

1           **Reassess seasonal sea ice predictability of the Pacific-Arctic sector in**

2           **Markov model**

3           Yunhe Wang<sup>1,4</sup>, Xiaojun Yuan<sup>2</sup>, Haibo Bi<sup>1,3,4</sup>, Mitchell Bushuk<sup>5</sup>, Yu Liang<sup>1,6</sup>,

4           Cuihua Li<sup>2</sup>, Haijun Huang<sup>1,3,4,6</sup>

5           <sup>1</sup> CAS Key Laboratory of Marine Geology and Environment, Institute of Oceanology,  
6           Chinese Academy of Sciences, Qingdao, China.

7           <sup>2</sup> Lamont-Doherty Earth Observatory of Columbia University, New York, USA.

8           <sup>3</sup> Laboratory for Marine Geology, Qingdao National Laboratory for Marine Science  
9           and Technology, Qingdao, China.

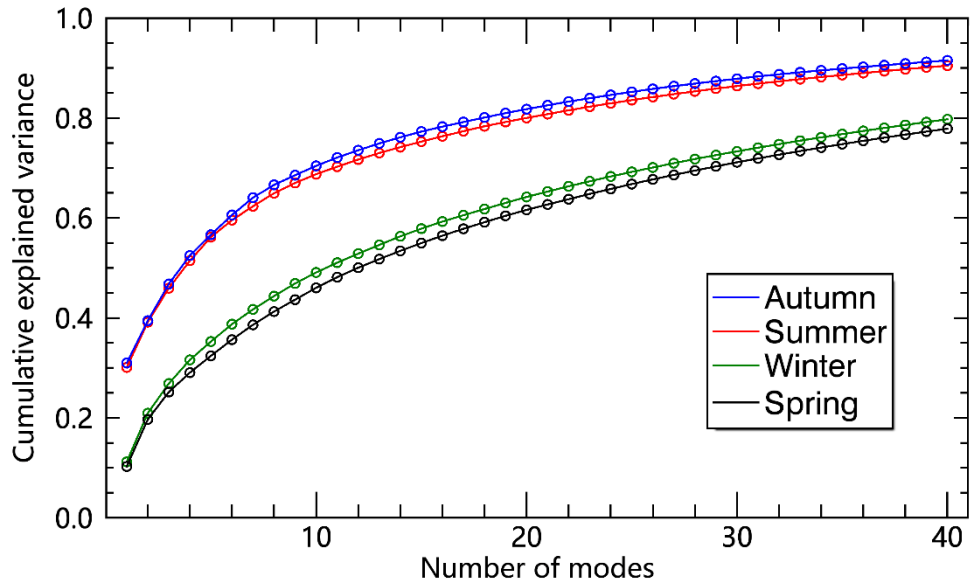
10          <sup>4</sup> Center for Ocean Mega-Science, Chinese Academy of Sciences, Qingdao, China.

11          <sup>5</sup> National Oceanic and Atmospheric Administration/Geophysical Fluid Dynamics  
12          Laboratory, Princeton, New Jersey, USA

13          <sup>6</sup> University of Chinese Academy of Sciences, Beijing, China

