Title	Deep Learning and Uncertainty Quantification for Climate Resilience

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Abstract	Modeling and monitoring of earth's processes through physical models and satellite observations at high resolutions is crucial for ensuring society's ability to adapt to climate change. Deep learning (DL) has been shown to be a valuable tool for generating high resolution data, emulating physical models, and detecting weather patterns which can then be used to inform stakeholders and decision makers. However, both the data and model parameters contain substantial uncertainties that may alter users' decisions. In this work we present two DL applications on high-resolution climate and satellite datasets using Bayesian neural networks to generate well calibrated uncertainty estimates.

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