



Consistency between Cloud Physics and Radiation Schemes in the KIM

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Cloud hydrometeor is an important component to calculate the radiative fluxes in the radiation scheme of NWP model and especially, subgrid hydrometeor is crucially considered in the KIM because the amount of detrained hydrometeor in deep/shallow convection processes is relatively small. In this talk, the linkage between subgrid hydrometeor and radiation process is mainly discussed via the analysis of consistency between cloud physics and radiation scheme. Based on the analysis, the way to connect the subgrid hydrometeor and the radiation scheme is also discussed. Especially, the amount of subgrid hydrometeor calculated using the time scale of subgrid cloud is represented. Also, the impact of this approach on the radiation and precipitation is evaluated and analyzed in the KIM.