

Cloud impact on global climate

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Recent studies on global warming phenomena tend to concentrate on the impact of green house gas species (carbon dioxide). However there is another important factor to be considered: cloud coverage. Low cloud reflects the solar irradiation so that it would cool the surface. The precise mechanism of cloud formation is still unclear but it should require cloud condensation nuclei. There are some candidates of the cause of cloud condensation nuclei formation; volcanic ejections, sea foam, natural and artificial fires and so on.

Addition to the above candidates, cosmic rays (showers) comes to under consideration recently. According to a series of studies by Svensmark and his co-workers, there is obvious relation among the amount of low clouds and the flux of the cosmic ray which arrives at the surface. Moreover, the current covering rate of the clouds fluctuates by a few percent during the last 20 years.