Special Issue

Impact of Desert Dust on Air Quality and Human Health

Message from the Guest Editor

Desert dust is one of the most abundant aerosols in the atmosphere: according to the latest IPCC report, it represents about 30% of the total atmospheric aerosol burden. Desert dust is emitted by wind erosion of bare or sparsely vegetated soils, i.e., mainly from the arid and semi-areas of the world. As a consequence, the population living in the vicinity of these regions can be exposed to very high levels of mineral dust concentrations. Meanwhile, desert dust has a residence time in the atmosphere of about one week so that it can be transported over long distances and impact air quality throughout its course in the atmosphere. Desert dust covers a large size spectrum, ranging from some tenths of um to 40 or 50 um in diameter. These particles can be inhaled and induce various impacts on human health. Finally, desert dust can also transport other species or be coated with reactive species that may increase the negative impact on human health. The aim of this Special Issue is to underline the impact of desert dust on air quality and human health throughout the world.

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Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

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