

Array studies of the Villarrica Volcano, Southern Chile.

¹ASCH, Guenter, ²BATAILLE Klaus, ¹BOCK Guenter, ³RIETBROCK Andreas, ⁴WIGGER Peter. ¹GeoForschungZentrum Potsdam, ²Universidad de Concepcion, ³Universitaet Potsdam, ⁴Freie Universitaet Berlin

The characteristics of the seismic signal originated from the Villarrica volcano, Southern Chile, is investigated in order to understand wave propagation properties, and discriminate source from structure frequency dependent effects. For this study, a one month continuous recording of a seismic array composed of 12 short-period and 4 broad band digital stations will be deployed during May 2000, located a few kilometres from the crater. The characteristics of tremors and other volcanic events, is used by some researchers as a monitoring tool to asses the degree of maturity of the volcano in its eruptive cycle. For the past year, the main source of seismic signal seems to be originated at the surface of the lava-lake, in relation to the gas emission dynamics. The use of the array will be important to elucidate the location of the most seismically active region of the volcano (during this one month period).