Anmeldung eines Themas für ein Forschungspraktikum und eine Masterarbeit

Thema Datum	Statistical investigation of the life time of different cloud types from geostationary observations 17 June 2020
Betreuer (mit Kontaktdaten)	Matthias Tesche Institut für Meteorologie, Universität Leipzig Stephanstrasse 3, 04103 Leipzig Tel: 0341/97-36660 matthias.tesche@uni-leipzig.de
ggf. weitere Kontaktperson	Torsten Seelig, torsten.seelig@uni-leipzig.de
Zweitgutachter	Johannes Quaas, j.quaas@rz.uni-leipzig.de
Kurzbeschreibung:	Sensors aboard geostationary satellites provide cloud observations with very high temporal resolution. The data can be used to track individual clouds, e.g. by means of particle imaging velocimetry (Adrian and Westerweel, 2011), and to derive trajectories of individual clouds. Applying this method to the CLAAS product (Stengel et al., 2014) of cloud physical properties gives information on the occurrence rate and life time of different cloud types within the MSG-SEVIRI field of view. The scope of this work is to perform a statistical analysis of the life time of different types of clouds from the trajectories of individually tracked clouds. The derived information will be prepared to provide a benchmark for assessing the representation of different cloud types in global climate models. Programming skills in Matlab are required as the work employs the MatPIV package (Sveen, 2004).
Literatur:	Adrian and Westerweel (2011), Particle Image Velocimetry, Cambridge University Press. Stengel et al. (2014), CLAAS: the CM SAF cloud property data set using SEVIRI, ACP 14, acp-14-4297-2014. Sveen (2004), An introduction to MatPIV v. 1.6.1. eprint series, Dept. of Math. University of Oslo, Mechanics and Applied Mathematics, No. 2, ISSN 0809-4403, August 2004.