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A correlation between cirrus clouds and galactic cosmic rays?

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We use the cloud index (CI) data of the MIPAS-E instrument onboard ENVISAT to investigate a possible link between galactic cosmic rays (GCRs) and high clouds (cirrus clouds and polar stratospheric clouds). We calculate daily averages of the CI data for different altitude and latitude ranges, and compare these data to the neutron count data from the CLIMAX station. In order to allow for nucleation and growth of ice particles but also to identify potential statistical artefacts, time lags ranging from -30 to 30 days were used.

With the methods applied, we did not find any statistically significant correlation between the CI and NC data which would have supported the hypothesis of a link between high clouds and galactic cosmic rays.