

On the mechanisms that give rise to predictive skill on seasonal-to-decadal timescales

Jon Robson

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@JonIRobson



On the mechanisms that give rise to predictive skill on seasonal-to-decadal timescales: *with a focus on the North Atlantic*

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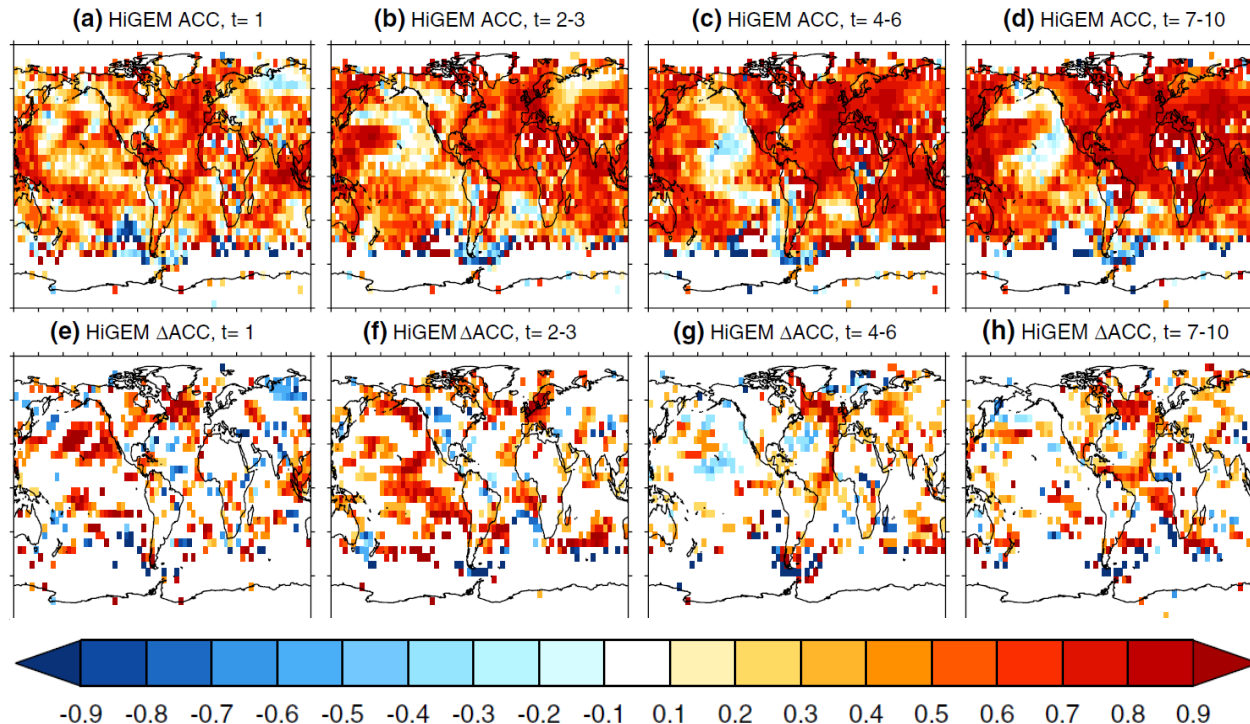
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*Thanks to: Paul-Arthur Monerie, Pablo Ortega, Irene Polo, Matt Menary,
Fangxing Tian, Buwen Dong, Dan Hodson, Rowan Sutton, Nick Dunstone,
Doug Smith, Leon Hermanson, Steve Yeager, David Thornalley*



Why study mechanisms in S2D?



*Shaffrey et al,
2017*

- Can we expect similar skill in the future?
- Prediction is the ultimate test of our knowledge
 - S2D has highlighted that models underestimate the predictable signal in NAO
- S2D data sets are huge! Novel ways to assess the processes in models?

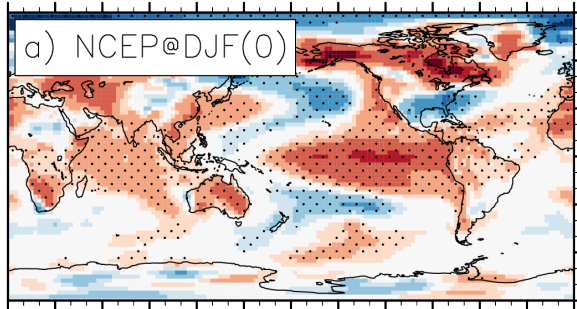
Mechanisms/processes that give rise to S2D skill



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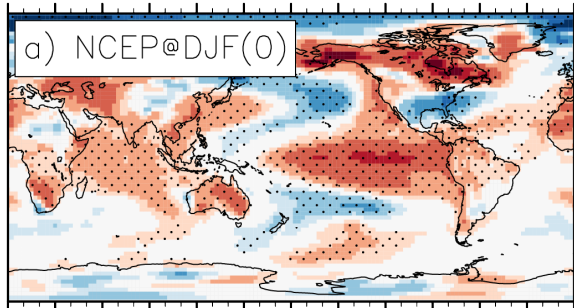
Mechanisms/processes that give rise to S2D skill

