




COMMENT

Comment on “Evidence from acoustic imaging for submarine volcanic activity in 2012 off the west coast of El Hierro (Canary Islands, Spain)” by Pérez NM, Somoza L, Hernández PA, González de Vallejo L, León R, Sagiya T, Biain A, González FJ, Medialdea T, Barrancos J, Ibáñez J, Sumino H, Nogami K and Romero C [Bull Volcanol (2014) 76:882–896]

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Introduction

Pérez et al. (2014) report the presence of submarine volcanic activity observed off the western coast of El Hierro Island in June 2012. They present as their main evidence acoustic imaging records, interpreted as showing submarine plumes, and an aerial picture showing white traces on the sea, which are

interpreted as pyroclastic material. Pérez et al. (2014) state that the superficial deformation, the geochemical changes, the strong seismicity, and what they call “earthquake tremor” also support their conclusions. Despite the fact that Pérez et al. (2014) do not use the word eruption either in the title or in the abstract, in the Discussion section, the authors affirm that the acoustic imaging data and the aerial picture provide sufficient evidence to infer the occurrence of a new submarine pyroclastic eruption and postulate that these plumes were produced by a short-lived eruption involving several jets. We have critically reviewed the content of that article and conclude that the data (some of which is inexactly interpreted or not correctly georeferenced) do not support the existence of a second eruption on the Island of El Hierro. However, there is a clear consensus among the scientific community on the fact that after the end of the submarine eruption close to La Restinga village (about late February–early March 2012) a few different processes of deep magma injection have taken place below the Island of El Hierro and its surroundings (Prates et al. 2013; García et al. 2014; González et al. 2013), being that of June–July 2012 the first and one of the most important ones.

Following we discuss the different arguments exposed along the paper.

Volcanic plumes

Pérez et al. (2014) reported five “filament-shaped” acoustic signals emanating from the flanks of mounds in the western

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