Volcano Ambient Noise Interferometry in the Caribbean (VANIC)

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The hazardous stratovolcanoes in the Lesser Antilles island arc are monitored with sparse seismic networks. The application of ambient noise interferometry to monitor seismic velocity variations (\(dv/v\)) on data from such a sparse instrumented volcanic environment often is a challenge. For the purpose of monitoring it is important a) to analyse the applicability of, and differences between, cross- and single-station cross-correlations, b) to estimate the base level of seismic velocity variations during quiet times and c) to understand the characteristics. Within the EUROVOLC instrument “Transnational Access (TA)” a proposal called VANIC was supported to a) use and evaluate different types of ambient noise cross correlations (single stations vs. multiple stations; auto, cross and cross-component correlations) to be applied on seismic recordings from the Guadeloupe seismic network on La Soufriere, b) compare the results with \(dv/v\) base level estimates from the sparse Netherlands Caribbean network on The Quill and Mt. Scenery and c) start collaboration between OVSG and KNMI on both monitoring and research levels with a focus on volcano seismology. This presentation will focus is on the results obtained during the TA visit to OVGS.