《論文獎》

Spatiotemporal Landslide Activity Derived from Tree-rings: The Tieliku Mingsui Landslide, Northern Taiwan

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ABSTRACT Spatiotemporal landslide activity records are reconstructed for the Tieliku Mingsui landslide. Periods and the extent of scar activity at the foot of the landslide body are estimated from satellite and aerial photo records. The location of landslide features at the densely forested head of the landslide body are surveyed in the field using a VBS-RTK survey and periods of activity are inferred from growth disturbances recorded in 14 conifer and broadleaf trees growing adjacent to the features. Together, image and growth disturbance records produce a detailed spatiotemporal landslide activity record that spans 34 years and includes 8 years of activity. A comparison of landslide activity records with rainfall data collected near the landslide reveals that years of landslide activity coincide with years of high summer season and event accumulated rainfall.

Key Words : Dendrogeomorphology, landslide activity, VBS-RTK survey, rainfall threshold.

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