# **Climate and** Mathematicians

Douglas Nychka Institute for Mathematics Applied to Geosciences National Center for Atmospheric Research



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# **Climate Processes** *Climate system components:*













# **Big Iron to run the models**

1 day of the super's time  $\approx$  5 years simulation



### Terabytes of model out-

put "data"



# 100s of contributors

## National Center for Atmospheric Research

50 years old,  $\sim$  1000 staff, several hundred Ph D scientists, funded mainly by NSF.

#### Research:

Covers all aspects that are related to the atmosphere: Climate, weather, chemistry, ocean, land processes and the Sun.

#### Facilities:

supercomputing center, research aircraft, community weather and climate models.

#### Community links:

Mathematics and statistics, Computational science, Societal impacts.

# *Institute for Mathematics Applied to Geosciences (IMAGe)*

An eclectic applied math group focused on geosciences: Turbulence, statistics, numerics, data assimilation, risk. ( $\sim 25$  staff).

#### *Theme-of-the-year:*

A yearly focus on some interface between math and geosciences.  $\sim$  120K/year, external codirector(s)

Data Assimilation (05), Multiscale processes (06), Computer Models (07), Turbulence (08), Numerical methods (09), Mathematicians and climate (10) Risk and uncertainty of climate change (11)