ENSO

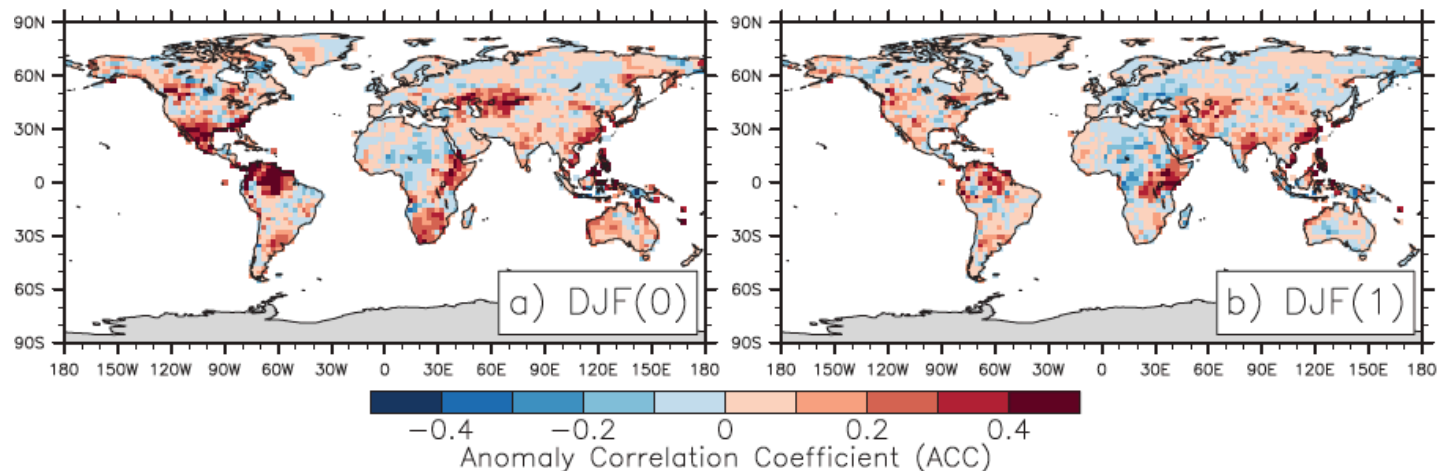


Mechanisms/processes that give rise to S2D skill

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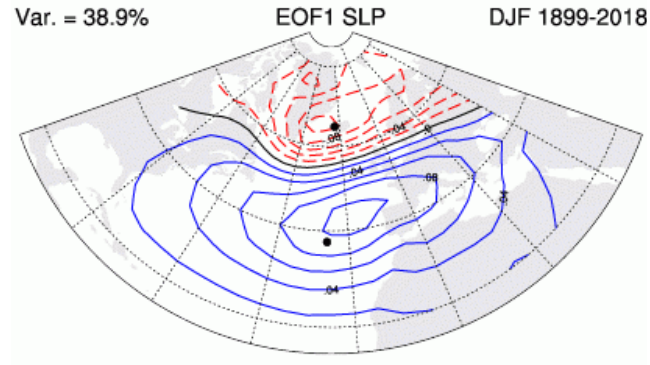
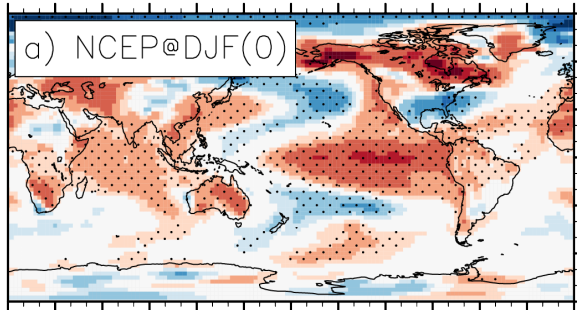
Precip - ACC attributable to ENSO
DePreSys3 1990-2015 – 40 members, Nov start



Courtesy Paul-Arthur Monerie and Nick Dunstone

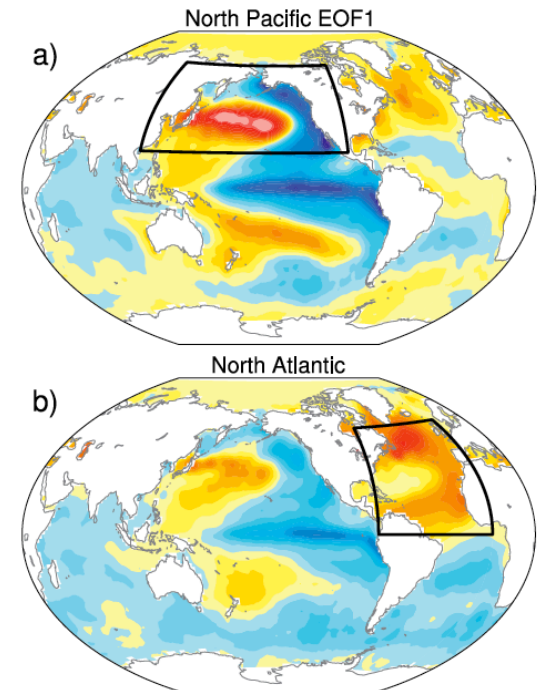
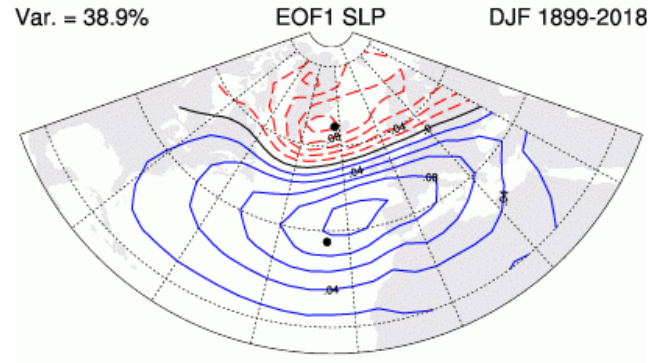
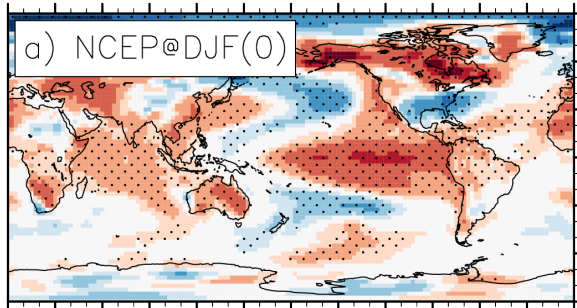
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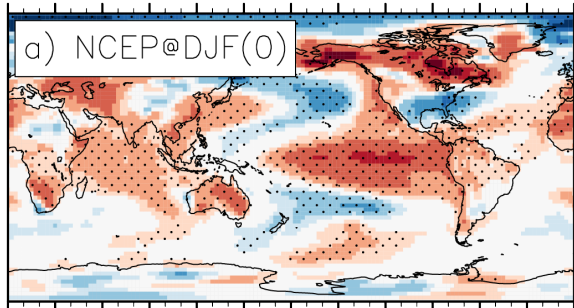
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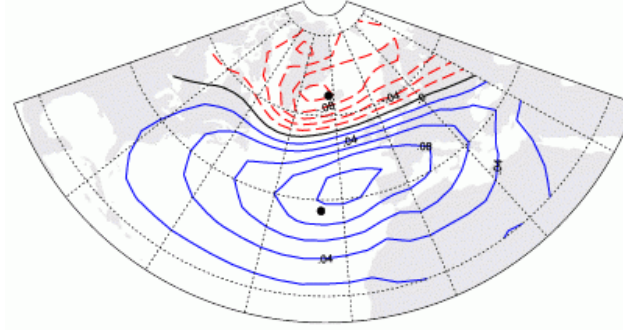


