



The FUB cloud mask scheme for SEVIRI aboard MSG: method and validation

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At the Institute for Space Sciences, Free University of Berlin (FUB) new space- and airborne remote sensing techniques are developed for deriving atmospheric, surface, and cloud parameters. The SEVIRI instrument on MSG offers excellent conditions for remote sensing those parameters. A cloud mask algorithm has been established as one of the first products developed for SEVIRI aboard MSG by the Institute for Space Sciences. The presence or absence of clouds has significant impact on the earth radiation budget. Consequently cloud coverage statistics based on a reliable cloud mask are important for long term monitoring of climate change as well as for validating climate models. As the cloud mask in general is the first link of a chain in the retrieval of atmospheric, surface and cloud parameters, the quality of the cloud mask algorithm directly affects the quality of every depending product. The developed algorithm takes advantage of SEVIRI's high temporal resolution as well as its consistent viewing geometry to estimate assumed clear sky brightness temperatures. A neural network approach was set up using this information as well as data from the infrared and visible channels as input to calculate cloud covered probabilities. Results of a validation against synoptical observations and against other satellite based cloud mask methods will be presented.