



Detection of fog layers characteristics with ground-based remote sensing equipments

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Fog is one of the phenomena that generates important economic problems and also impacts a broad variety of human activities. This study aims to determine fog layers characteristics in terms of type, time evolution, and vertical extent in Magurele, Romania (44.35 N, 26.03 E) for two periods (2012 and 2013). Data regarding fog evolution was provided by a Vaisala CL31 Ceilometer and a HATPRO Microwave Radiometer. Ceilometer profiles are obtained with a time resolution of 16 s and up to 7.5 km altitude. Microwave radiometer uses passive microwave detection in the 22.335 to 31.4 GHz and 51 to 58 GHz bands to obtain the vertical profiles of temperature and relative humidity up to 10 km with a temporal resolution of several minutes. MWR also provide integrated water vapor and liquid water path. Considering all this information from active and passive remote sensing instruments, we present preliminary results towards a method for fog type classification. The extended database containing fog measurements for a two years period is used in a statistical analysis of the evolution and geometrical properties for each fog type.

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