RUNNING CESM2 WITH SYNTHETIC VOLCANIC FORCING

PLAN

- Run CESM2 (community Earth system model) with volcanic forcing
- Volcanoes are the only external forcing
- Obtain estimate of the temperature response

EXAMPLE

FPP — filtered Poisson process

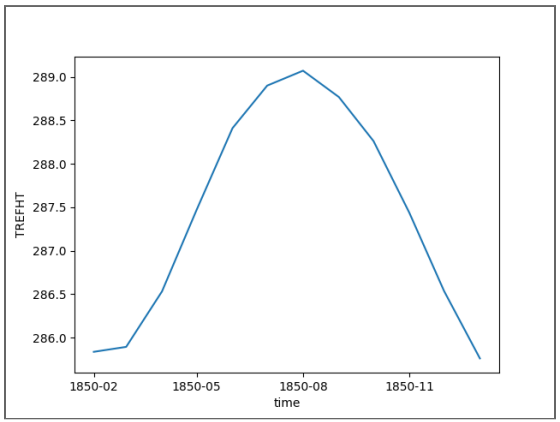
CURRENT AFFAIRS

Creating synthetic volcanic forcing data

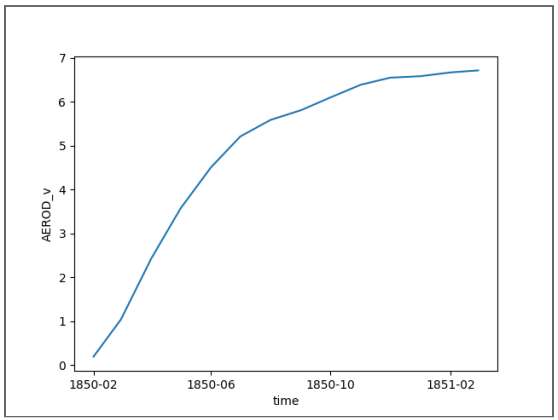
POST INDUSTRIAL VOLCANOES

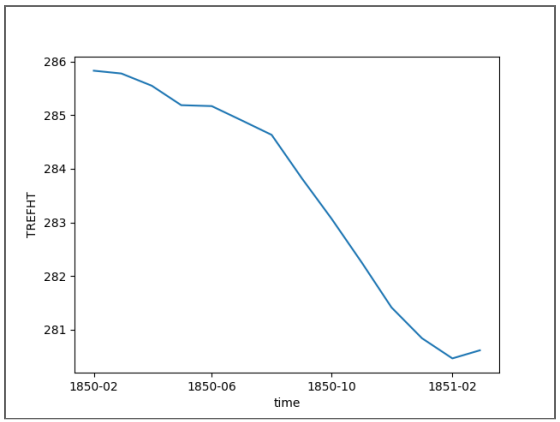
FPP GENERATED VOLCANOES

LARGE SINGLE VOLCANO



Historical run, unchanged





Historical run with large eruption in 1850-01-15

EXPERIMENTS

1. Small ensemble over 5 to 10 years → Look at internal variability
2. Longer run with volcanoes generated from an FPP
3. Volcanoes that cluster together

QUESTIONS

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What about solar?

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