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Implications of radiation management for coastal flooding risks - A case study for New Orleans

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Sea level rise and (potential changes in) storm surge poses sizeable coastal flooding risks. Estimates of these risks are deeply uncertain (Oddo et al., 2017). Solar radiation management and cirrus cloud thinning add even more layers of deep uncertainty, for example through the uncertain efficacy. Here we extend a previous scenario-based approach (Wong and Keller, 2017) to include impacts of radiation management on geophysical processes described in the BRICK (Building blocks for Relevant Ice and Climate Knowledge) model (Wong et al., 2017). Additionally, we consider deep uncertainties regarding the combination of cirrus cloud thinning and radiation management, the timing of these measures, and their cooling potential.

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