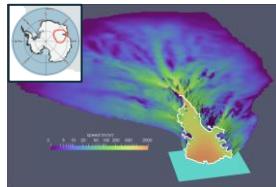




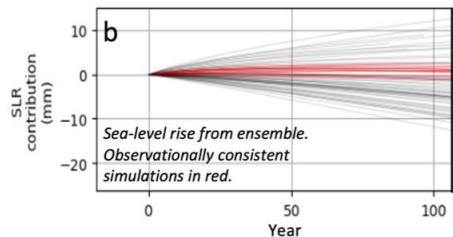
# Quantifying uncertainty in projections of sea-level contribution from the Antarctic Ice Sheet

Matthew Hoffman, Los Alamos National Laboratory | FAnSSIE SciDAC

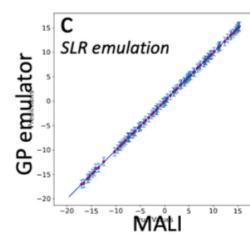
## Bayesian calibration of sea-level contribution from Amery Ice Shelf basin



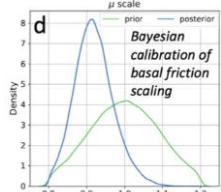
1 Perturbed parameter historical simulations



Gaussian process emulation

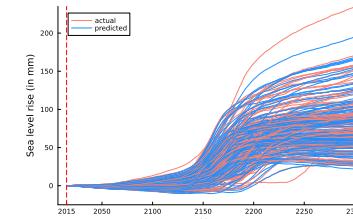


2 Bayesian calibration of 6 model parameters

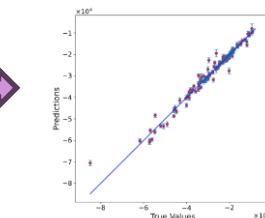


3

Perturbed parameter projections to 2300

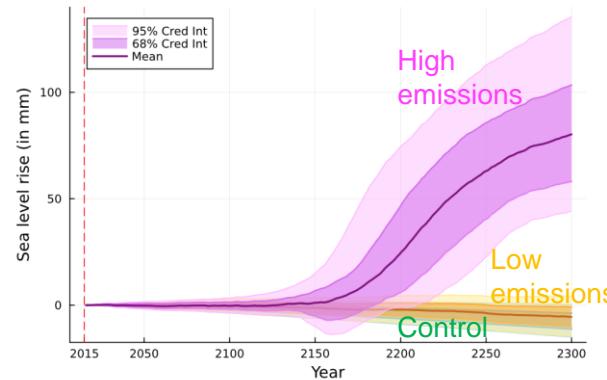


GP/PCA emulation of time series



4

Probabilistic projections of sea-level rise



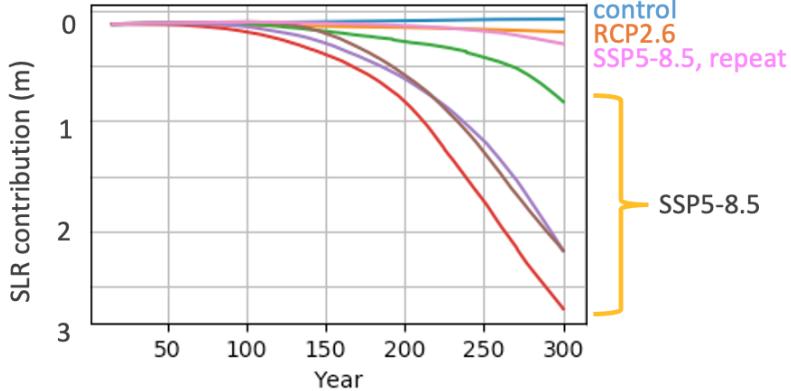


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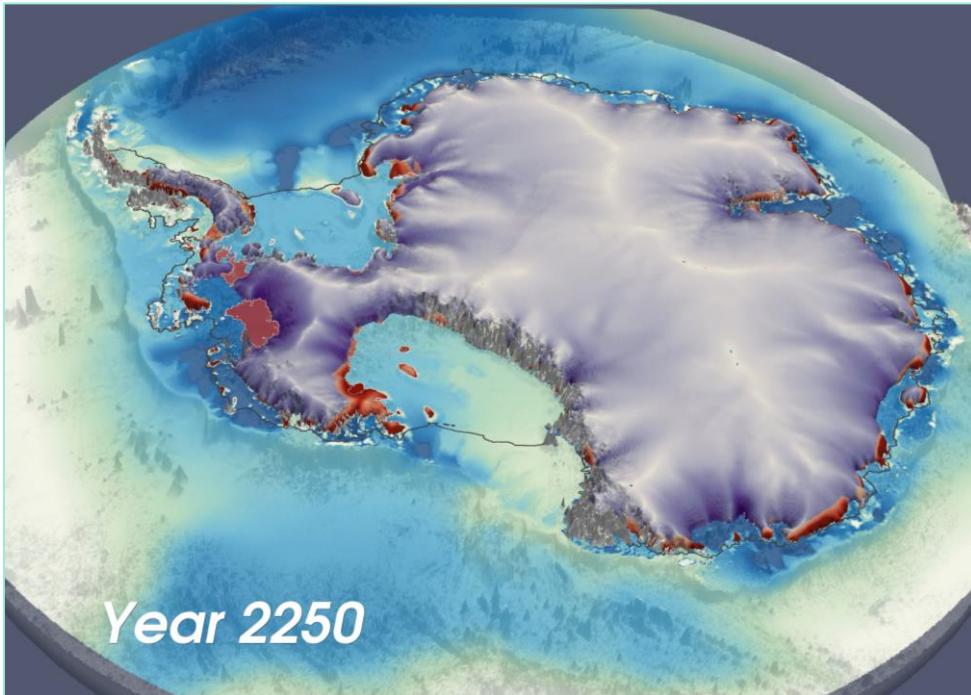
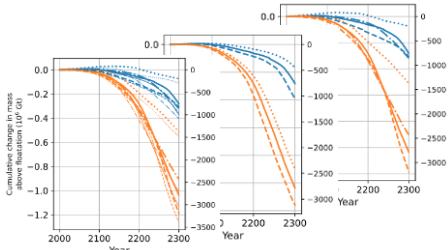
## Antarctic Ice Sheet projections to 2300

MALI forced by CMIP6 atmosphere  
and ocean output (ISMIP6-AIS-2300)



+50 sensitivity  
experiments

sub-shelf melt, basal friction,  
discretization order, resolution



Year 2250