Thema einer Bachelorarbeit

Thema	Identification of clouds at ATTO site
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Kurzbeschreibung:	Clouds in the Amazon forest are different than at any other place in the world. In this remote region, there are clear seasons with daily occurrence of convective clouds in a highly variable environment, with respect to concentrations and types of aerosol particles. The Amazonian Tall Tower Observatory (ATTO), a 325 meters research tower is located in the heart of the Amazon forest. Meteorological parameters, clouds and aerosols measurements have been made there since 2015. This bachelor thesis means to quantify how frequent and which type of clouds are there, through pictures. Are the cloud types affected by aerosol particles? Or are they dominated by meteorological conditions? One month of data, from sunrise to sunset, will be analyzed.
Literatur:	Andreae, M. O. et al.: The Amazon Tall Tower Observatory (ATTO): overview of pilot measurements on ecosystem ecology, meteorology, trace gases, and aerosols. Atmos. Chem. Phys., 15, 10723–10776, 2015. Giangrande, S. E., et al.: Cloud Characteristics, Thermodynamic Controls and Radiative Impacts During the Observations and Modeling of the Green Ocean Amazon (GoAmazon2014/5) Experiment. Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2017-452, 2017. Pöhlker, M. L., et al.: Long-term observations of cloud condensation nuclei in the Amazon rain forest – Part 1: Aerosol size distribution, hygroscopicity, and new model parametrizations for CCN prediction. Atmos. Chem. Phys., 16, 15709–15740, 2016. Wendisch, M. et al.: ACRIDICON–CHUVA CAMPAIGN Studying Tropical Deep Convective Clouds and Precipitation over Amazonia Using the New German Research Aircraft HALO. BAMS, 1885 - 1908, 2016.