NEW PMIP publications for AR6

Document generated on **Wed Aug 28 15:11:35 2019**

Number of submitted references: **16**

Notes:

- References are not sorted, and listed in the order they were submitted to the *PMIP publications for the AR6-WG1 questionnaire*
- There may be some duplicates (same ref submitted by different people)

Chapter 1: Framing, context, methods

Number of selected references: **5**

- Dmitry Yumashev* & Chris Brierley, The economic implications of using the true preindustrial climate baseline
  - **Submitted** = *No*
  - **Keywords** = *early industrial vs preindustrial*
  - **Details** = This paper will look at the cost-benefit analysis of using a preindustrial or early-industrial baseline. Whilst these may be statistically equivalent, which one is picked could still cause differences between different economic blocs.
  - **Why** = This wil be relevant for the cross-chapter box on preindustrial definitions. It's analysis demonstrates that even a choice as scientifically arbitrary as this has social justice implications. It also states that this difference only matters if the Paris Agreement is met, and so shouldn't be wrangled over during negotiations.

- Charles J.R. Williams*, Maria V. Guarino, Joy S. Singarayer, Louise Sime, Emilie Capron, Daniel Lunt, The UK contribution to paleoclimate modelling for CMIP6/PMIP4: The mid-Holocene and the Last Interglacial experiments, two "orbital forcing" simulations, and comparison to the preindustrial era and proxy data
  - **Submitted** = *No*
  - **Keywords** = *Paleaoclimate modelling, midHolocene, last interglacial, preindustrial, model-data comparisons*
  - **Details** = The aim of this paper is to compare the MH and LIG HadGEM3 simulations, both with the corresponding PI control, previous CMIP5 simulations and available proxy data, to assess whether the latest version of the UKMO GCM is reproducing these periods better than previous generations.
  - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, CMIP6/PMIP4/DeepMIP: Atmosphere-only early Eocene simulations with HadGEM3
  - **Submitted** = *No*
  - **Keywords** = *Paleoclimate modelling, early Eocene, atmosphere only*

- **Details** = The aim of this paper was to carry out a number of sensitivity experiments during the early Eocene using HadGEM3, to test the climate sensitivity (and particular hydro-climate e.g. changing precipitation patterns) to varying CO_2 levels as well as a modified land sea mask and pole-equator SST changes
- **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks)

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, Alex Farnsworth, Fully-coupled early Eocene simulation using HadGEM3 as part of CMIP6/PMIP4/DeepMIP: Experimental design, model-model and model-data comparisons
    - **Submitted** = *No*
    - **Keywords** = *Paleoclimate modelling, early Eocene, experimental design, model-data comparisons*
    - **Details** = The aim of this paper was to conduct the fully coupled early Eocene simulation using HadGEM3, presenting both the experimental design and results based on model-model comparisons (e.g. with other Eocene simulations) and model-data comparisons
    - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, Fully-coupled Pliocene simulation using HadGEM3 as part of CMIP6/PMIP4/DeepMIP: Experimental design, model-model and model-data comparisons
    - **Submitted** = *No*
    - **Keywords** = *Paleoclimate modelling, Pliocene, experimental design, model-data comparisons*
    - **Details** = The aim of this paper was to conduct the fully coupled Pliocene simulation using HadGEM3, presenting both the experimental design and results based on model-model comparisons (e.g. with other Eocene simulations) and model-data comparisons.
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Chapter 2: Changing state of the climate system

Number of selected references: **9**

- Kira Rehfeld*, Chris Brierley, Raphael Hebert, Juan Lora, Marcus Lovferstrom, Variability of surface climate in PMIP3-PMIP4 simulations for past and future climate
    - **Submitted** = *No*
    - **Keywords** = *interannual variability*
    - **Details** = n/a
    - **Why** = It looks at interannual variability in surface temperature and precipitation across both past and future simulations. It compares these response to existing compilations

from palaeoclimate reconstructions. It also contains scatterplots of modes of climate variability (e.g. ENSO, IOD) to global temperature changes, and scaling diagnostics.

