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P-14. Iakov Gontsov: Enviro-HIRLAM sensitivity to the wet and dry deposition

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Analysis of sensitivity to the different options already present in ENVIRO-HIRLAM system is performed. Dry deposition is the removal of gaseous and particulate nuclides or other pollutants from the atmosphere to the earth surface by vegetation or other biological or mechanical means. In wet deposition, there are always some atmospheric hydrometeors which scavenge aerosol particles. Usually the wet deposition is treated in a standard way with a washout coefficient for a below-cloud scavenging and a rainout coefficient for in-cloud scavenging. The washout coefficient is strongly depends on the particle size. This dependence, however, does not include in most atmospheric models. Therefore, a revised formulation of the wet deposition parameterizations of particles of different size is suggested. Possible ways to implement different parameterization of the dry and wet deposition are observed.