



K/Ar AGES, MAGNETIC STRATIGRAPHY AND MORPHOLOGICAL EVOLUTION OF LA GOMERA: IMPLICATIONS FOR THE CANARY ISLANDS HOTSPOT EVOLUTION

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The Canary Islands are a group of seven volcanic islands, 100-700 km west of the Sahara continental margin. The spatial and chronological evolution of the canarian volcanism, from east to west, is due to the progression of the slow-moving african plate on a hotspot. La Gomera is located between the western shield-growing stage islands (La Palma, 1,7 Ma and El Hierro, 1,1 Ma) and the central "rejuvenated stage" islands (Tenerife, 11,9 Ma and Gran Canaria, 14,5 Ma). After 23 K-Ar ages and paleomagnetism datas, we determine the main volcanic phases of La Gomera : (1) the submarine shield volcano ($> 9,5$ Ma), (2) the first subaerial shield volcano (9,43-7,36 Ma), (3) the Vallehermoso stratovolcan, (4) the peripheral "planèzes" and domes forming series (6,67-1,94 Ma) and the Garajonay horizontal series (5,42-4,25 Ma). The stratovolcano and the horizontal series fill a 10 km wide depression that is supposed to be a giant landslide embayment. The scarps of this landslide correspond to the main discontinuity in the island structure. After 4 M.y. of very scarce volcanism, the whole structure of La Gomera is in relief inversion, with a radial pattern of deep barrancos. The erosion rates are lower during the hiatus ($< 0,2$ m/ka) than during the shield stage (0,2-0,9 m/ka), pointing out the fact that the volcanic construction rates and the erosion rates are strongly correlated. La Gomera is one of the best example of a hiatus stage of hotspot evolution. The volcanic load La Gomera and Tenerife may have delayed the western islands volcanism, favouring a dual-line.