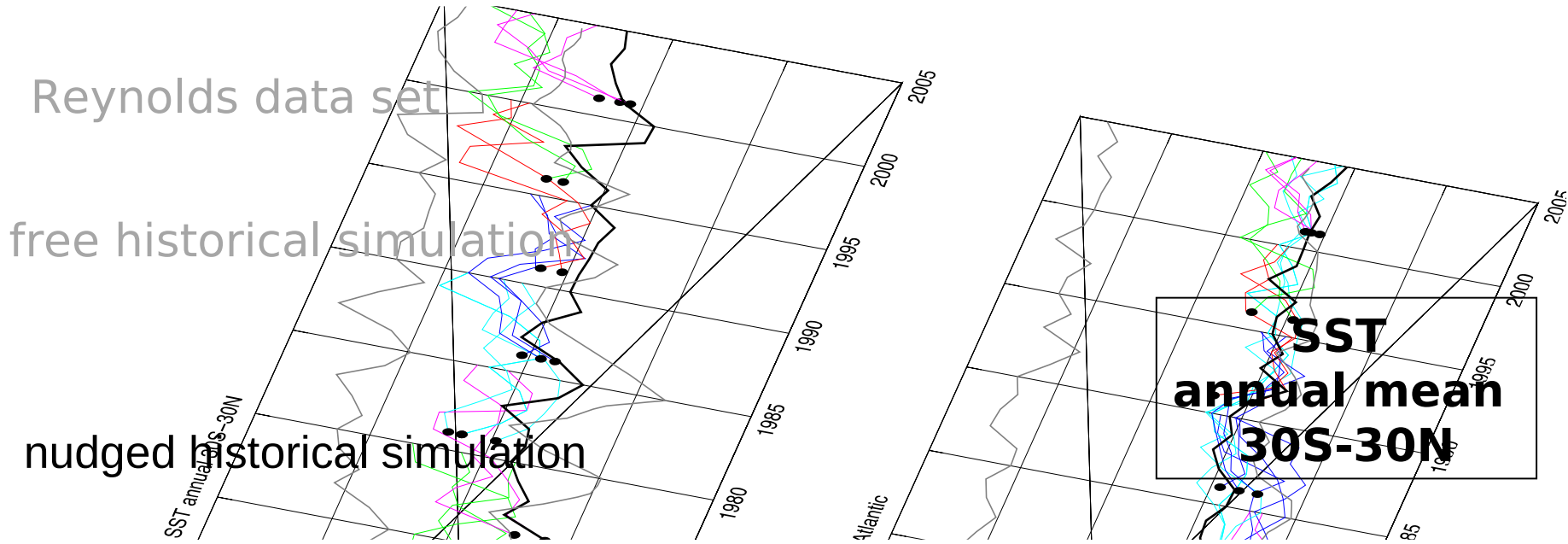


Seasonal to Decadal predictability research at IPSL

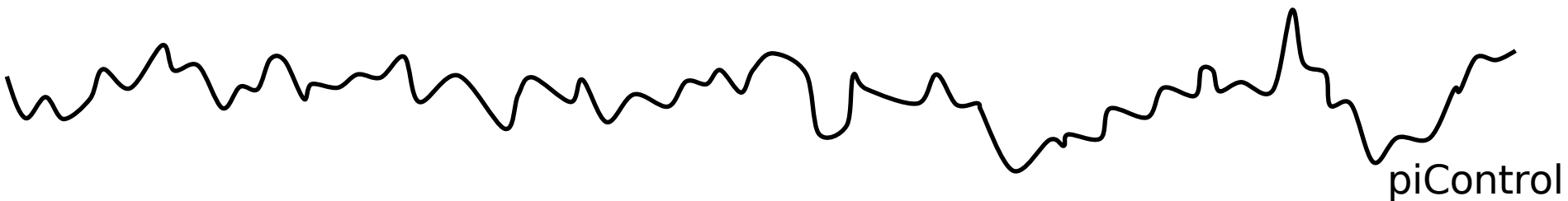
- Seasonal in tropics (Benoit V, Eric G)
 - Understand model initial drift
 - Time sequence of bias set up
- Mechanisms for MOC predictability (Didier S, Juliette M, Aurelie P)
- Initialisation of coupled system (Jérôme S, Juliette M, Didier S, Eric G)
 - Surface nudging/forcing
 - Perfect model studies (SST, SSS, wind stress - sea-ice, ...)
 - Optimal perturbation ensemble generation (using adjoint/tangent NEMO)
- Potential predictability evaluation (Aurélie P, Juliette M, Didier S)
- Other predictability studies
 - Ocean biogeochemistry (Roland S, Laurent B)
 - African monsoon (Adbou K G, Serge J)
- CMIP5 contribution (Sonia L, Juliette M, Didier S, Eric G)
 - using IPSL-CM5A-IR

