

**Donnerstag, 09.06.2022, 14.00 Uhr**  
**Leipziger Meteorologisches Kolloquium**

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**Recent findings on Arctic aerosol processes**

In the past years, substantial efforts have been undertaken to investigate Arctic aerosol processes. Aerosol processes in the Arctic have sparked strong interest for a number of reasons. First, they have a direct effect on Arctic surface temperature due to radiation interaction. The decline in air pollution in the northern hemisphere has led to a decrease in Arctic haze which in turn has resulted in an increase in Arctic surface temperature (loss of masking effect). Second, aerosols modulate cloud radiative properties through aerosol-cloud interactions with a strong seasonality. In late summer, the Arctic cloud regime is highly sensitive to the availability of CCN, meaning that cloud formation can even be inhibited in extreme cases or needs to rely on smaller-than-usual particle sizes to sustain clouds and fog. In such instances, new particle formation can become directly relevant for clouds. Third, in light of the rapidly changing Arctic environment, new anthropogenic and natural sources of aerosols and their precursors emerge. However, there is only little observational evidence yet for such ongoing changes. A further complication is that atmospheric transport patterns are also changing, thereby causing changes to source regions from which aerosols are advected and to atmospheric processes which can lead to changed aerosol microphysical properties. This presentation will provide an overview of recent findings including from long-term observations and recent central Arctic drift experiments such as MOCCHA and MOSAiC.

Zoom-Meeting:

<https://us02web.zoom.us/j/82659132695?pwd=YkdoM25EREp2UllDcmc4aVJKSWVnZz09>

Meeting-ID: 826 5913 2695, Kenncode: 922265

**Ort: Online**