

CHARACTERISATION OF AFRICAN DUST OUTBREAKS IN GRAN CANARIA (CANARY ISLANDS)

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Dust outbreaks over the Canary Islands are a weather situation which has important repercussions on local activities, especially on the agriculture and the human health. In this work, variability of dust inputs measured daily in the island of Gran Canaria were studied during different periods 1997-1998 and 2002-2003. Total suspended particles (TSP) were collected using high volume capture systems located at the top of Gran Canaria island -1930 m- Composition of several metals (Al, Fe, Mn) was determined in the filters after acid digestion. A seasonal pattern of African dust outbreaks was observed with maximum fluxes in winter and summer, and with higher concentration of particles ($78 \mu\text{g m}^{-3}$) in winter. Special geographic features of relief in Gran Canaria appear determinate the altitude of dust intrusion. Good correlations between high concentrations of TSP and the meteorological data were found in the studied period.