CMIP5 near term exercise at IPSL



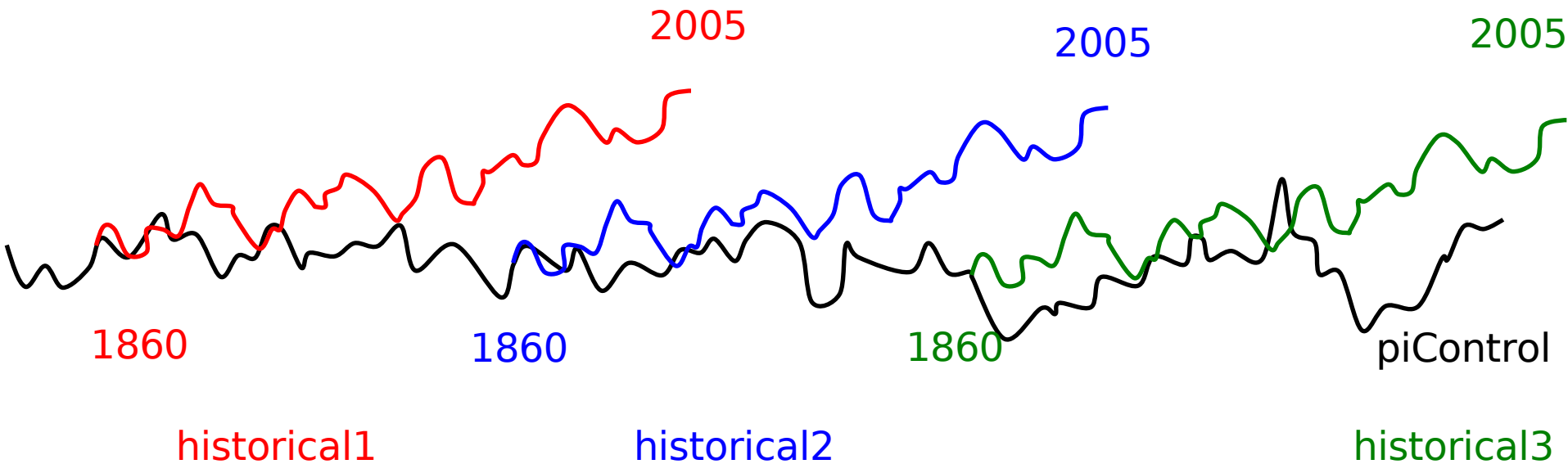
Strategy:

- surface initialization
- 3 initialized simulations from 3 members of the ensemble of historical simulations (long term)
- 3 hindcasts members launched from each initialized run



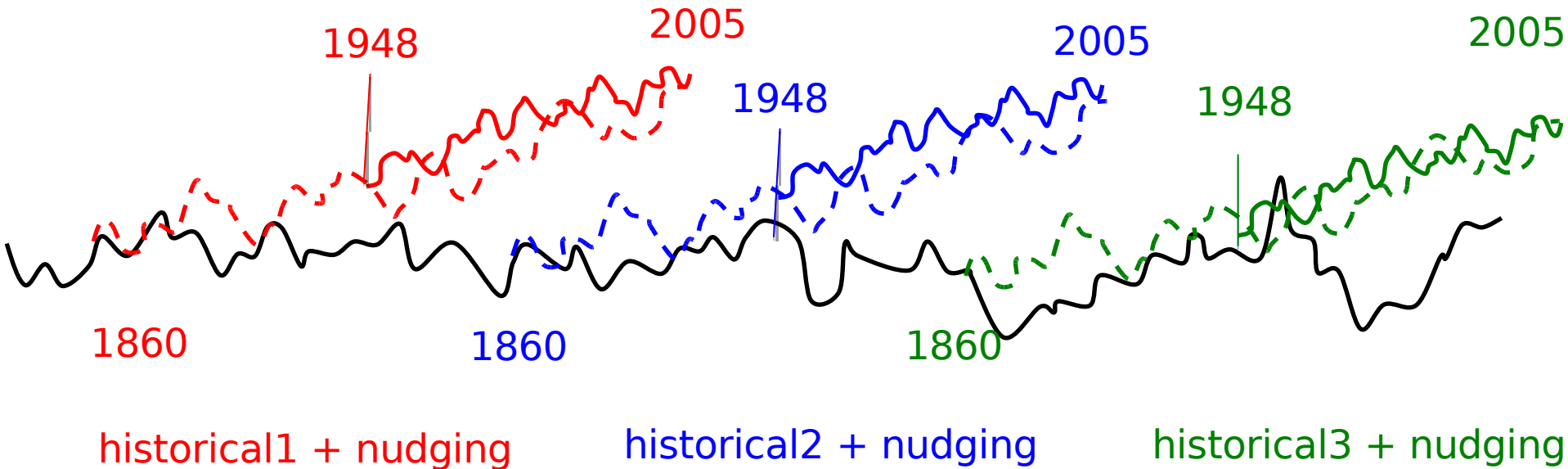
Strategy:

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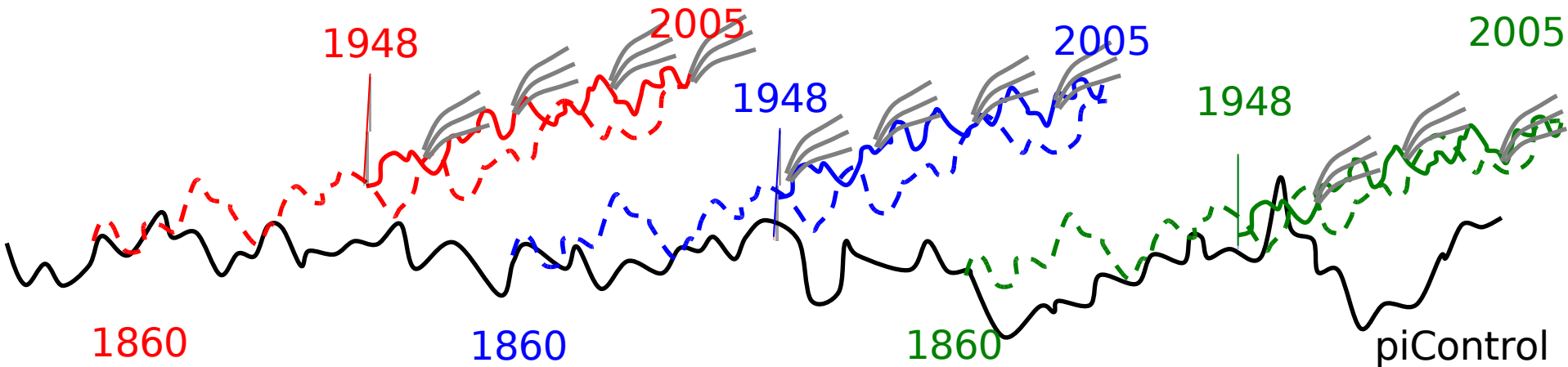
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Strategy:

