



Climate Sensitivity and Aerosols

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Climate sensitivity is a key concept in the forcing-feedback framework of the climate science and modeling is one important tool to explore it. Therefore, it is important to explore how climate sensitivity is related to the physics of a given climate model. Moreover, one could ask how the aerosol indirect effects could modify the estimate of the twentieth century warming and therefore, the climate sensitivity being underestimated.

For that end, alternative climate sensitivity models from a given model (MPI-ESM) are used and it was asked if they could reproduce the historical record and how strong can be the aerosol indirect effect to evaluate its plausibility. We compare these results with other models and ensembles.

Some answers to the former research questions are presented with the help of these modified versions of MPI-ESM2 and ECHAM6, the MPI-ESM grand ensemble and the CMIP5 experiments.