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技术方法

地质灾害调查中ETM+与SPOT 5 Pan影像融合与评价

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摘要：

在对金沙江上游某库区地质灾害调查中，针对研究区范围广、高差大及交通不便等不利因素，选用ETM+与SPOT 5 Pan融合影像

，对库区地质灾害进行遥感调查； 采用Brovey变换、IHS变换和PCA 变换融合方法对二者进行了融合，并对融合方法和地质灾害解译

效果进行了评价。结果表明，PCA变换是一种适合于地质灾害调查的遥感影像融合方法，融合后的影像滑坡、泥石流及崩塌等地质灾

害特征明显，能够满足地质灾害遥感解译要求。

关键词： ETM + SPOT 5 影像融合 遥感应用 地质灾害调查

THE ASSESSMENT OF FUSED IMAGE OF ETM+ AND SPOT 5 PAN IN THE INVESTIGATION OF GEOLOGICAL HAZARDS

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Abstract:

Remote sensing, as an earth-observing tool, is a cost-effective technique for field investigation of

geological hazards. The study area and the reservoir area of a hydropower station located on the upstream of the

Jinshajiang River are characterized by high relief and inaccessibility, and hence ETM+ and SPOT-5 Pan were used as

the remote sensing data source, and Brovey, IHS and PCA transformation methods were adopted for image fusion. It is

concluded that PCA is the best image-fusing method for geological hazard interpretation, and that the fused image

can provide abundant textural and spectral information for easy interpretation of such geological hazards as

landslides, rock falls and debris flows.

Keywords: ETM+ SPOT 5 Image fusion Remote sensing application Geohazard detection

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