

# The Sun's Role for Decadal Climate Predictability in the North Atlantic

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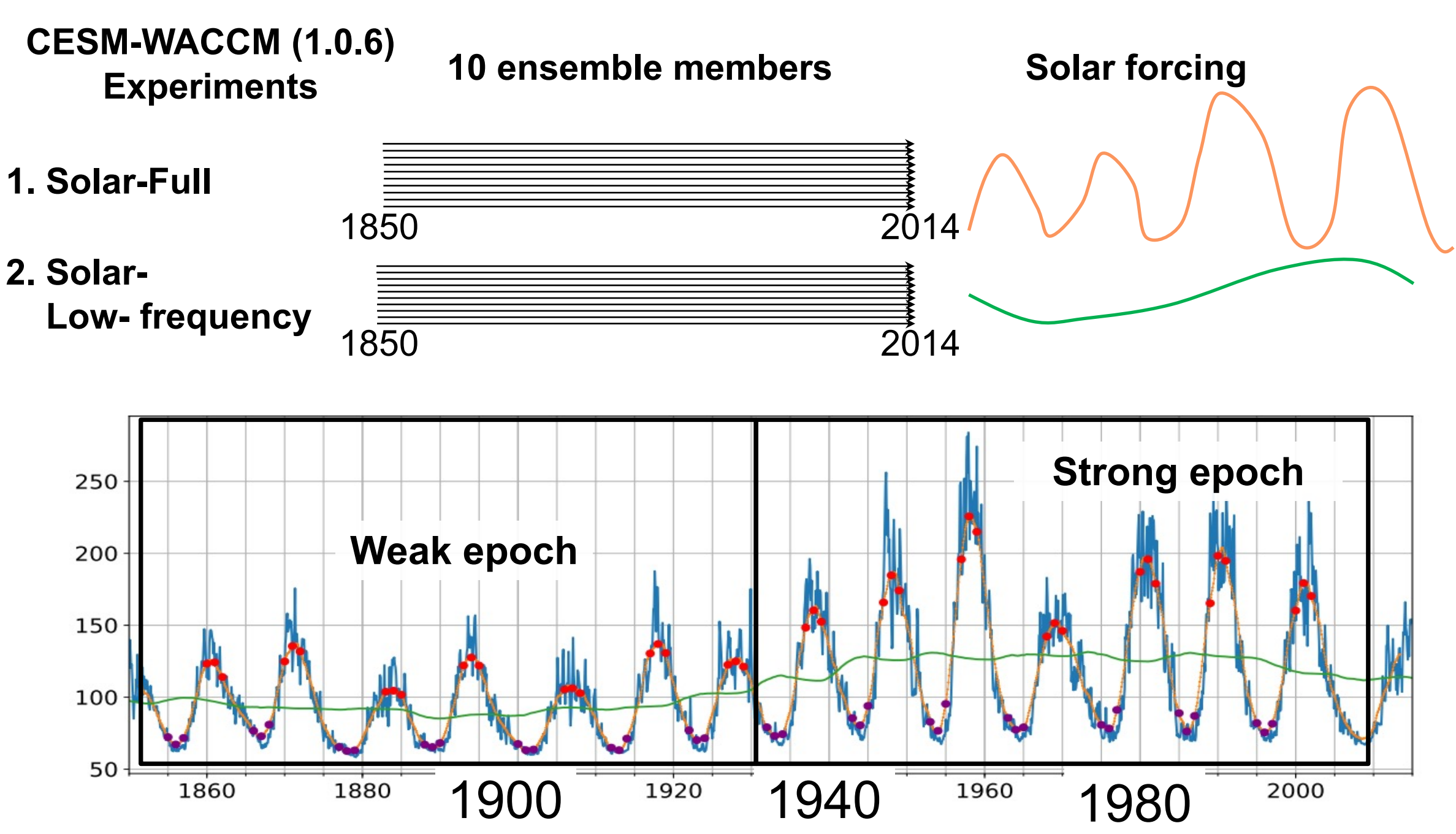
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