- The ENSO gang at Past2Future.org, ENSO in CMIP6/PMIP4
  - **Submitted** = No
  - **Keywords** = ENSO; El Nino teleconnections
  - **Details** = This publication will look at the ENSO response during the Last Glacial, Mid-Holocene & Last Interglacial, both the amplitude, spectra and teleconnections. It will compare these to the idealised warming scenarios.
  - **Why** = ENSO

- Cao, Jian; Wang, Bin; Liu,Jian, Attribution of the Last Glacial Maximum climate formation
  - **Submitted** = Yes
  - **Keywords** = LGM, single forcing experiment
  - **Details** = n/a
  - **Why** = Attributed the contribution of each external forcing in the LGM temperature and precipitation change

- Cao, Jian; Wang, Bin; Ma, Libin, Attribution of Global Monsoon Response to the Last Glacial Maximum Forcings
  - **Submitted** = Yes
  - **Keywords** = LGM. global monsoon
  - **Details** = The impact of LGM forcings to global monsoon precipitation changes over global or hemispheric scale.
  - **Why** = n/a

- Alexandre Cauquoin, Martin Werner*, Gerrit Lohmann, Water isotopes - climate relationships for the mid-Holocene and pre-industrial period simulated with an isotope-enabled version of MPI-ESM
  - **Submitted** = Yes
  - **Keywords** = MPI-ESM, stable water isotopes, mid-Holocene
  - **Details** = Paper currently in discussion at Climate of the Past: https://doi.org/10.5194/cp-2019-72
  - **Why** = The paper shows the first results, for the pre-industrial and mid-Holocene climatological periods, of the newly developed isotope-enhanced version of the fully coupled Earth system model MPI-ESM. The simulations follow the CMIP6-PMIP4 protocol and enable an improved model-data comparison for the mid-Holocene climate period.

- Charles J.R. Williams*, Maria V. Guarino, Joy S. Singarayer, Louise Sime, Emilie Capron, Daniel Lunt, The UK contribution to paleoclimate modelling for CMIP6/PMIP4: The mid-Holocene and the Last Interglacial experiments, two "orbital forcing" simulations, and comparison to the preindustrial era and proxy data
  - **Submitted** = No
  - **Keywords** = Paleaoclimate modelling, midHolocene, last interglacial, preindustrial, model-data comparisons
  - **Details** = The aim of this paper is to compare the MH and LIG HadGEM3 simulations, both with the corresponding PI control, previous CMIP5 simulations and available proxy data, to assess whether the latest version of the UKMO GCM is reproducing these periods better than previous generations.
  - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes

and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, CMIP6/PMIP4/DeepMIP: Atmosphere-only early Eocene simulations with HadGEM3
    - **Submitted** = *No*
    - **Keywords** = *Paleoclimate modelling, early Eocene, atmosphere only*
    - **Details** = The aim of this paper was to carry out a number of sensitivity experiments during the early Eocene using HadGEM3, to test the climate sensitivity (and particular hydro-climate e.g. changing precipitation patterns) to varying CO_2 levels as well as a modified land sea mask and pole-equator SST changes
    - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks)

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, Alex Farnsworth, Fully-coupled early Eocene simulation using HadGEM3 as part of CMIP6/PMIP4/DeepMIP: Experimental design, model-model and model-data comparisons
    - **Submitted** = *No*
    - **Keywords** = *Paleoclimate modelling, early Eocene, experimental design, model-data comparisons*
    - **Details** = The aim of this paper was to conduct the fully coupled early Eocene simulation using HadGEM3, presenting both the experimental design and results based on model-model comparisons (e.g. with other Eocene simulations) and model-data comparisons
    - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, Fully-coupled Pliocene simulation using HadGEM3 as part of CMIP6/PMIP4/DeepMIP: Experimental design, model-model and model-data comparisons
    - **Submitted** = *No*
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    - **Details** = The aim of this paper was to conduct the fully coupled Pliocene simulation using HadGEM3, presenting both the experimental design and results based on model-model comparisons (e.g. with other Eocene simulations) and model-data comparisons.
    - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

