



*Supplement of*

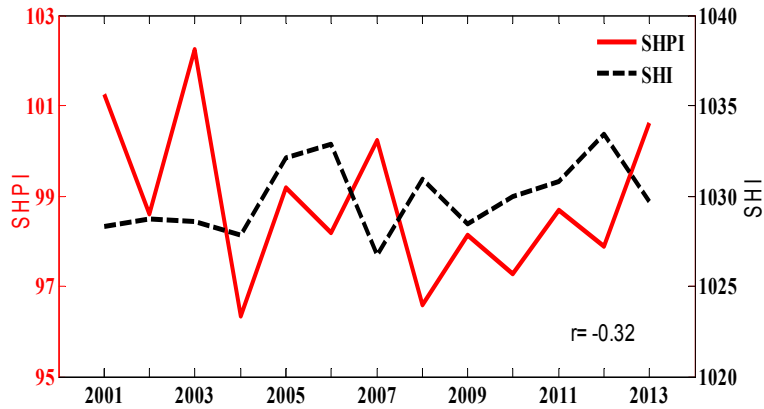
## **A new indicator on the impact of large-scale circulation on wintertime particulate matter pollution over China**

**B. Jia et al.**

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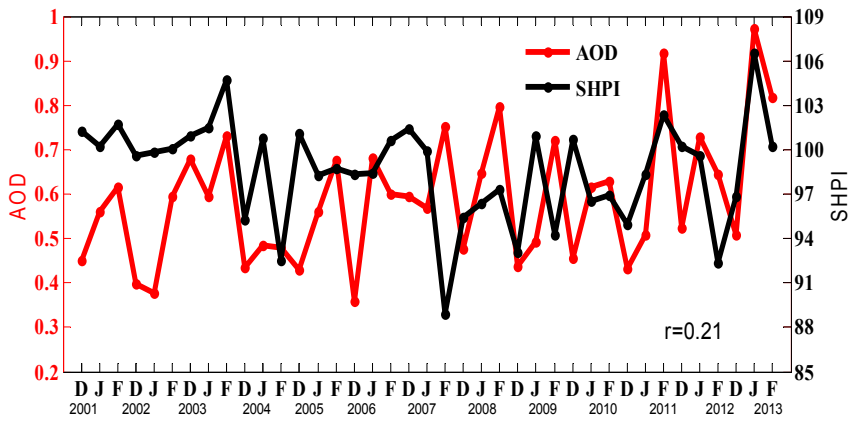
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1 **Supplementary**



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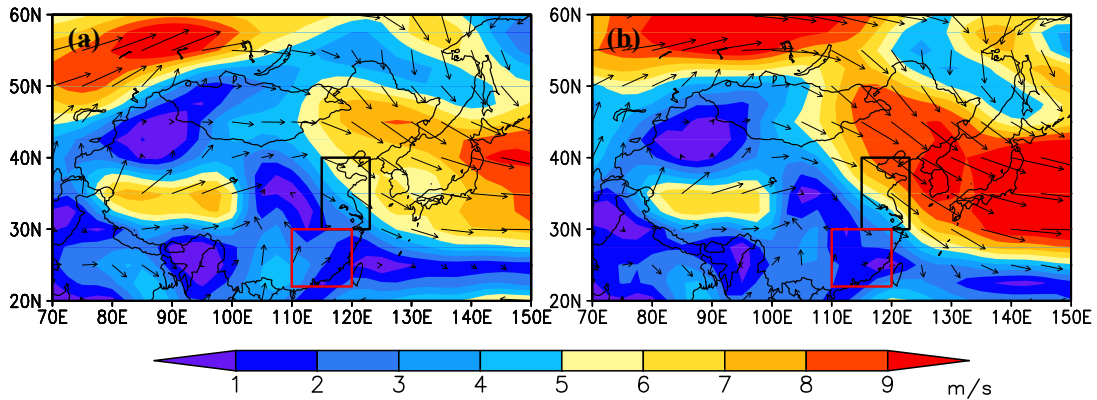
3 Figure S1. Time series of SHPI and SHI from 2001 to 2013.



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5 Figure S2. Time series of NC AOD and SHPI for winter months from December 2001  
6 to February 2013. The data are raw time series prior to detrending and normalization.