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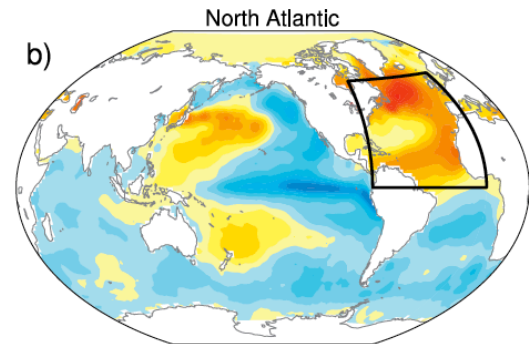
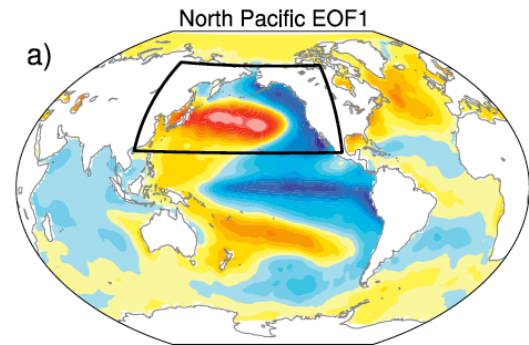
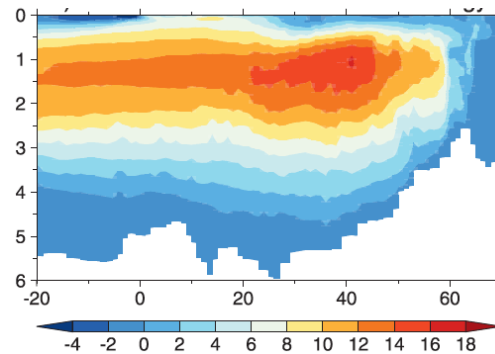
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Var. = 38.9% EOF1 SLP DJF 1899-2018

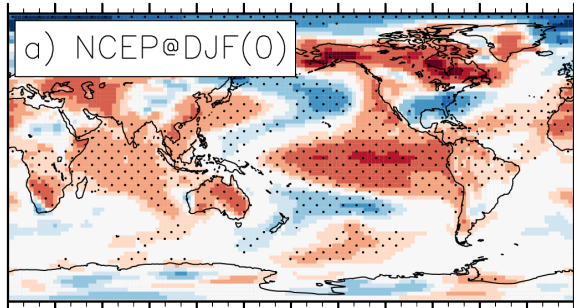


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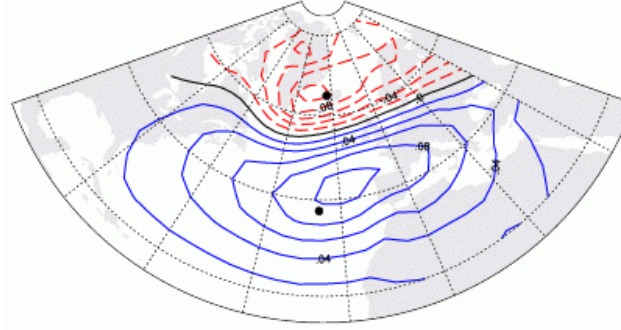