Chapter 3: Human influence on the climate system

Number of selected references: **1**

- Gabriel Silvestri (*), Ana Laura Berman and Marcela Tonello, Modern anthropogenic warming in the context of past climate changes in southern South America

- **Submitted** = *No*
- **Keywords** = *Last Glacial Maximum, Holocene, 21st century*
- **Details** = This study describes the time evolution of near-surface air temperature in southern South America from the Last Glacial Maximum to the end of the 21st century based on PMIP3-CMIP5 model simulations. The study shows temperature changes throughout time and model simulations allow comparisons between climate changes occurred in the past with those projected for the future.
- **Why** = Model simulations suggest that the regional warming in response to anthropogenic forcings from 1850 to the end of the 21st century will be almost similar or even higher than the increment of temperature occurred between LGM and pre-Industrial times.

Chapter 4: Future global climate: scenario-based projections and near-term information

Number of selected references: **3**

- Kira Rehfeld*, Chris Brierley, Raphael Hebert, Juan Lora, Marcus Lovferstrom, Variability of surface climate in PMIP3-PMIP4 simulations for past and future climate
    - **Submitted** = *No*
    - **Keywords** = *interannual variability*
    - **Details** = n/a
    - **Why** = It looks at interannual variability in surface temperature and precipitation across both past and future simulations. It compares these response to existing compilations from palaeoclimate reconstructions. It also contains scatterplots of modes of climate variability (e.g. ENSO, IOD) to global temperature changes, and scaling diagnostics.

- Cao, Jian; Wang, Bin; Ma, Libin, Attribution of Global Monsoon Response to the Last Glacial Maximum Forcings
    - **Submitted** = *Yes*
    - **Keywords** = *LGM. global monsoon*
    - **Details** = The impact of LGM forcings to global monsoon precipitation changes over global or hemispheric scale.
    - **Why** = n/a

- Gabriel Silvestri (*), Ana Laura Berman and Marcela Tonello, Modern anthropogenic warming in the context of past climate changes in southern South America
    - **Submitted** = *No*
    - **Keywords** = *Last Glacial Maximum, Holocene, 21st century*
    - **Details** = This study describes the time evolution of near-surface air temperature in southern South America from the Last Glacial Maximum to the end of the 21st century based on PMIP3-CMIP5 model simulations. The study shows temperature changes throughout time and model simulations allow comparisons between climate changes occurred in the past with those projected for the future.
    - **Why** = Model simulations suggest that the regional warming in response to anthropogenic forcings from 1850 to the end of the 21st century will be almost similar or even higher than the increment of temperature occurred between LGM and pre-Industrial times.

Chapter 5: Global carbon and other biogeochemical cycles and feedbacks

Number of selected references: **1**

- Fabrice Lambert(*), N. Opazo, A. Ridgwell, G. Winckler, F. Lamy, G. Shaffer, K. Kohfeld, R. Ohgaito, S. Albani, A. Abe-Ouchi , Spatial and Temporal Distribution of Ocean Iron Fertilization and CO2 drawdown during the Last Glacial Termination
    - **Submitted** = *No*
    - **Keywords** = *iron fertilization co2*
    - **Details** = Regional quantification of CO2 drawdown through iron fertilization in individual HNLC regions
    - **Why** = Gives an idea of the amount of CO2 that could be removed from the atmosphere through increased dust emissions in East Asia