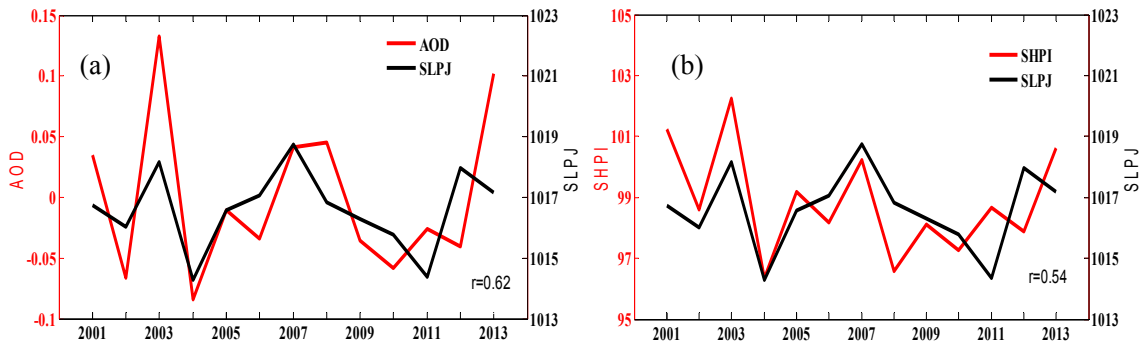
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9 Figure S3. Spatial distribution of wintertime 850hPa wind field (vector), and wind

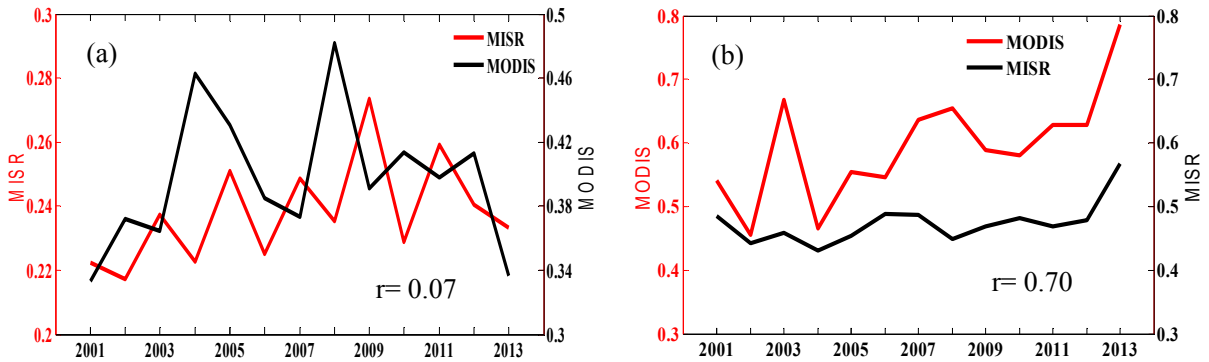
10 speed (shaded) in (a) 1990 and (b) 2004.



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12 Figure S4. Time series of SLP over Japan (SLPJ) with (a) detrended NC AOD and (b)

13 SHPI from 2001 to 2013.

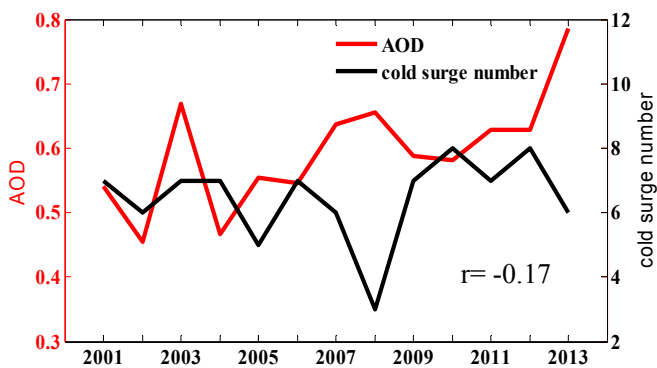


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15 Figure S5. Time series of MISR AOD and MODIS AOD during 2001-2013 over (a)

16 South China and (b) North China.

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19 Figure S6. Time series of MODIS AOD over NC and cold air surge number from

20 2001 to 2013.