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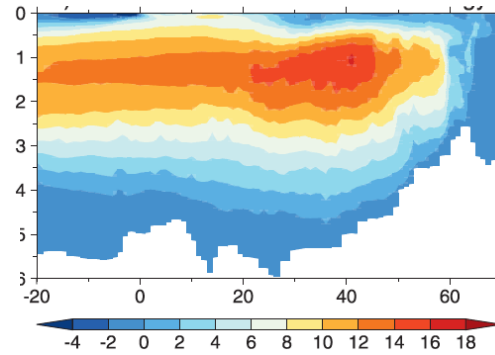
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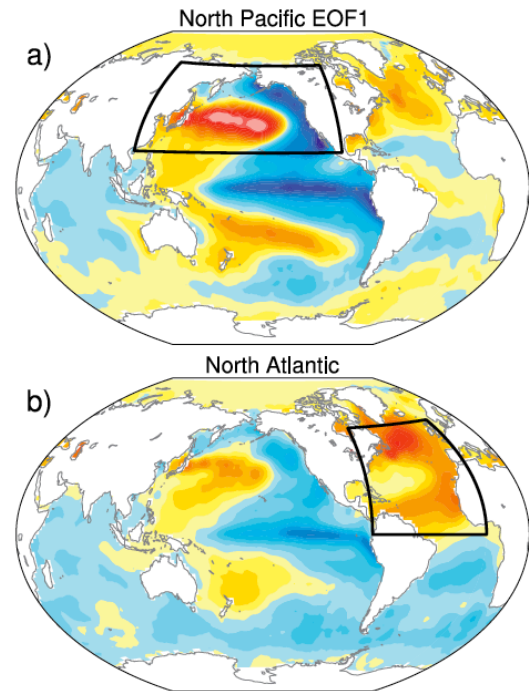
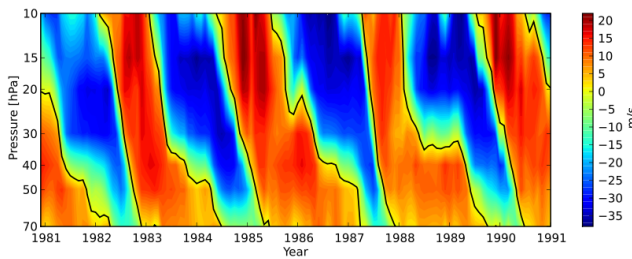
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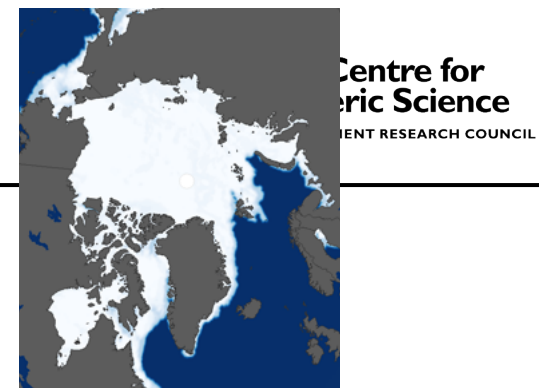
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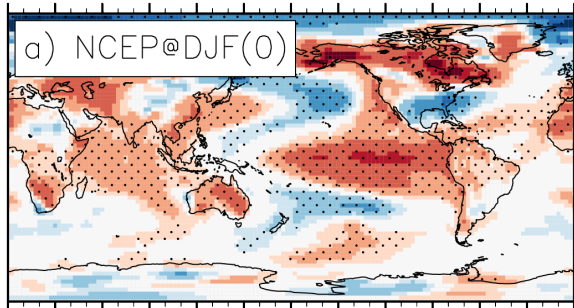
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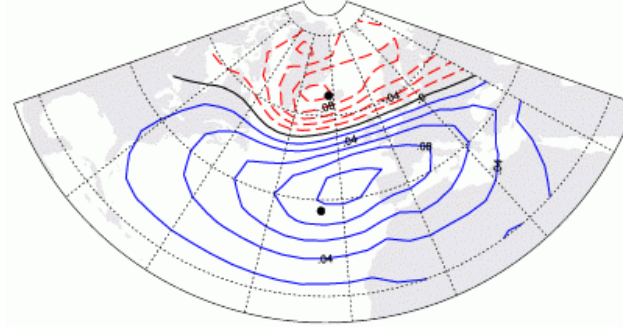
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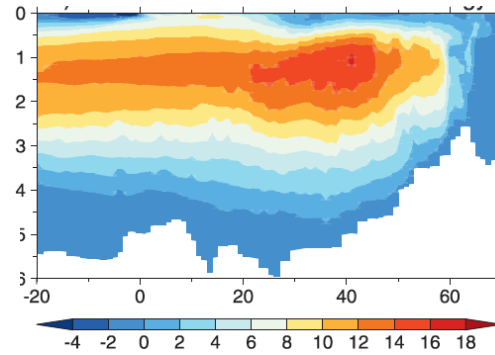
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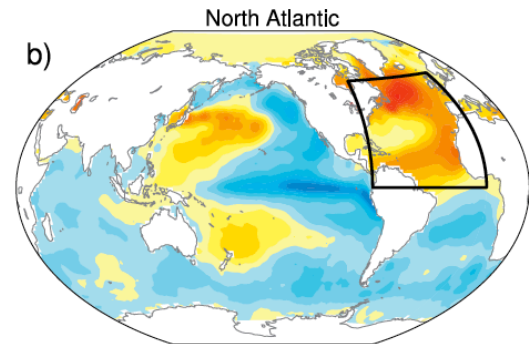
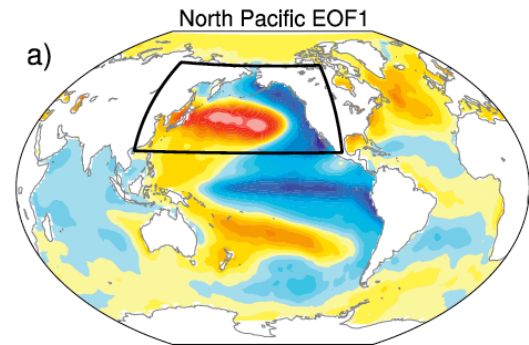
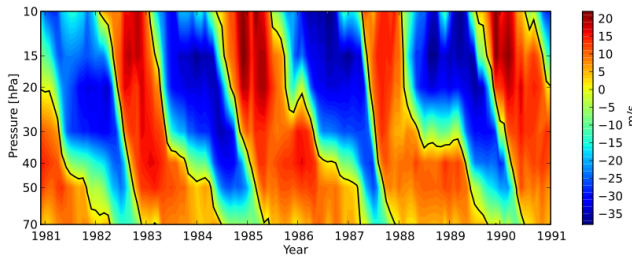
