

Topic 1: Present of clouds in the Arctic seen from space

Arctic is the most sensitive region for global climate change. The temperature over the Arctic region is increasing two times faster than other regions worldwide. Cloud is a crucial factor affecting the energy balance in the Arctic. Quantifying the amount of cloud is the first step for a precise understanding of climate change in the Arctic. However, due to the similarities between cloud and snow at certain wavelengths, the quality of the existing cloud fraction products over the Arctic is quite uncertain. This project aim to use the Ocean and Land Colour Instrument (OLCI) instrument on-board Sentinel 3 and calculate the cloud fraction over the Arctic, and investigate the change during certain Arctic campaigns (e.g. MOSAiC).



Requirements: Basic programming skill is needed

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