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MODIS and HRPT satellite images of some characteristic and unusual cyclonal and anticyclonal meteorological situations of Europe in 2006

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In 2006, the European weather produced some interesting meteorological situations, connected to anticyclones in the winter and cyclones in the summer period. Some of them are exhibited in this work using MODIS and HRPT (NOAA AVHRR) satellite imagery recorded and processed at the receiving station of the Eötvös University. The most characteristic winter weather situation is the thermal inversion accompanied by thin or even thick fog layer in specific parts of the continent. It is characteristic in the Pannonian Basin and its sub-basins, where the fog-bound situation can exceed the one-week period. Semi-basins, like the Po Plain in Northern Italy, suffer similar fog cover for shorter periods. In December 2006, thick fog layer covered large parts of NW Europe, causing constant delays in air traffic for almost a week. The thickness variation of this fog layer can be followed on a satellite image series.

In the summer of 2006, some disastrous thunderstorm events occurred, some of them connected to cold fronts. Around the summer solstice, the high irradiation led to instability, and huge thunderstorm cells built up in the Central European region. Their building and dissolving process are shown on subsequent TERRA and AQUA MODIS data. An unusually dissolving convective complex over the Czech Republic, recorded 27 June, 2006 is analysed using MODIS data from TERRA satellite and local meteorological and radar recordings.

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