14          Corresponding author: Xiaojun Yuan (xyuan@ldeo.columbia.edu)

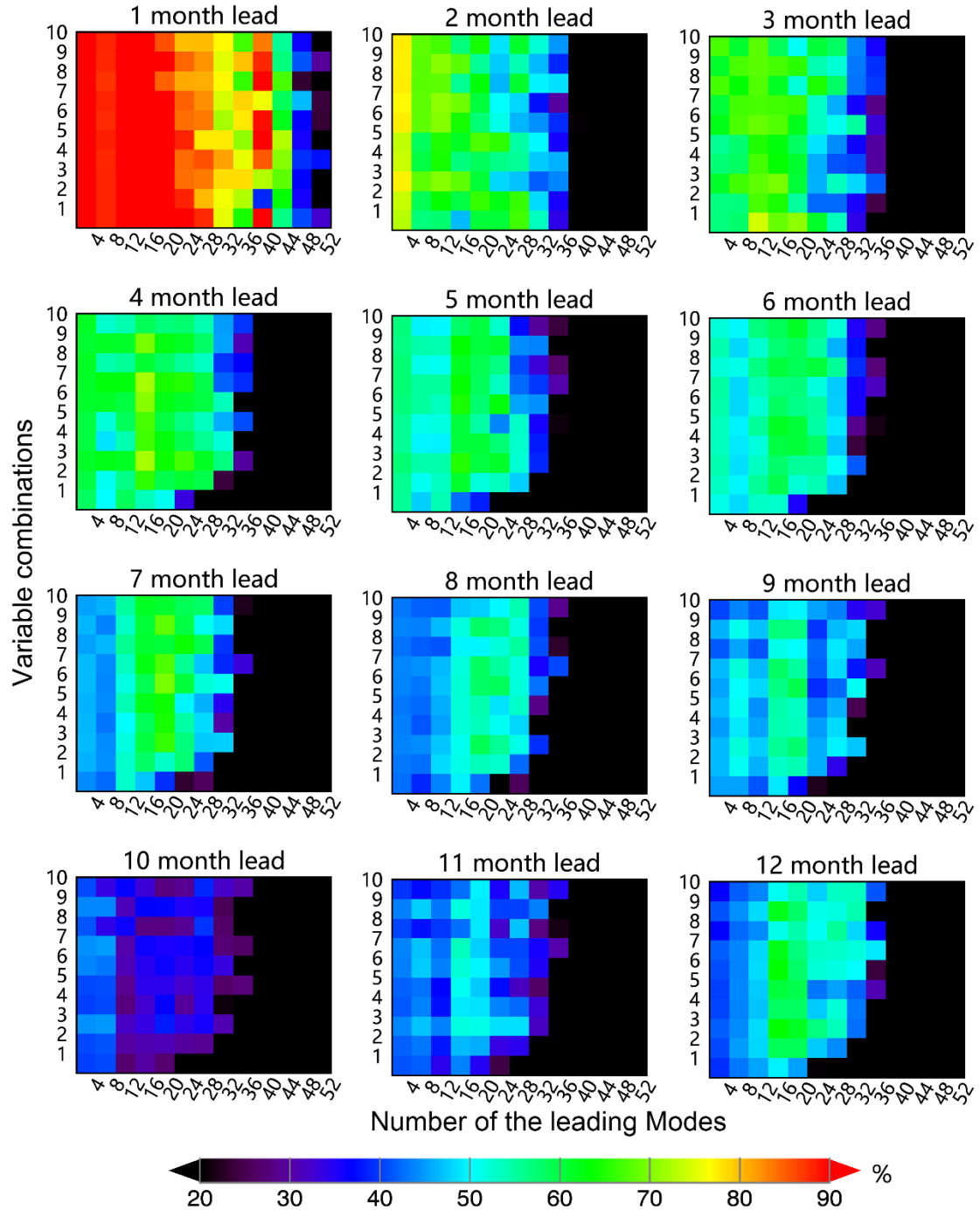
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17 **Figure S1.** The cumulative explained variance as a function of the number of  
18 leading EOF modes of seasonal SIC for the period of 1979-2020.

