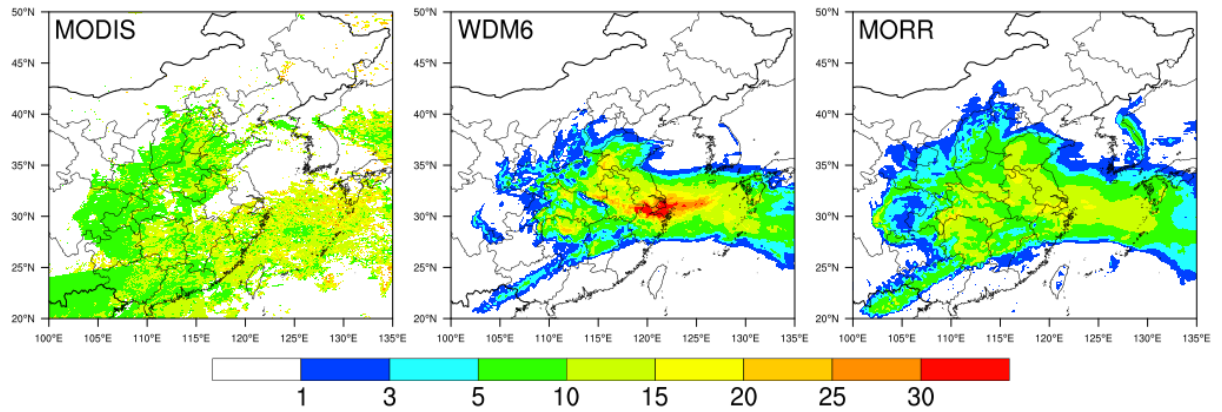
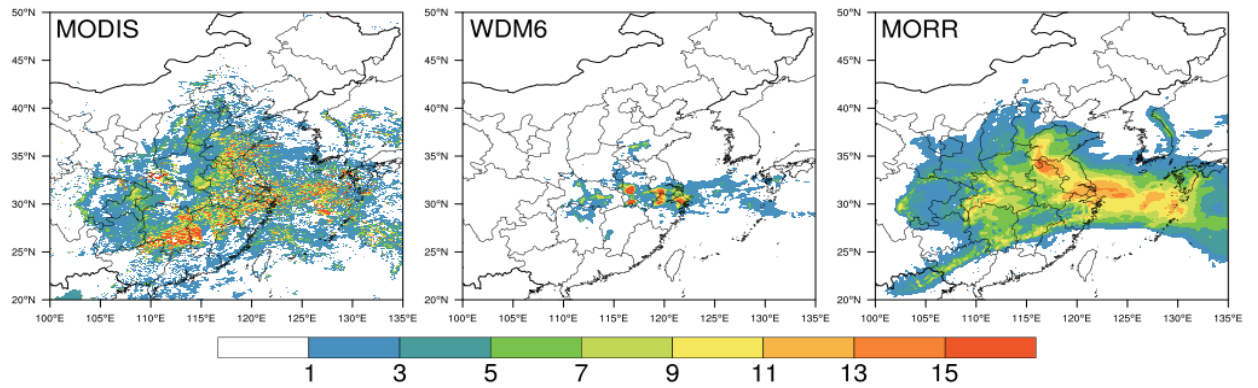


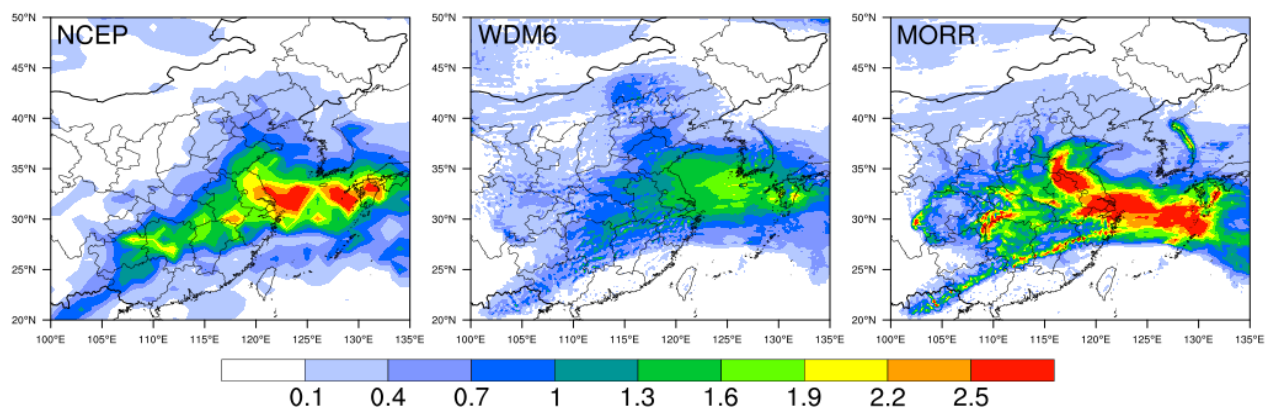
## Supplementary Materials:



