Modeling group perspective: INM

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Model for CMIP6

Atmosphere: 2x1.5L73, Ocean 0.5x0.25L40

Model used in CMIP5:

Atmosphere: 2x1.5L21, Ocean 1x0.5L40.

Changes: increased vertical resolution in the atmosphere (realistic QBO, stratospheric warmings); increased horizontal resolution in the ocean; aerosol block;

For some long runs (PMIP, ISMIP6) model version with more rough resolution will be used (ATM 2x1.5L21, OC 1x0.5L40, or ATMx4L21, OC. 5x2L33

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CMIP6 design according to (a) is preferable: no further prioritization beyond DECK, but in some MIPs simulations prioritized by tiers.

DECK consitis of preindusrtrial run, 1% CO_2 increase, instantaneous $4xCO_2$, AMIP, Historical run, simulation of future with illustrative warm scenario (as RCP8.5)

Plans for CMIP6

1. **All deck experiments**
2. **C4MIP** (very likely): 1pctCO2, esmHistorical, esmssp85
3. **CFMIP** (likely): amip4, amipminus4k, amipFuture, amip4CO2
4. **DCPP** (likely): decadal hindcasts
5. **GEOMIP** (likely): all
6. **PMIP** (likely): lgm, midHolocene, Plio, LIG
7. **ISMIP6** (likely): piControl, 1pctCO2, rcp85

Suggestions for CMIP6:

To concretize DCPP part C, for example:

Study of potential predictability events of very high (low) AMO and PDO index in piControl run with ensembles of ~30 year runs using method of "perfect model". Comparison with actual predictability of AMO and PDO averaged over 20-30 years