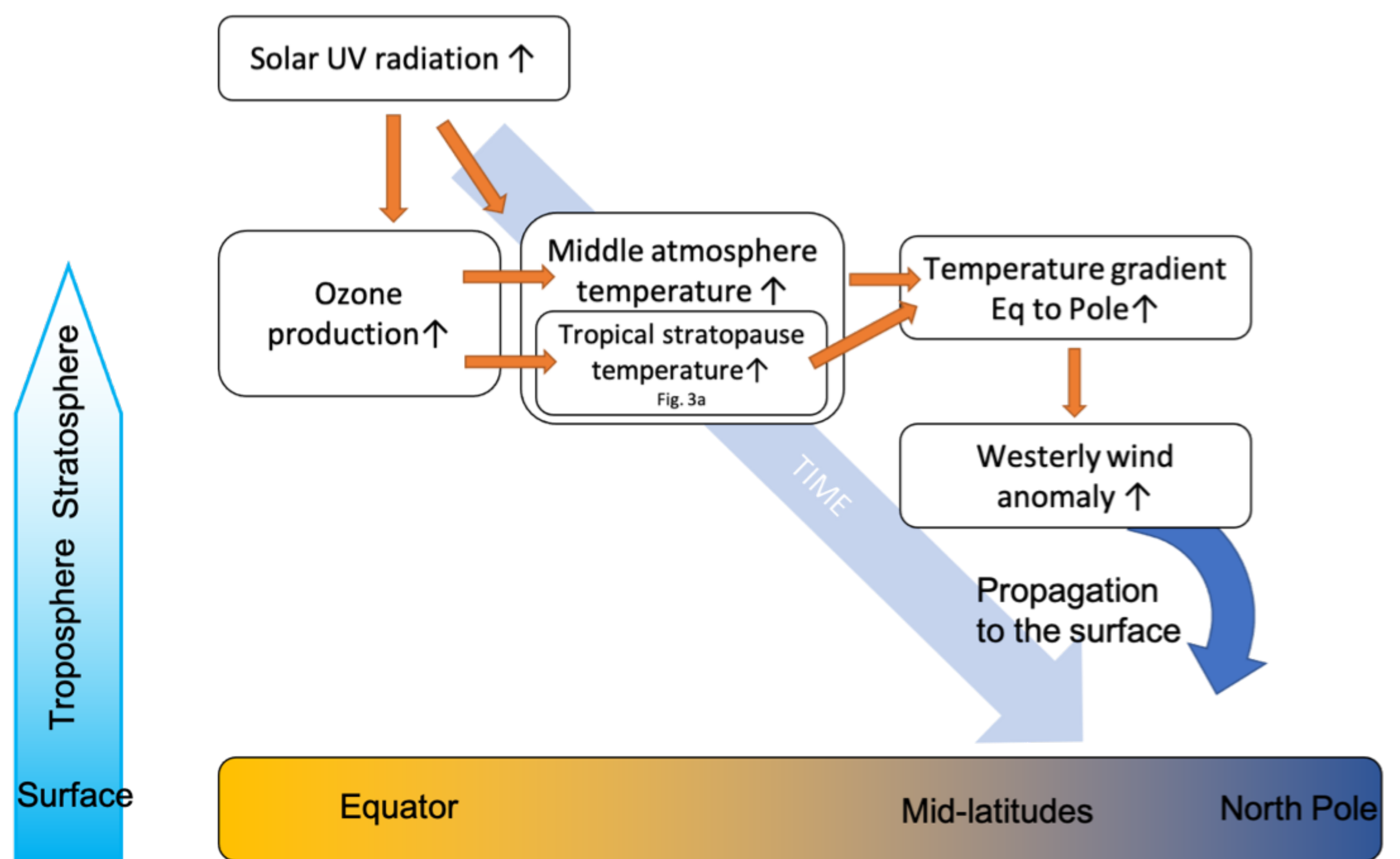


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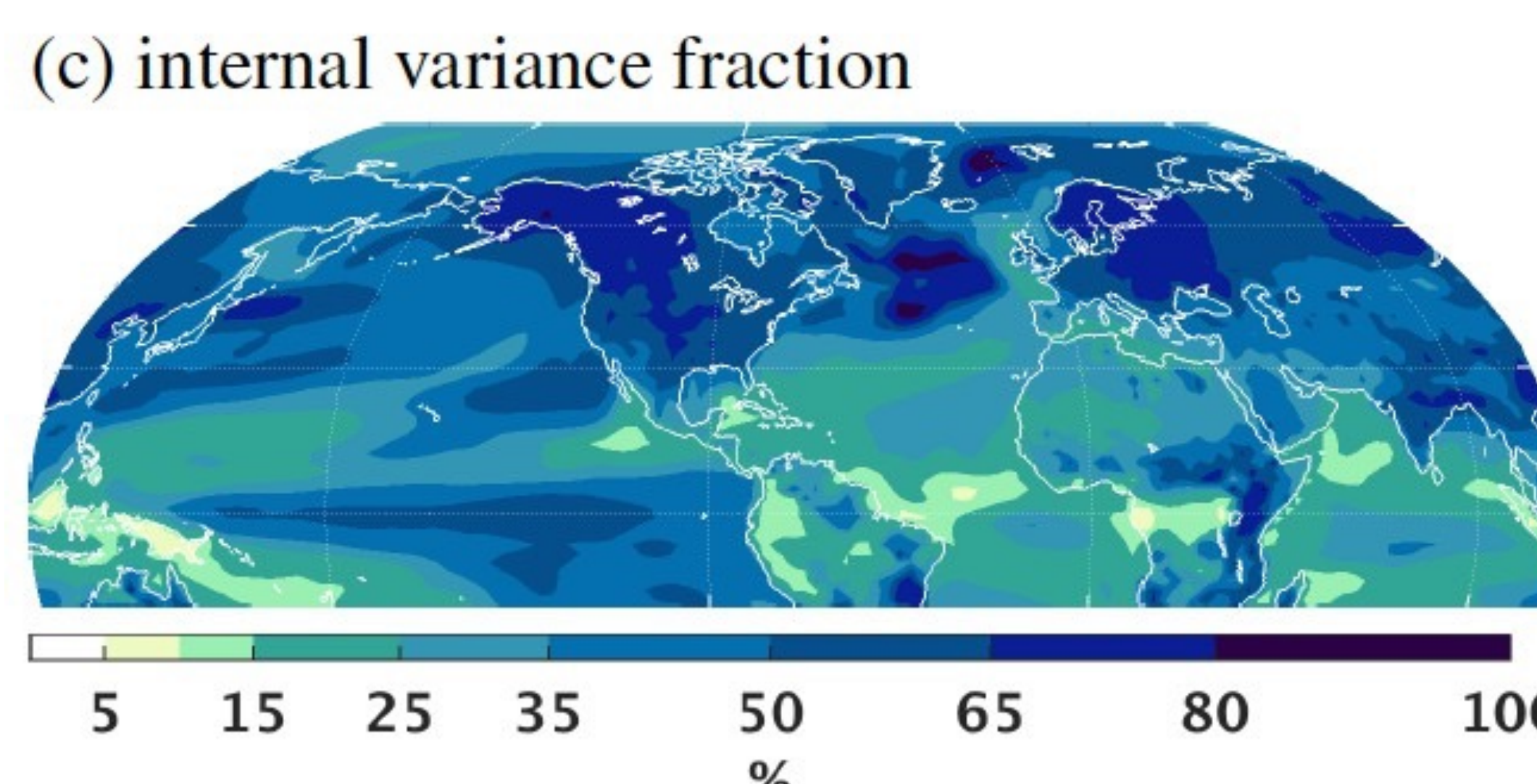
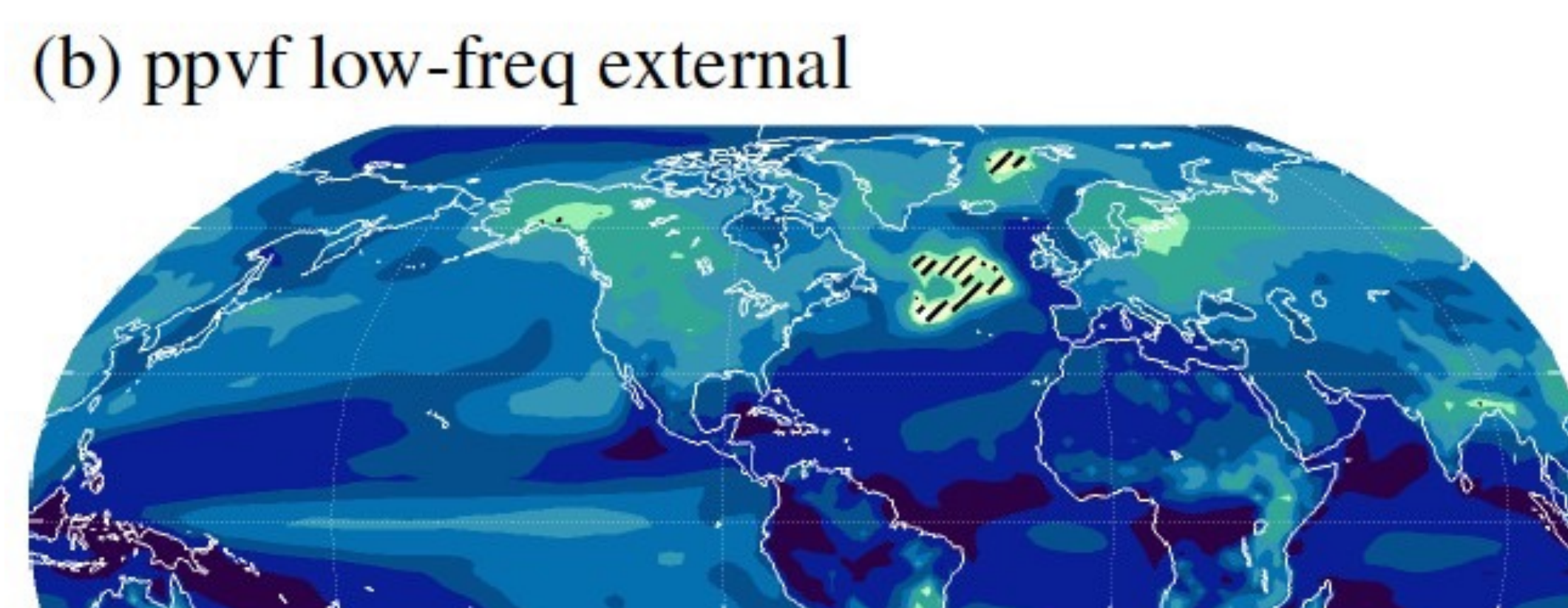
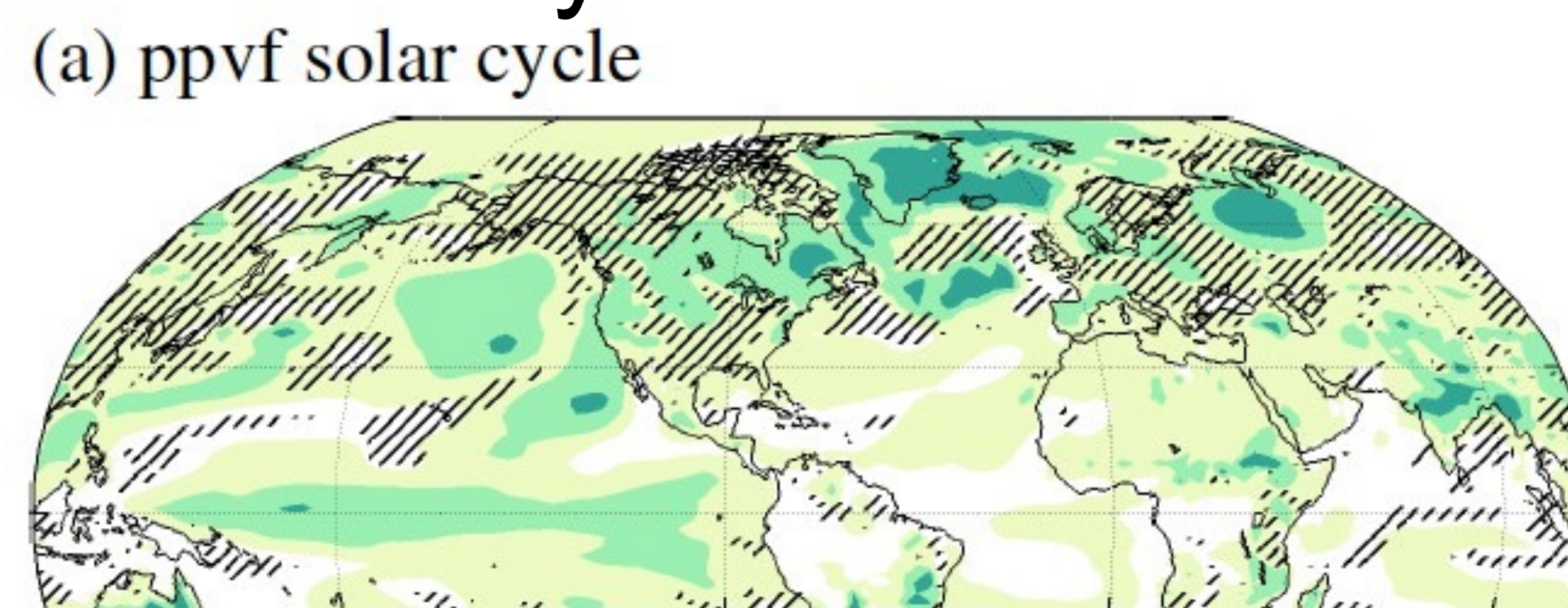
