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Saharan dust from a marine perspective: sediment-trap time series off Mauritania

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The particle size of mineral dust is often used as a tool to reconstruct paleoenvironmental conditions in the source of the dust. Both in on-land (loess), lacustrine, and in marine archives, the size of dust deposits is considered a proxy for paleo-wind intensity. However, next to wind strength, the particle size of aeolian deposits is also influenced by various other parameters such as source-to-sink distance, altitude at which the particles have been transported, and various other environmental conditions in the sources of the dust. To verify if we can quantify a relationship between the size of mineral dust particles and prevailing environmental conditions, we study "modern" dust. Here we present grain-size distributions of Saharan dust that was collected in a marine sediment trap, which is situated off Cape Blanc, ∼400 km offshore the Mauritanian coast. In this trap, dust is collected that is sinking through the water column to the ocean floor. The temporal resolution of the trap is 1-2 weeks. The time series was started in the late 1980's and is still being continued.