

Rockface Glide Avalanche Detection

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A smooth rock slab, known as Rock Face, is exposed 2.5 km north-northwest of Snoqualmie Pass, Washington adjacent to the Alpental Ski Area. Rock Face, at an elevation of 1055 m, has a slope angle of approximately 35° and a northeast aspect. During the winter of 2003-2004, a continuous recording station was installed at the top of the Rock Face slope. Instrumentation for data collection at the site includes air temperature, snow temperature, solar intensity, a cable-extension transducer for measuring glide rate and a geophone that will record the precise time of an avalanche. A limited number of events have been documented. We present an overview of the glide events and examine possible mechanisms for the glide failures. Our goal is to characterize avalanche processes and weather variables that influence the onset and eventual release of full-depth avalanches.