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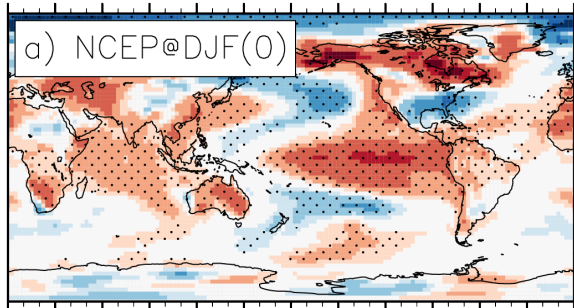
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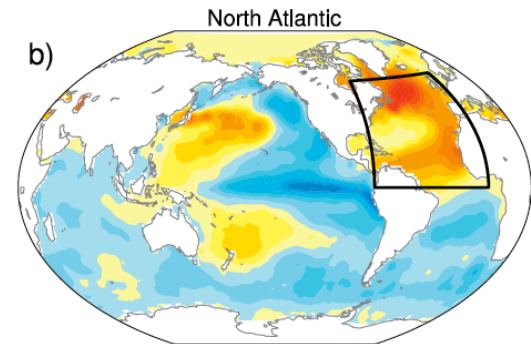
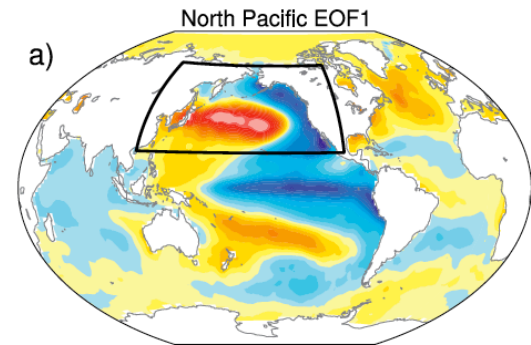
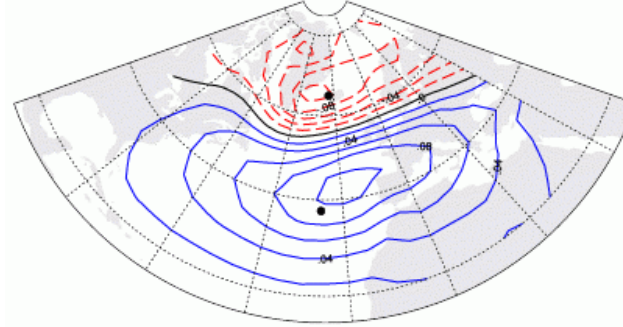
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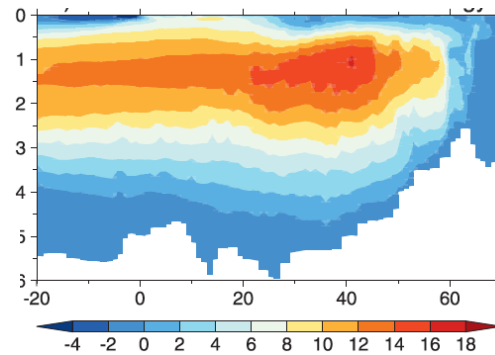
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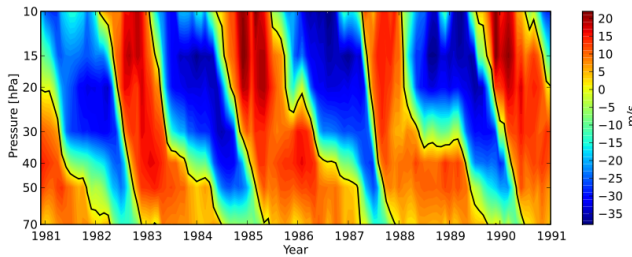
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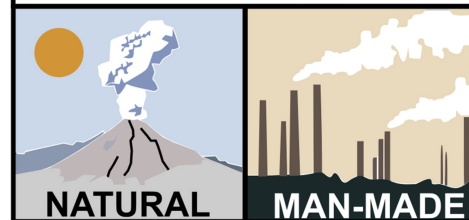
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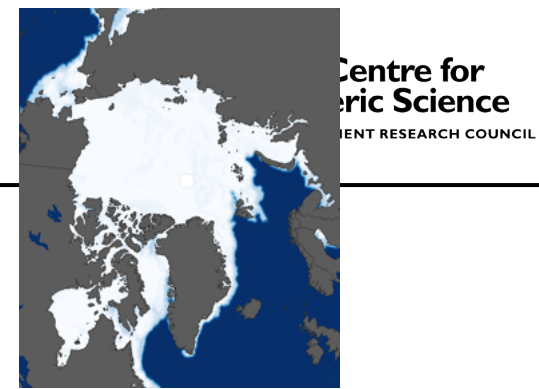
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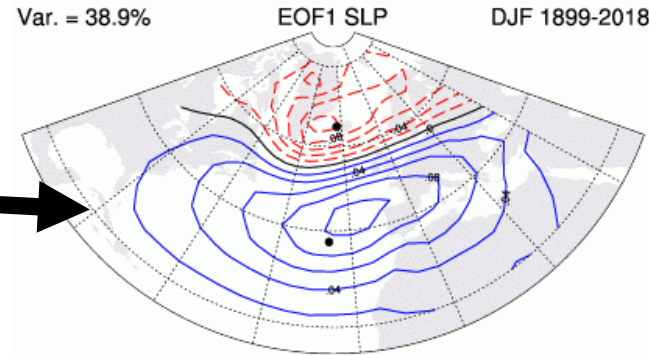
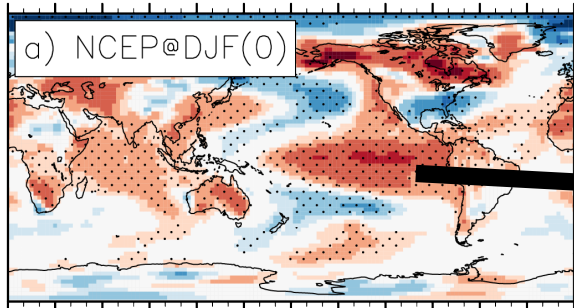
EXTERNAL FORCING



