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## Aerosols' influence on the interplay between condensation, evaporation and rain in warm cumulus cloud

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**Abstract.** A numerical cloud model is used to study the influence of aerosol on the microphysics and dynamics of moderate-sized, coastal, convective clouds that develop under the same meteorological conditions. The results show that polluted convective clouds start their precipitation later and precipitate less than clean clouds but produce larger rain drops. The evaporation process is more significant at the margins of the polluted clouds (compared to the clean cloud) due to a higher drop surface area to volume ratio and it is mostly from small drops. It was found that the formation of larger raindrops in the polluted cloud is due to a more efficient collection process.

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