Chapter 6: Short-Lived Climate Forcers

Number of selected references: **1**

- Fabrice Lambert(*), N. Opazo, A. Ridgwell, G. Winckler, F. Lamy, G. Shaffer, K. Kohfeld, R. Ohgaito, S. Albani, A. Abe-Ouchi , Spatial and Temporal Distribution of Ocean Iron Fertilization and CO2 drawdown during the Last Glacial Termination
    - **Submitted** = *No*
    - **Keywords** = *iron fertilization co2*
    - **Details** = Regional quantification of CO2 drawdown through iron fertilization in individual HNLC regions
    - **Why** = Gives an idea of the amount of CO2 that could be removed from the atmosphere through increased dust emissions in East Asia

Chapter 7: The Earth's Energy Budget, Climate Feedbacks, and Climate Sensitivity

Number of selected references: **4**

- Charles J.R. Williams*, Maria V. Guarino, Joy S. Singarayer, Louise Sime, Emilie Capron, Daniel Lunt, The UK contribution to paleoclimate modelling for CMIP6/PMIP4: The mid-Holocene and the Last Interglacial experiments, two "orbital forcing" simulations, and comparison to the preindustrial era and proxy data
    - **Submitted** = *No*
    - **Keywords** = *Paleaoclimate modelling, midHolocene, last interglacial, preindustrial, model-data comparisons*
    - **Details** = The aim of this paper is to compare the MH and LIG HadGEM3 simulations, both with the corresponding PI control, previous CMIP5 simulations and available proxy data, to assess whether the latest version of the UKMO GCM is reproducing these periods better than previous generations.
    - **Why** = The paper has direct relevance to various chapters/sections within AR6, including

Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, CMIP6/PMIP4/DeepMIP: Atmosphere-only early Eocene simulations with HadGEM3
    - **Submitted** = *No*
    - **Keywords** = *Paleoclimate modelling, early Eocene, atmosphere only*
    - **Details** = The aim of this paper was to carry out a number of sensitivity experiments during the early Eocene using HadGEM3, to test the climate sensitivity (and particular hydro-climate e.g. changing precipitation patterns) to varying CO_2 levels as well as a modified land sea mask and pole-equator SST changes
    - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks)

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, Alex Farnsworth, Fully-coupled early Eocene simulation using HadGEM3 as part of CMIP6/PMIP4/DeepMIP: Experimental design, model-model and model-data comparisons
    - **Submitted** = *No*
    - **Keywords** = *Paleoclimate modelling, early Eocene, experimental design, model-data comparisons*
    - **Details** = The aim of this paper was to conduct the fully coupled early Eocene simulation using HadGEM3, presenting both the experimental design and results based on model-model comparisons (e.g. with other Eocene simulations) and model-data comparisons
    - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, Fully-coupled Pliocene simulation using HadGEM3 as part of CMIP6/PMIP4/DeepMIP: Experimental design, model-model and model-data comparisons
    - **Submitted** = *No*
    - **Keywords** = *Paleoclimate modelling, Pliocene, experimental design, model-data comparisons*
    - **Details** = The aim of this paper was to conduct the fully coupled Pliocene simulation using HadGEM3, presenting both the experimental design and results based on model-model comparisons (e.g. with other Eocene simulations) and model-data comparisons.
    - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

Chapter 8: Water Cycle Changes

Number of selected references: **6**

- Cao, Jian; Wang, Bin; Liu,Jian, Attribution of the Last Glacial Maximum climate formation
    - **Submitted** = *Yes*
    - **Keywords** = *LGM, single forcing experiment*
    - **Details** = n/a
    - **Why** = Attributed the contribution of each external forcing in the LGM temperature and precipitation change

- Roberta D'Agostino (*), Josephine Brown, Johann Jungclaus, Aurel Moise, Hanh Nguyen, Pedro S. Dias., Southern Hemisphere monsoon response to midHolocene and rcp8.5 forcing: difference and analogies in hydrological cycle changes.
    - **Submitted** = *No*
    - **Keywords** = *Monsoons midHolocene rcp8.5 PMIP3 CMIP5 past2future*
    - **Details** = n/a
    - **Why** = This paper highlights difference and analogies on moisture budget components response (e.g. thermodynamics vs dynamics) in monsoon regions under orbital and greenhouse gas forcing.