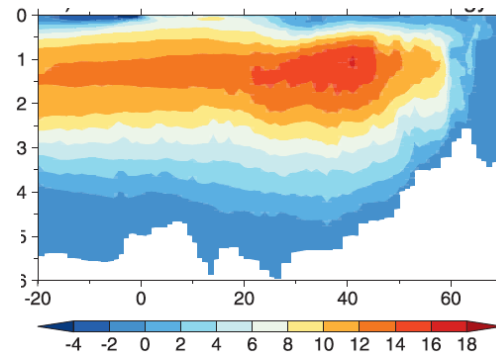
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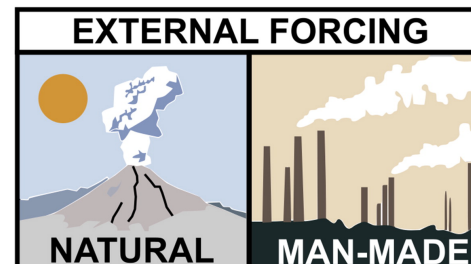
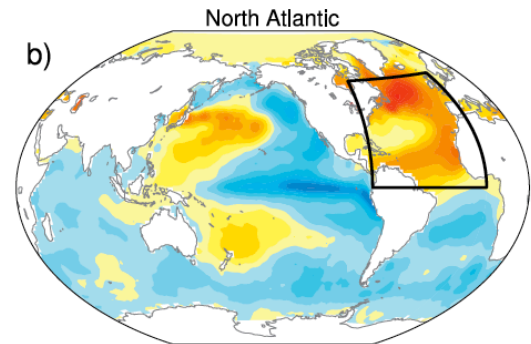
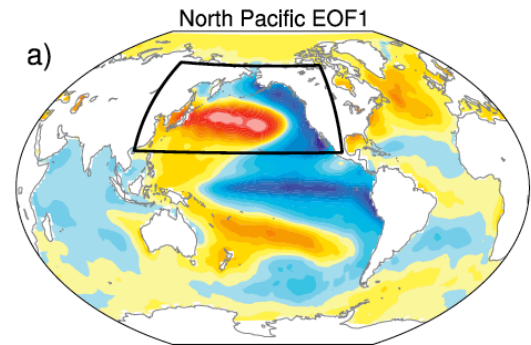
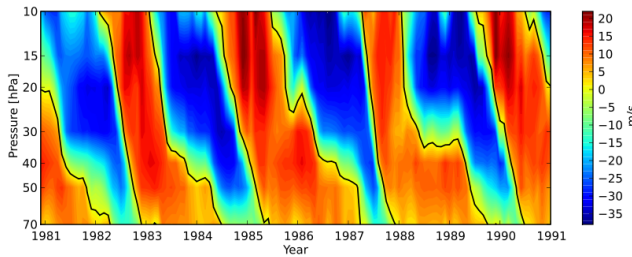
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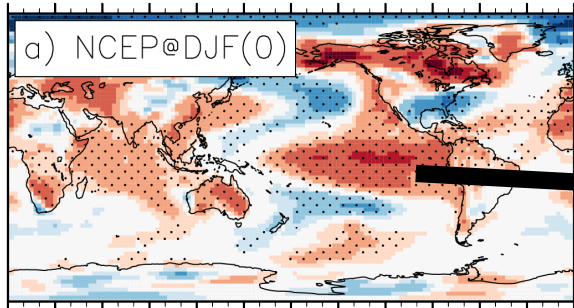
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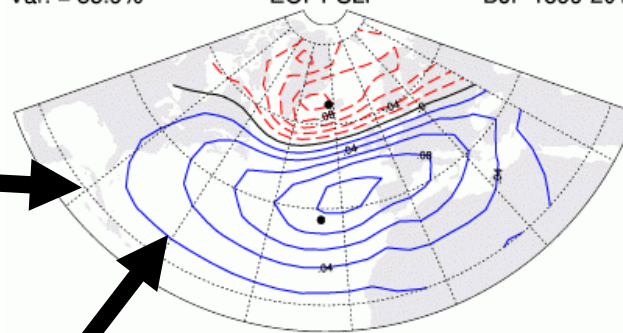
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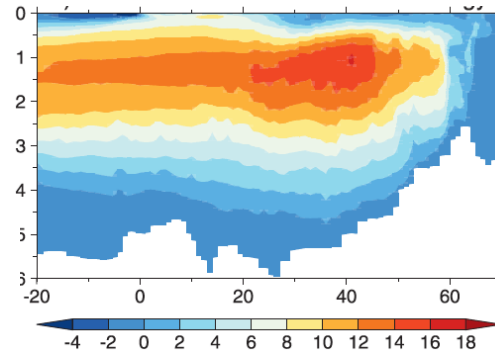
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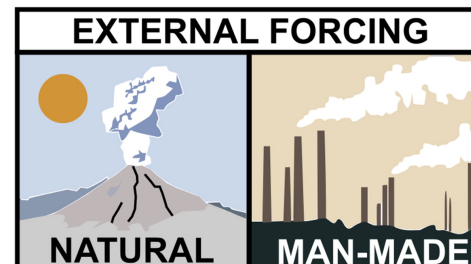
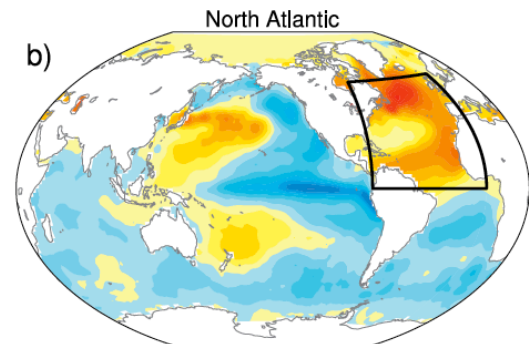