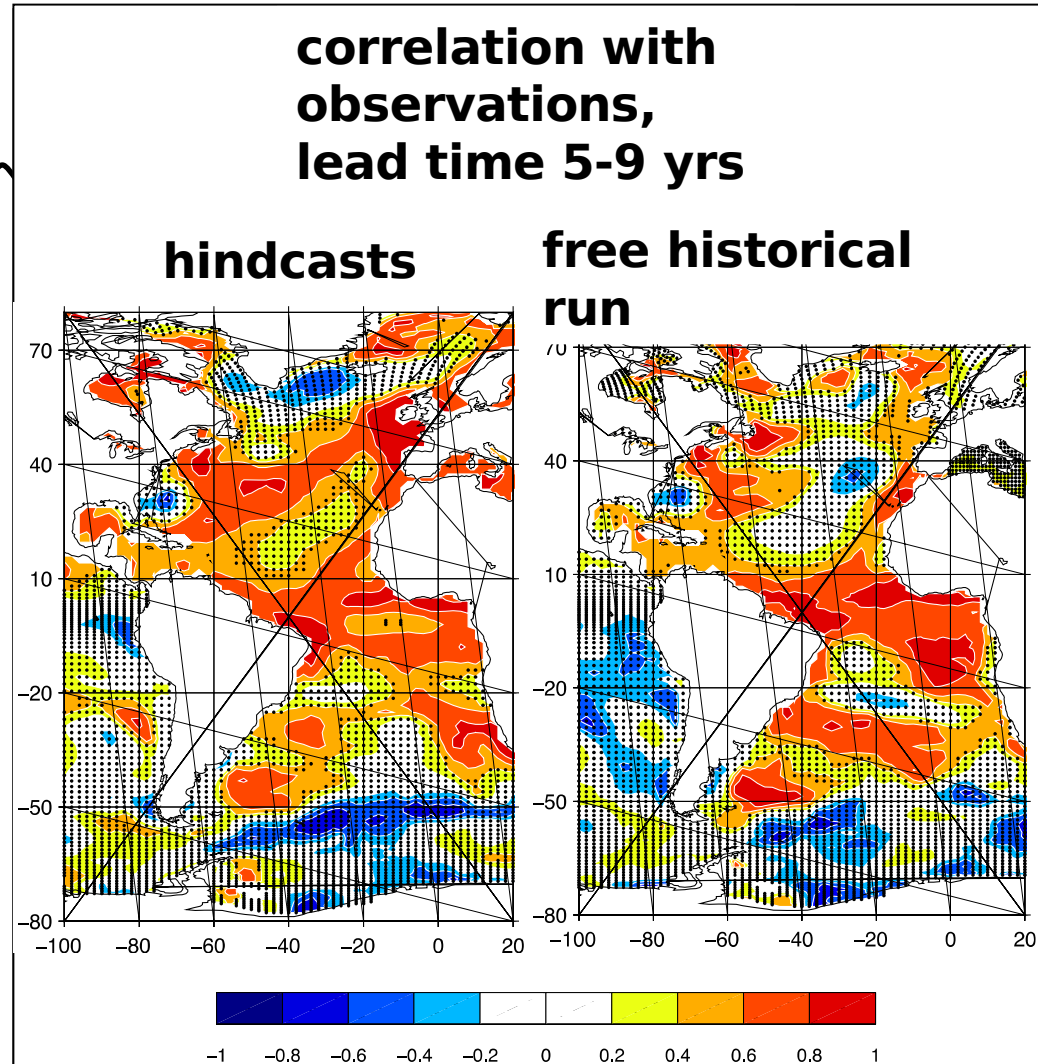
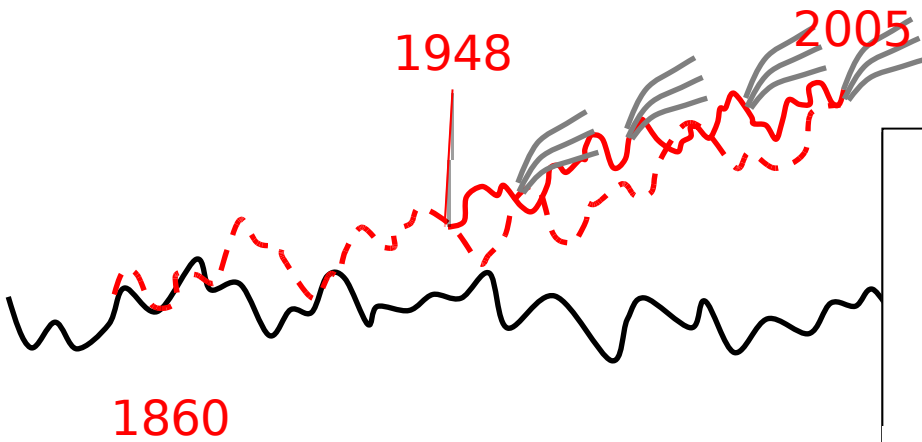
- surface initialization
- 3 initialized simulations from 3 members of the ensemble of historical simulations (long term)
- 3 hindcasts members launched from each initialized run



**3 free runs with perturbed initial conditions started from
31 dec 1960, 1965, ... 2005
Initial perturbation: spatial white noise on SST**

Status and preliminary results

First set of 3 ok (historical 1)
Second set running



Prévisibilité décennale à l'IPSL – prochaines étapes

Mécanismes de prévisibilité, liens avec modes de variabilité:

- AMOC et Atlantique Nord
- Tropiques

Initialisation du système couplé

- Etudes en modèle parfait -> nouvelle stratégie d'initialisation

CMIP5:

- fin des runs de la série 1 (cesium...), CMOR, ESGF, métadonnées
- Seconde série CMIP5 avec nouvelle initialisation/perturbation
- Analyse coordonnée des performances

Projets:

- GICC EPIDOM
- LabEX IPSI