Understanding the contribution of desert areas such as the North Africa Sahara to the presence of dust particles in the atmosphere is very important for assessing air quality at regional and global levels and their impact on global climate system or on human health. For this purpose detailed data on the size distribution and the size-resolved chemical and mineralogical composition of dust providing from this region were characterized in Cape Verde.

The size distribution of PM at Cape Verde Santiago Island obtained with a Grimm dust monitor is discussed here. The chemical composition of PM10 is presented in poster (XY73) also presented in this session.

Measurement of the PM size was based on optical particle counter (OPC) method and was carried out using an environmental dust monitor (GRIMM, model EDM164). The equipment allowed the counting of particles in real time (every 5 minutes) with sizing from 0.25 up to 32 μm. Measurements were run almost continuously from January 2011 to December 2011.

Figures 1a to 1c show the correlations between mass concentration measured by PM samplers and the averaged PM10 and PM2.5 mass concentration estimated with Grimm for each period of sampling. Grimm fitting was optimized by considering a dust density of 3g/cm³.

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