**The Atlantic Multidecadal Oscillation**

**mettez y tout ce que vous voulez**

**Pourquoi c’est important :**

Associated with important climate impacts, such as the multidecadal variability of Atlantic Hurricane activity, North American and European summer climate, northern hemispheric mean surface temperature, and Arctic sea ice anomalies

**Problématiques possibles :**

* **prévision de l’AMO à partir des données historiques**
* **comparaison des projections d’ensembles d’un model**
* **comparaison des modèles**

**Les données :**

**Model :** CMIP6 -> Lesquels ?

**Période :** *Projection* environ 2000->2150

**Variable :** moyenne mensuelle de sea surface temperature (*TOS*)

**Zone :** 80w-> 0E / 65N-> 0N

* Il faut des données de sst moyennées sur 10 années roulantes
* Trenberth and Shea (2006) (2)recommend that the detrending be done by subtracting the global-mean SST anomaly timeseries from the spatially averaged timeseries. **(1)**

(The AMO is given by smoothing from a 10‐year running mean [[*Goldenberg et al.*, 2001](https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2006GL026894#grl21860-bib-0009); [*Enfield et al.*, 2001](https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2006GL026894#grl21860-bib-0008)] or similar low‐pass filter ([Figure 1](https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2006GL026894#grl21860-fig-0001)). In most cases the variability has been highlighted by detrending the data [[*Enfield et al.*, 2001](https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2006GL026894#grl21860-bib-0008); [*McCabe et al.*, 2004](https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2006GL026894#grl21860-bib-0018); [*Sutton and Hodson*, 2005](https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2006GL026894#grl21860-bib-0026); [*Knight et al.*, 2005](https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2006GL026894#grl21860-bib-0013)], and a linear trend is provided in [Figure 1](https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2006GL026894#grl21860-fig-0001) for reference.  **(2))**

* northern limit was kept at 60°N to avoid problems with sea ice changes (2)

**Les étapes du projet :**

* calculer l’AMO historique

On doit travailler sur des projection mais on pourra vérifier que notre index est bon en travaillant sur les données historiques.

<https://climatedataguide.ucar.edu/climate-data/atlantic-multi-decadal-oscillation-amo> (1)

<https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2006GL026894> (2)

[**https://www.aoml.noaa.gov/phod/d2m\_shift/amo\_faq.php**](https://www.aoml.noaa.gov/phod/d2m_shift/amo_faq.php) **-> site de la NOOA**



