

## Anmeldung eines Themas für eine Bachelorarbeit

Thema Datum	Investigation of multilayer clouds observed during research cruises to the Arctic based on data from radiosounding and cloud radar 09.07.2019
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Kurzbeschreibung:	Remote-sensing observations of Arctic clouds have been performed during two recent research cruises with the Swedish ice breaker Oden in 2014 and 2018. Following the approach of Vassel et al. (2019), observations from radiosoundings and cloud radar will be used to investigate the occurrence rate of multilayer clouds. The multilayer cloud cases will be further analysed regarding the possibility of ice crystal seeding. This process can occur when an ice crystal does not sublimate while falling through a subsaturated layer between two cloud layers. The likelihood for ice crystal seeding will be derived from relative humidity profiles by assessing if air layers are super- or subsaturated with respect to ice.
Literatur:	[1] Vassel, M., Ickes, L., Maturilli, M., and Hoose, C.: Classification of Arctic multilayer clouds using radiosonde and radar data in Svalbard, Atmos. Chem. Phys., 19, 5111-5126, <a href="https://doi.org/10.5194/acp-19-5111-2019">https://doi.org/10.5194/acp-19-5111-2019</a> , 2019.