## Experiments



## Mechanism

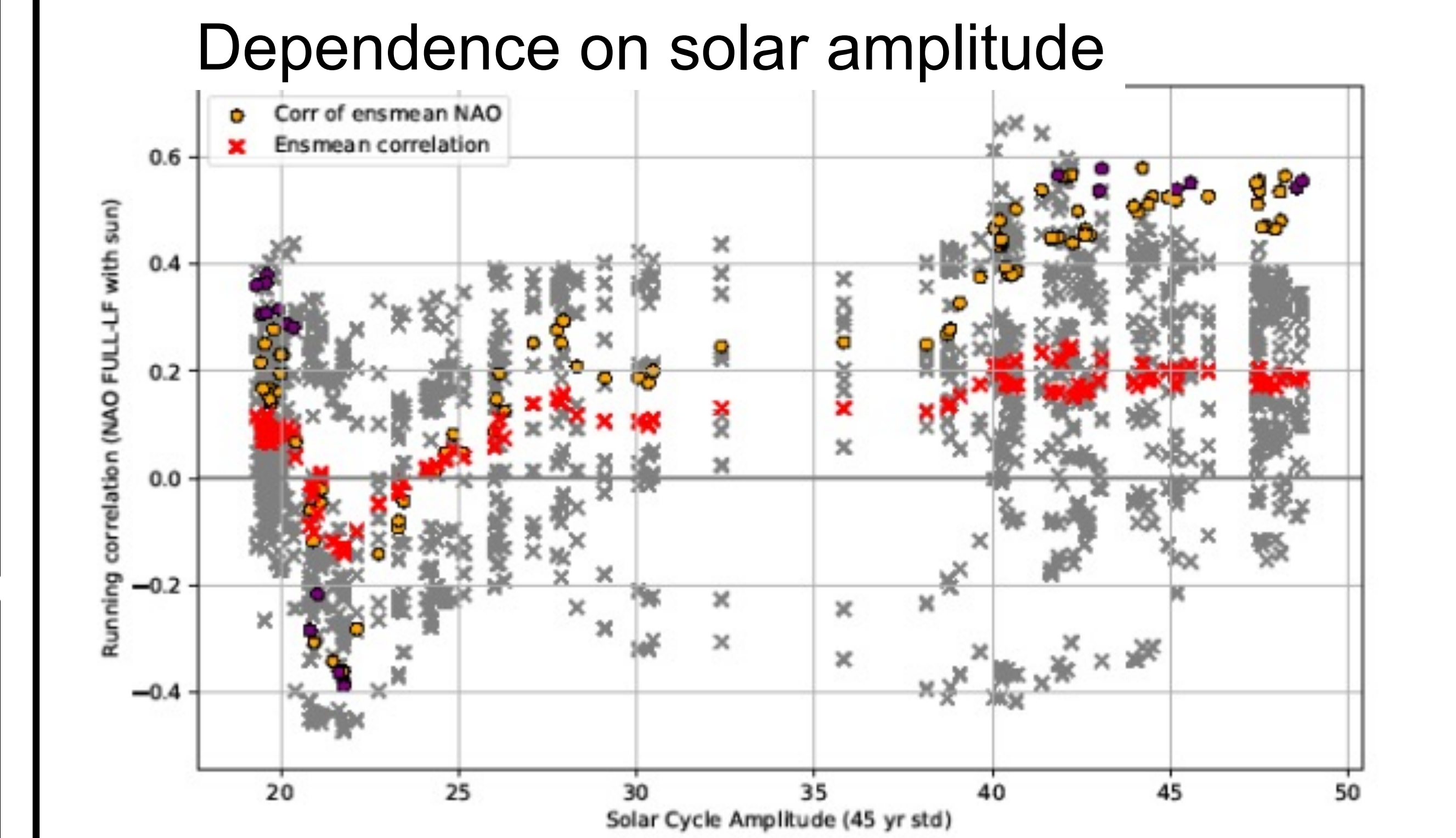
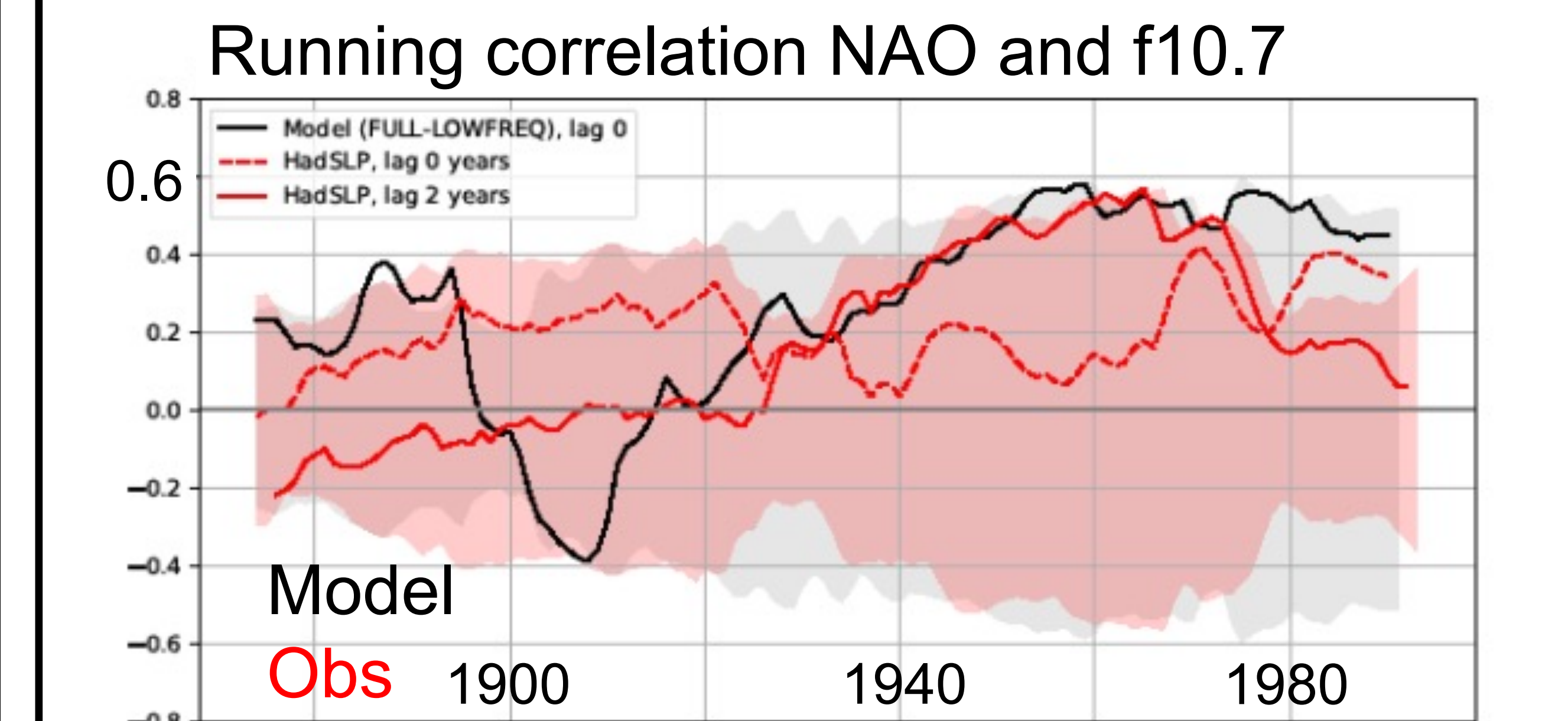
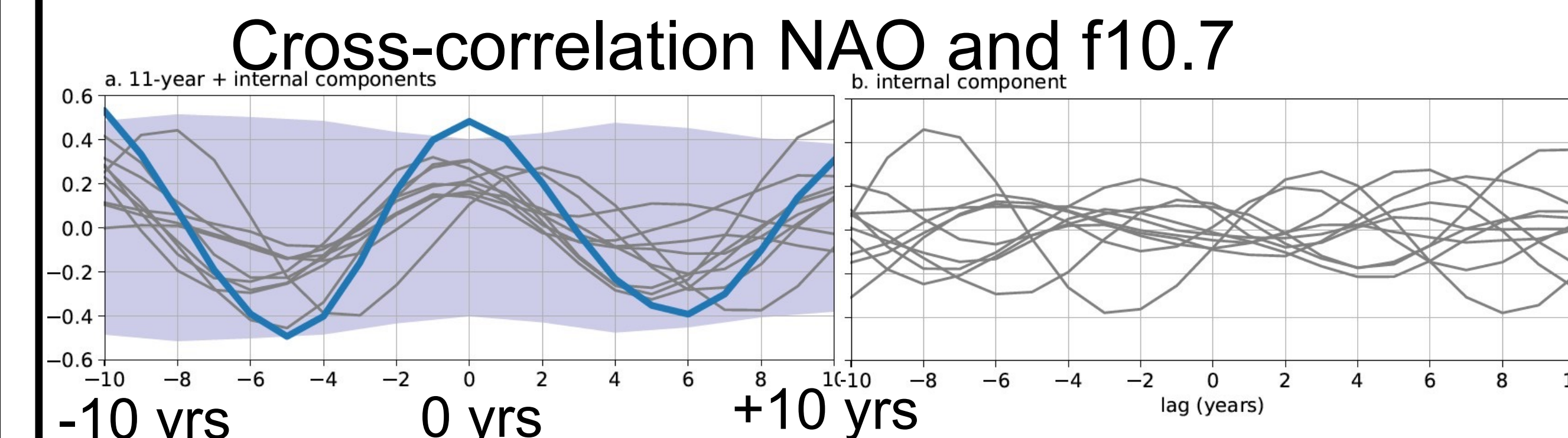


**Result 1** There is a significant potential