzed and the critical rain threshold value and early warning indices for predicting the rapid deformation of loose rock-soil masses on the shallow slope surface are discussed.

Key words: debris flow on slopes; hazard formation mechanism; rain intensity; early warning