

Consequences for the Ionosphere and Atmosphere

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This lecture will deal with further space weather effects in the ionosphere and upper atmosphere which have not been covered in the previous sections:

- 0 Particle precipitation in the auroral ionosphere and its consequences.
- 1 Ionospheric current systems and their solar wind control.
- 2 Geomagnetic indices (K_p , A_p , AE, Dst) which are related to these current systems and which are used to characterize space weather effects in the near Earth environment.
- 3 The aurora, the only pleasant aspect of space weather.
- 4 Electron density fluctuations in the ionosphere due to space weather effects and its consequences for communication and navigation.
- 5 Solar flare related effects in the D-region, mesosphere and stratosphere

All effects will be documented with ground-based and in-situ measurement results. For item 4 a selection of auroral photographs will be presented.