



Microseismic response uncovering the effect of environmental stressors on 'Tower' rock stability in the AcutoFieldLaboratory

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*Long-term and seasonal variations in environmental factors can lead to the development and expansion of rock fractures, and even the rock instability, such as landslides, collapses, and rockfalls.. To end these disasters, **microseismic monitoring** technology highly correlated with rock fracture activity can be employed to assess the stability of the 'Tower' rock at AcutoFieldLab, Italy. Using microseismic data collected over two years by 8 geophones arranged in different orientation, **an automatic detection method** for rock fracture microseismic events is developed. This method further explores the **influence of environmental stressors on rock fracture behavior**..*