# Solar Climate Intervention

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RUTGERS–NEW BRUNSWICK
Artificial Intelligence
and Data Science Collaboratory

**Can we design a solar climate intervention scenario to meet specific needs?**

What data we have:

Earth System Models

Aerosol injection at different
**Locations**
**Altitudes**
with different
**Amount**

## Model Output

- Temperature
- Rain
- Wind
- Sunlight
- Pressure
- Plant Growth
- Ocean Productivity
- ⋮

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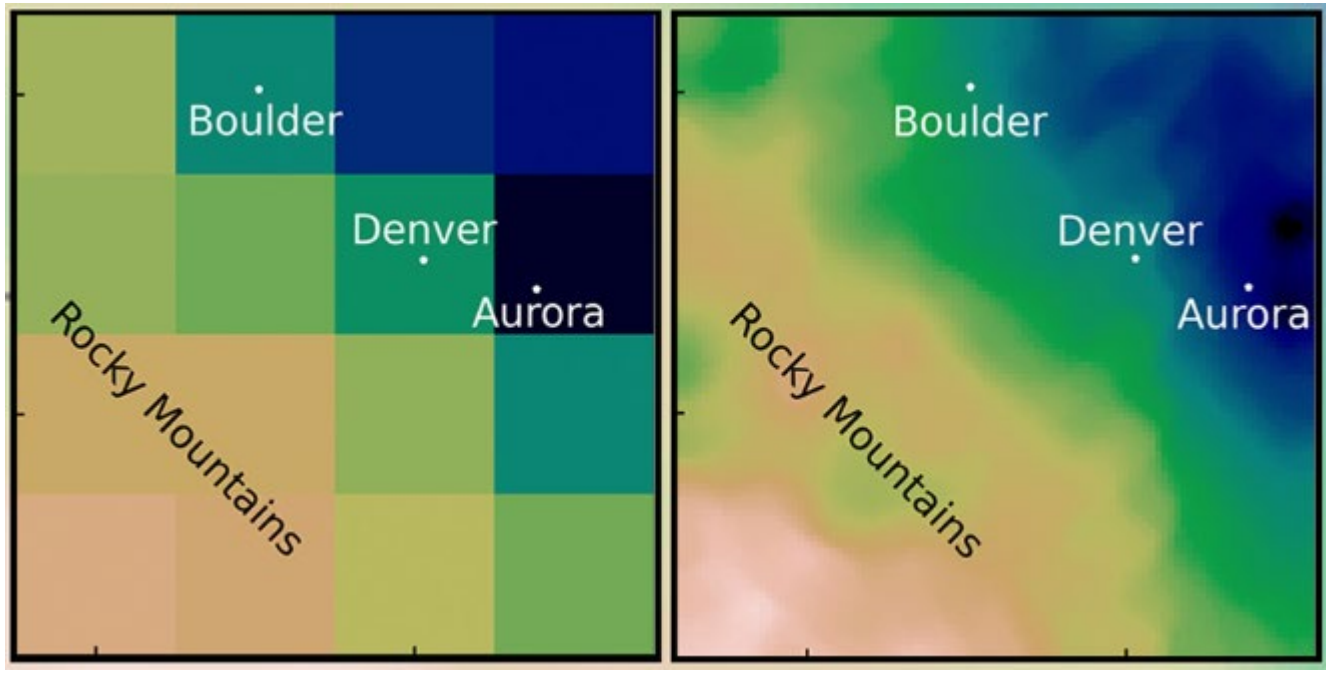
**Can machine learning be applied to downscale coarse-resolution climate data for high-resolution impact studies?**

What data we have:

Earth System Model Output

- Temperature
- Rain
- Wind
- Sunlight
- Humidity
- ⋮

Precipitation from (0.25° x 0.25° to 0.01° x 0.01°)




Our goal

**Multi Climate Variables**

**Preserve Climate Trend; Capture Extremes**

(Saha and Ravela, 2024)
https://doi.org/10.1029/2023MS003860