

## ***Interactive comment on “Simulation of observed climate changes in 1850–2014 with climate model INM-CM5” by Evgeny Volodin and Andrey Gritsun***

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We thank the referee for the careful reading and important comments and we will change our paper accordingly.

1. Referee comment: Page 1: lines 23-24 'just in' should be 'in just' line 24 'Spatial' should be 'The spatial' line 25 'of model mean' should be 'of the model mean' and 'close the' should be 'close to the' line 26 'Model' should be 'The Model' line 32 'A noticeable' should be 'Noticeable' and 'Main' should be 'The main' line 34-34 'reason is anthropogenic increase of' should be 'reason is the increase of anthropogenic' Page 2: line 16 'and North' should be 'and the North' line 17 'produce significant' should be 'produce a significant' line 26 'participated' should be 'that participated' page 3: line 3

C1

' But' should be 'However' line 26 'for historical' should be 'for the historical' line 29 'so upper' should be 'so the upper' page 4: line 3 't-test' should be 'a t-test' and 'Variance' should be 'The variance' line 9 'Stratospheric' should be 'The stratospheric' Page 5: line 1 'in more' should be 'in a more' line 9 ' Model' should be 'The model' Page 6: line 15 'then' should be 'than' line 16 'the stratospheric' should be 'stratospheric' line 32 'Southern' should be 'the Southern' line 34 'In Pacific, observed' should be 'In the Pacific, the observed' and 'PDO' should be 'the PDO' line 35 'near' should be 'the near' Page 7 line 11 'that magnitude' should be 'that the magnitude' line 19 'of Solar' should be 'of the Solar' line 32 'as the observations' should be 'as in the observations' With regard to the conclusions detailed between lines 24-33 it would be reassuring to note that the percent of variance explained by the PDO and AMO is similar in the model and nature, if that is so. Page 8: line 6 'Model' should be 'The model'

Author's response: We agree with the reviewer

Author's changes in the manuscript: All proposed changes will be made in the text.

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C2