predictability variance fraction associated with the solar cycle

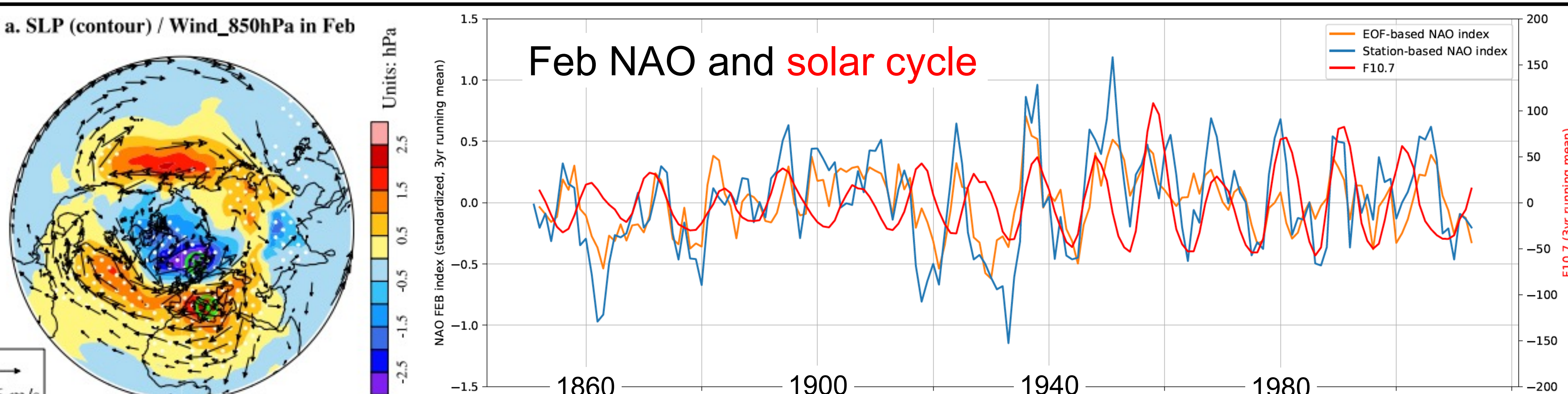


Potential predictability variance fraction (ppvf; explained variance) with respect to the DJF 8-year averaged surface air temperature associated with (a) the 11-year solar cycle, (b) all other external forcings (anthropogenic forcings, volcanic aerosols, and solar-induced low-frequency variability), and (c) remaining variance fraction due to internal climate variability. Statistically insignificant regions ( $p > 0.05$ ) in Figs. a and b are hatched (in c significant almost everywhere).

**Result 3** Solar cycle organizes NAO



**Result 2** NAO surface signal



This poster contains figures from: Drews, A.: The Sun's Role for Decadal Climate Predictability in the North Atlantic, Atmos. Chem. Phys. Discuss. in review, 2021. doi: 10.5194/acp-2021-241

