



Aerosol impact on seasonal prediction using FIM-Chem-iHYCOM coupled model

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A coupled model consisting of the weather model FIM and the ocean model iHYCOM, both operating on an icosahedral horizontal grid, is being developed for subseasonal to seasonal prediction. Initial results indicate that the model skill is comparable to that of the operational model CFSv2 used by NCEP. In addition, an online atmospheric chemistry module is coupled to FIM. The purpose of ongoing experiments with the FIM-Chem-iHYCOM combination is to investigate the aerosol impact on the atmospheric and oceanic circulation at the seasonal scale. We compare the model sensitivity with various chemistry emissions, including aerosols, fire and anthropogenic emissions. Additional emphasis of this work is on the effect of aerosols on cloudiness and precipitation, either directly or indirectly through changes in SST. To isolate the latter effect, we conduct parallel experiments with observed SST.