- Roberta D'Agostino (*), Piero Lionello, Mediterranean hydrological cycle changes from LGM to rcp8.5
    - **Submitted** = *No*
    - **Keywords** = *Mediterranean, hydrological cycle, moisture budget, Last Glacial Maximum, rcp8.5, PMIP3, CMIP5*
    - **Details** = n/a
    - **Why** = This study analyses the hydrological cycle changes in the Mediterranean region in two climate scenarios: the LGM and rcp8.5. Moisture budget components (Thermodynamic, dynamic and transient eddies) changes are analysed in order to get robust response of precipitation - evaporation as function of the temperature.

- Charles J.R. Williams*, Maria V. Guarino, Joy S. Singarayer, Louise Sime, Emilie Capron, Daniel Lunt, The UK contribution to paleoclimate modelling for CMIP6/PMIP4: The mid-Holocene and the Last Interglacial experiments, two "orbital forcing" simulations, and comparison to the preindustrial era and proxy data
    - **Submitted** = *No*
    - **Keywords** = *Paleaoclimate modelling, midHolocene, last interglacial, preindustrial, model-data comparisons*
    - **Details** = The aim of this paper is to compare the MH and LIG HadGEM3 simulations, both with the corresponding PI control, previous CMIP5 simulations and available proxy data, to assess whether the latest version of the UKMO GCM is reproducing these periods better than previous generations.
    - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, Alex Farnsworth, Fully-coupled early Eocene simulation using HadGEM3 as part of CMIP6/PMIP4/DeepMIP: Experimental design, model-model and model-data comparisons
    - **Submitted** = *No*
    - **Keywords** = *Paleoclimate modelling, early Eocene, experimental design, model-data comparisons*

- **Details** = The aim of this paper was to conduct the fully coupled early Eocene simulation using HadGEM3, presenting both the experimental design and results based on model-model comparisons (e.g. with other Eocene simulations) and model-data comparisons
- **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, Fully-coupled Pliocene simulation using HadGEM3 as part of CMIP6/PMIP4/DeepMIP: Experimental design, model-model and model-data comparisons
    - **Submitted** = *No*
    - **Keywords** = *Paleoclimate modelling, Pliocene, experimental design, model-data comparisons*
    - **Details** = The aim of this paper was to conduct the fully coupled Pliocene simulation using HadGEM3, presenting both the experimental design and results based on model-model comparisons (e.g. with other Eocene simulations) and model-data comparisons.
    - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

Chapter 9: Ocean, Cryosphere, and Sea Level Change

Number of selected references: **4**

- Quentin Dalaiden*, Hugues Goosse, François Klein, Jan T. M. Lenaerts, Max Holloway, Louise Sime, and Elizabeth R. Thomas, How is Antarctic snow accumulation useful in reconstructing surface temperature ?
    - **Submitted** = *Yes*
    - **Keywords** = *Surface temperature, snow accumulation, climate modelling, data assimilation*
    - **Details** = The initial title is "Surface Mass Balance of the Antarctic Ice Sheet and its link with surface temperature change in model simulations and reconstructions", but this will change (in review; doi: https://doi.org/10.5194/tc-2019-111).
    - **Why** = We show that snow accumulation is a more relevant proxy for Antarctic surface temperature reconstructions than delta18O. Based on a data assimilation method, our continental temperature reconstruction outperforms reconstructions based on delta18O, especially for East Antarctica.