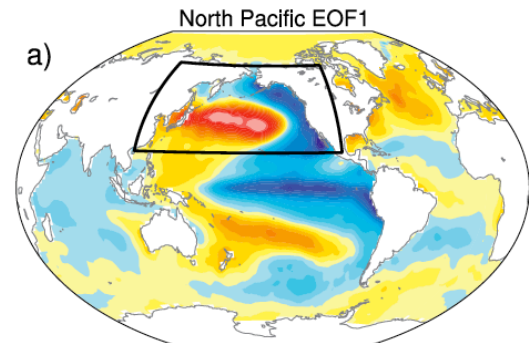
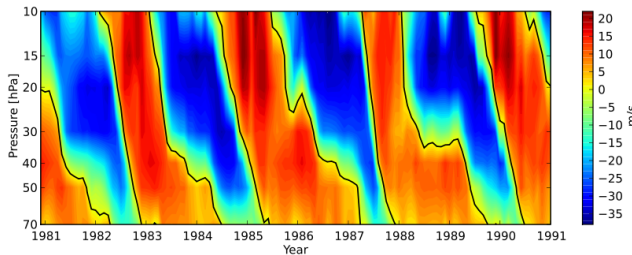
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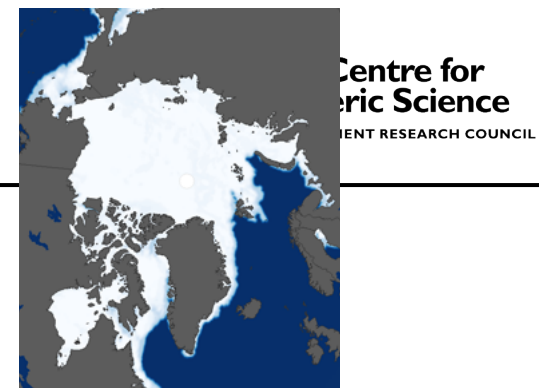
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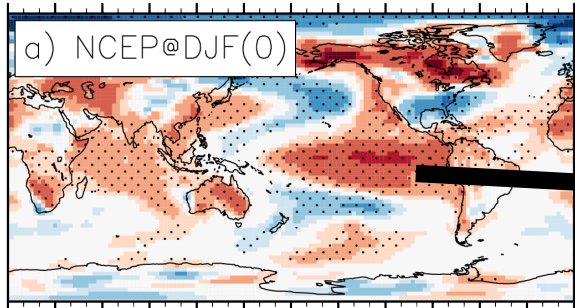
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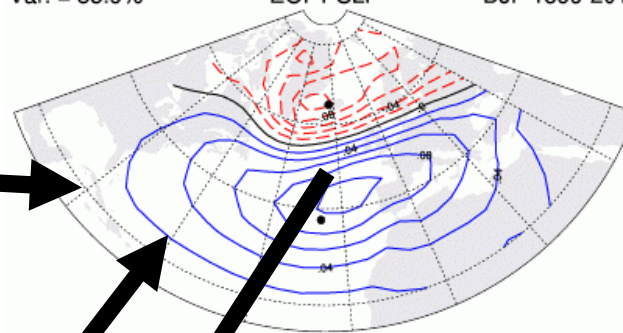
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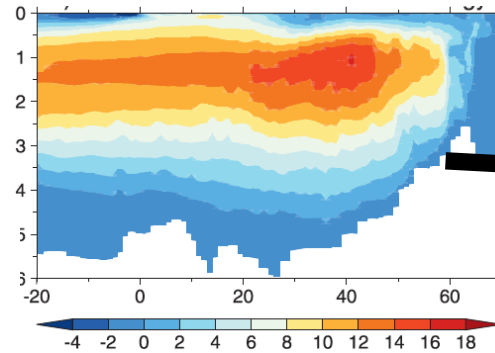
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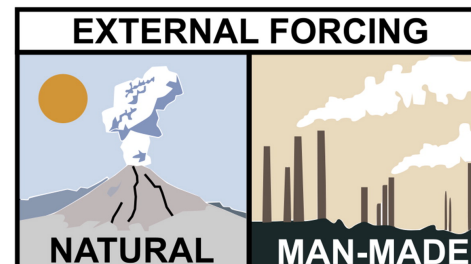
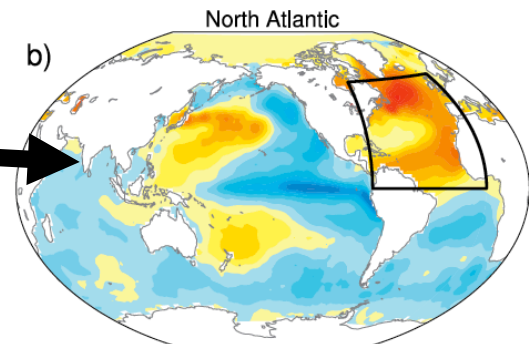
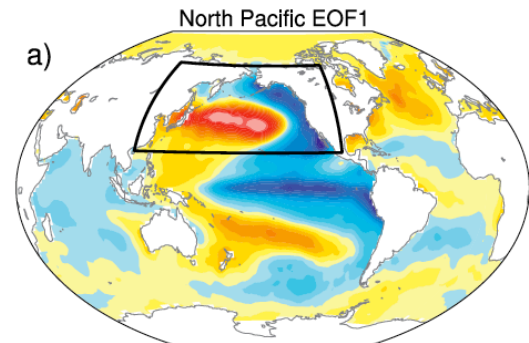
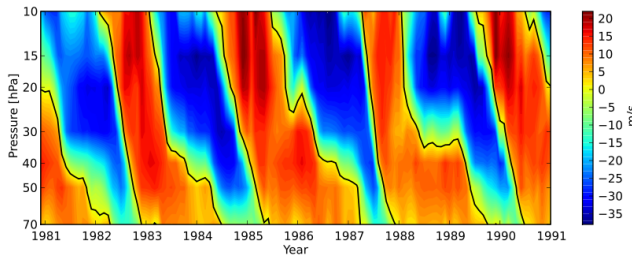