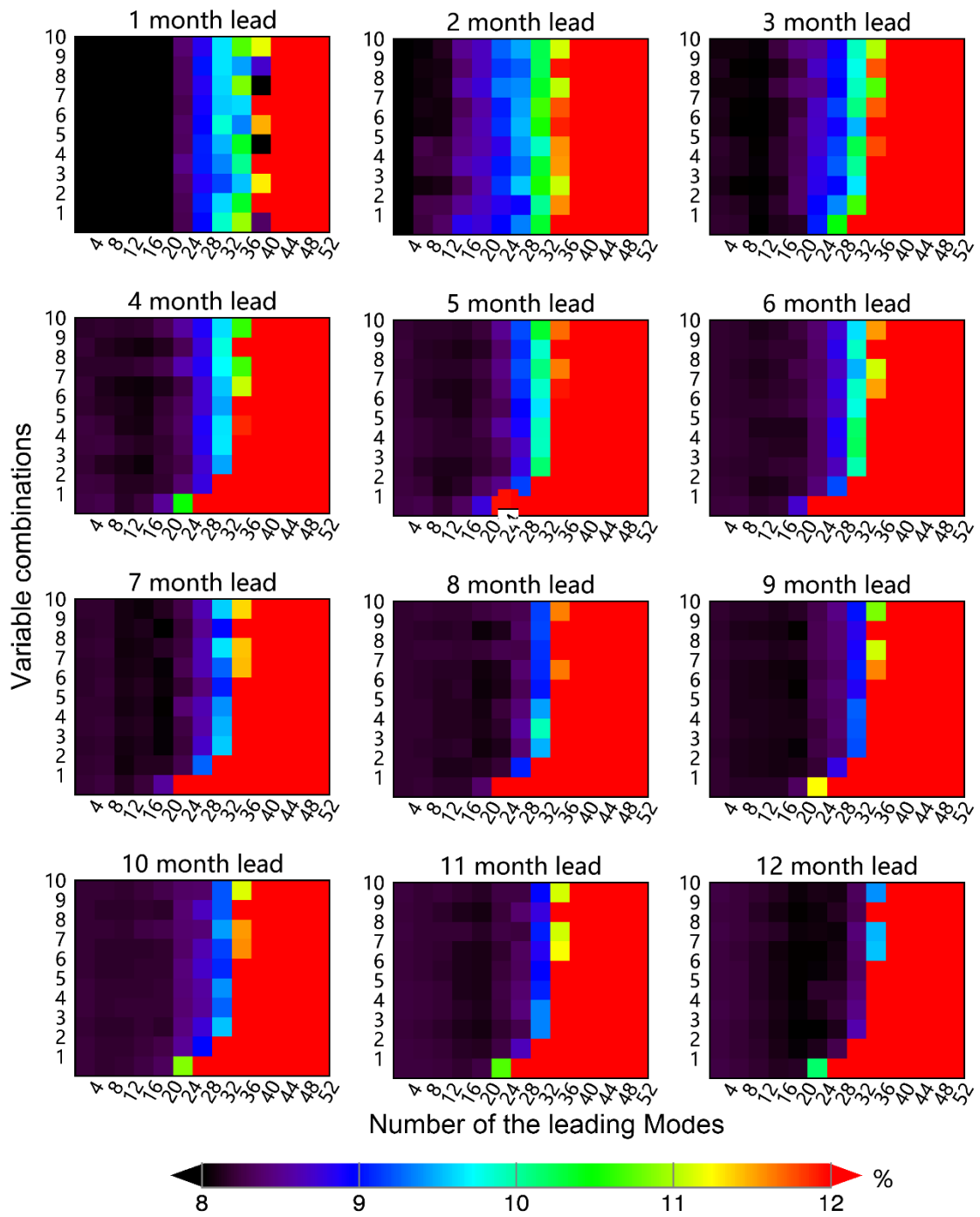
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21 **Figure S2.** PGS is based on the anomaly correlation between the observed and  
 22 predicted SICs in winter as a function of variables and MEOF modes for 1- to 12-  
 23 month lead. The x-axis represents the number of MEOF modes, and the y-axis  
 24 represents the combination of the variables corresponding to table 1.

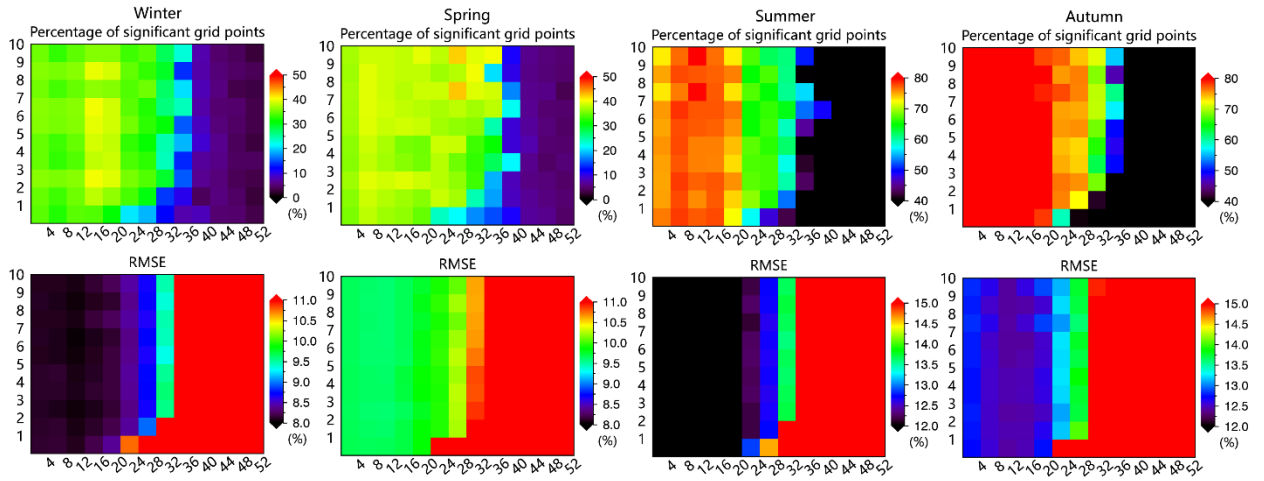
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27 **Figure S3.** Same as Figure 1 except for RMSE.

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30 **Figure S4.** Mean PGS and mean RMSE between the observations and predictions.

31 The first column panels show the winter model skills obtained by averaging all lead  
 32 months in Figure S2 and Figure S3 respectively. The 2<sup>nd</sup>-4<sup>th</sup> column panels are the  
 33 same as the first column but for spring, summer, and autumn respectively. The  
 34 interval between modes is 4.