- Charles J.R. Williams*, Maria V. Guarino, Joy S. Singarayer, Louise Sime, Emilie Capron, Daniel Lunt, The UK contribution to paleoclimate modelling for CMIP6/PMIP4: The mid-Holocene and the Last Interglacial experiments, two "orbital forcing" simulations, and comparison to the preindustrial era and proxy data
    - **Submitted** = *No*
    - **Keywords** = *Paleaoclimate modelling, midHolocene, last interglacial, preindustrial, model-data comparisons*
    - **Details** = The aim of this paper is to compare the MH and LIG HadGEM3 simulations, both

with the corresponding PI control, previous CMIP5 simulations and available proxy data, to assess whether the latest version of the UKMO GCM is reproducing these periods better than previous generations.
  - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, Alex Farnsworth, Fully-coupled early Eocene simulation using HadGEM3 as part of CMIP6/PMIP4/DeepMIP: Experimental design, model-model and model-data comparisons
  - **Submitted** = *No*
  - **Keywords** = *Paleoclimate modelling, early Eocene, experimental design, model-data comparisons*
  - **Details** = The aim of this paper was to conduct the fully coupled early Eocene simulation using HadGEM3, presenting both the experimental design and results based on model-model comparisons (e.g. with other Eocene simulations) and model-data comparisons
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- Charles JR Williams*, Dan Lunt, William Roberts, Alistair Sellars, Fully-coupled Pliocene simulation using HadGEM3 as part of CMIP6/PMIP4/DeepMIP: Experimental design, model-model and model-data comparisons
  - **Submitted** = *No*
  - **Keywords** = *Paleoclimate modelling, Pliocene, experimental design, model-data comparisons*
  - **Details** = The aim of this paper was to conduct the fully coupled Pliocene simulation using HadGEM3, presenting both the experimental design and results based on model-model comparisons (e.g. with other Eocene simulations) and model-data comparisons.
  - **Why** = The paper has direct relevance to various chapters/sections within AR6, including Chapter 1 (e.g. model/experimental design since AR5), Chapter 2 (e.g. multi-millennial context, natural/anthropogenic forcings, large-scale indicators of observed change), Chapter 7 (e.g. climate feedbacks), Chapter 8 (e.g. past changes, circulation processes and phenomena), Chapter 9 (e.g. past changes in ocean circulation).

Chapter 10: Linking Global to Regional Climate Change

Number of selected references: **3**

- Cao, Jian; Wang, Bin; Ma, Libin, Attribution of Global Monsoon Response to the Last Glacial Maximum Forcings
  - **Submitted** = *Yes*
  - **Keywords** = *LGM. global monsoon*
  - **Details** = The impact of LGM forcings to global monsoon precipitation changes over global or hemispheric scale.
  - **Why** = n/a

- Roberta D'Agostino (*), Josephine Brown, Johann Jungclaus, Aurel Moise, Hanh Nguyen, Pedro S. Dias., Southern Hemisphere monsoon response to midHolocene and rcp8.5 forcing: difference and analogies in hydrological cycle changes.
  - **Submitted** = *No*
  - **Keywords** = *Monsoons midHolocene rcp8.5 PMIP3 CMIP5 past2future*
  - **Details** = n/a
  - **Why** = This paper highlights difference and analogies on moisture budget components response (e.g. thermodynamics vs dynamics) in monsoon regions under orbital and greenhouse gas forcing.

- Roberta D'Agostino (*), Piero Lionello, Mediterranean hydrological cycle changes from LGM to rcp8.5
  - **Submitted** = *No*
  - **Keywords** = *Mediterranean, hydrological cycle, moisture budget, Last Glacial Maximum, rcp8.5, PMIP3, CMIP5*
  - **Details** = n/a
  - **Why** = This study analyses the hydrological cycle changes in the Mediterranean region in two climate scenarios: the LGM and rcp8.5. Moisture budget components (Thermodynamic, dynamic and transient eddies) changes are analysed in order to get robust response of precipitation - evaporation as function of the temperature.

Chapter 11: Weather and Climate Extreme Events in a Changing Climate

Number of selected references: **0**

Chapter 12: Climate change information for regional impacts and risk assessment

Number of selected references: **0**

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