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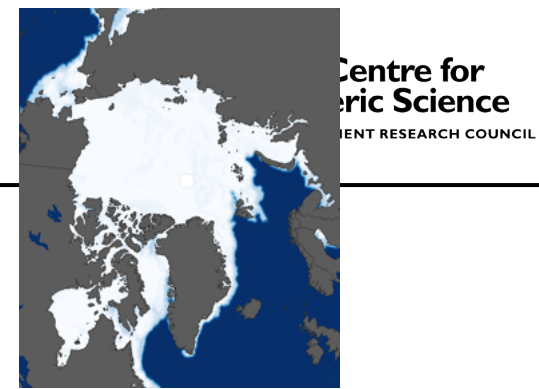
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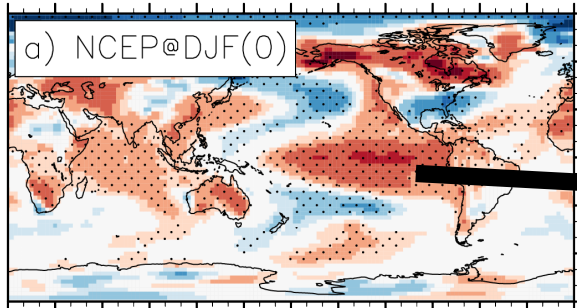
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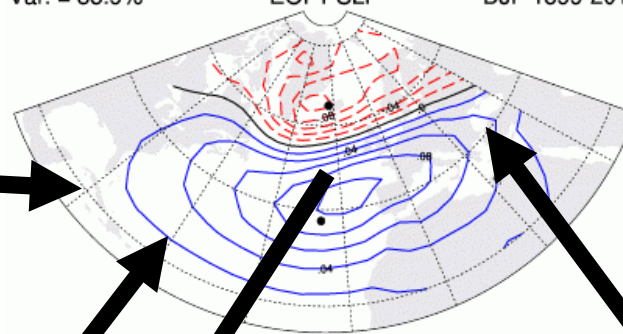
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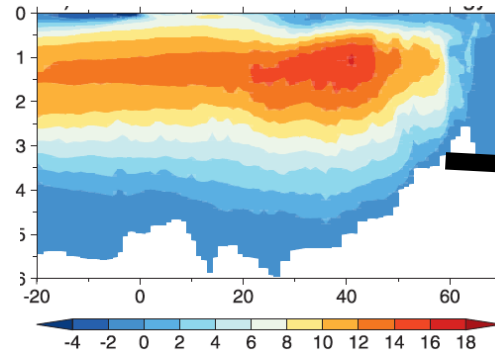
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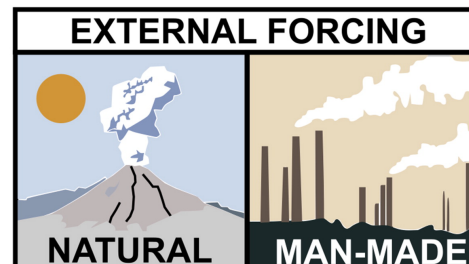
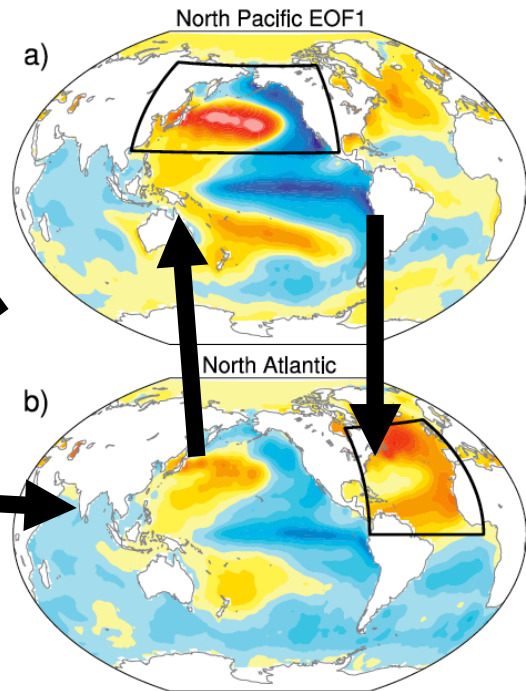
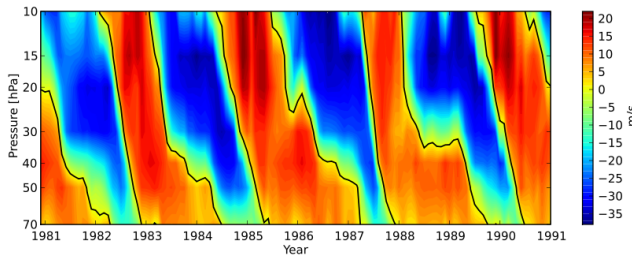
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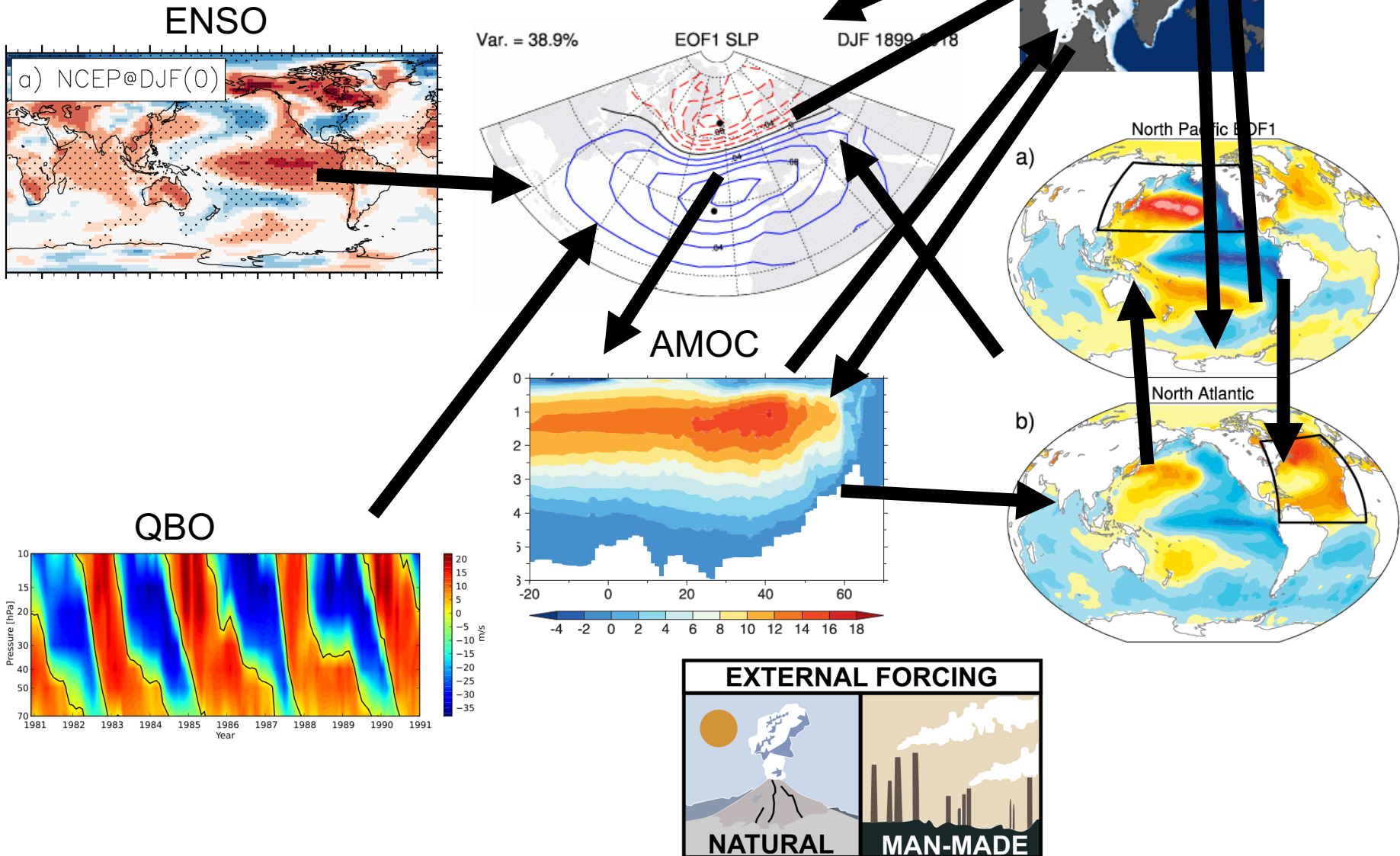
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