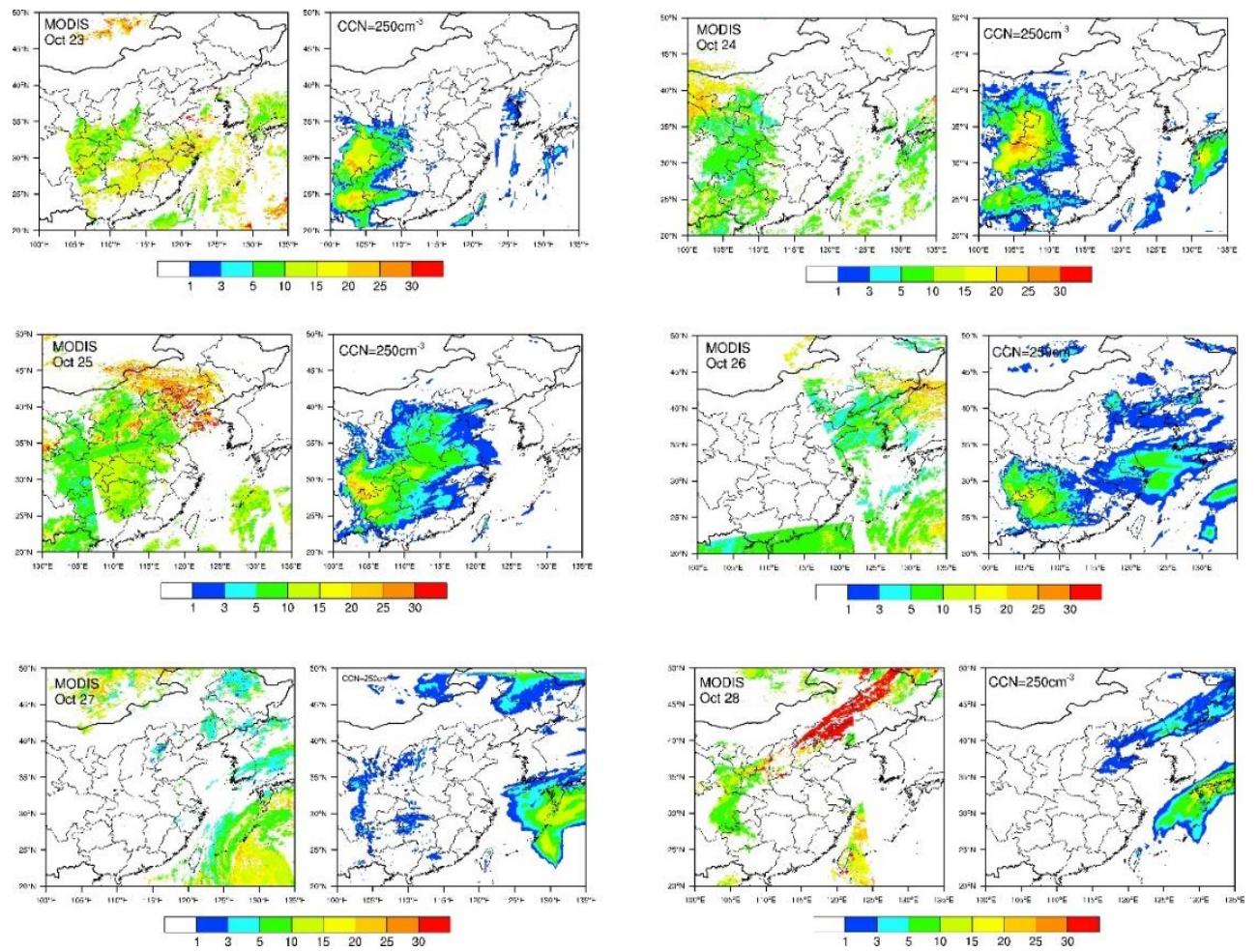
**Figure S1.** Averaged  $R_c$  ( $\mu\text{m}$ ) from 5 to 7 January 2017 (Left: MODIS data; Mid: WDM6 Scheme; Right: Morrison Scheme).



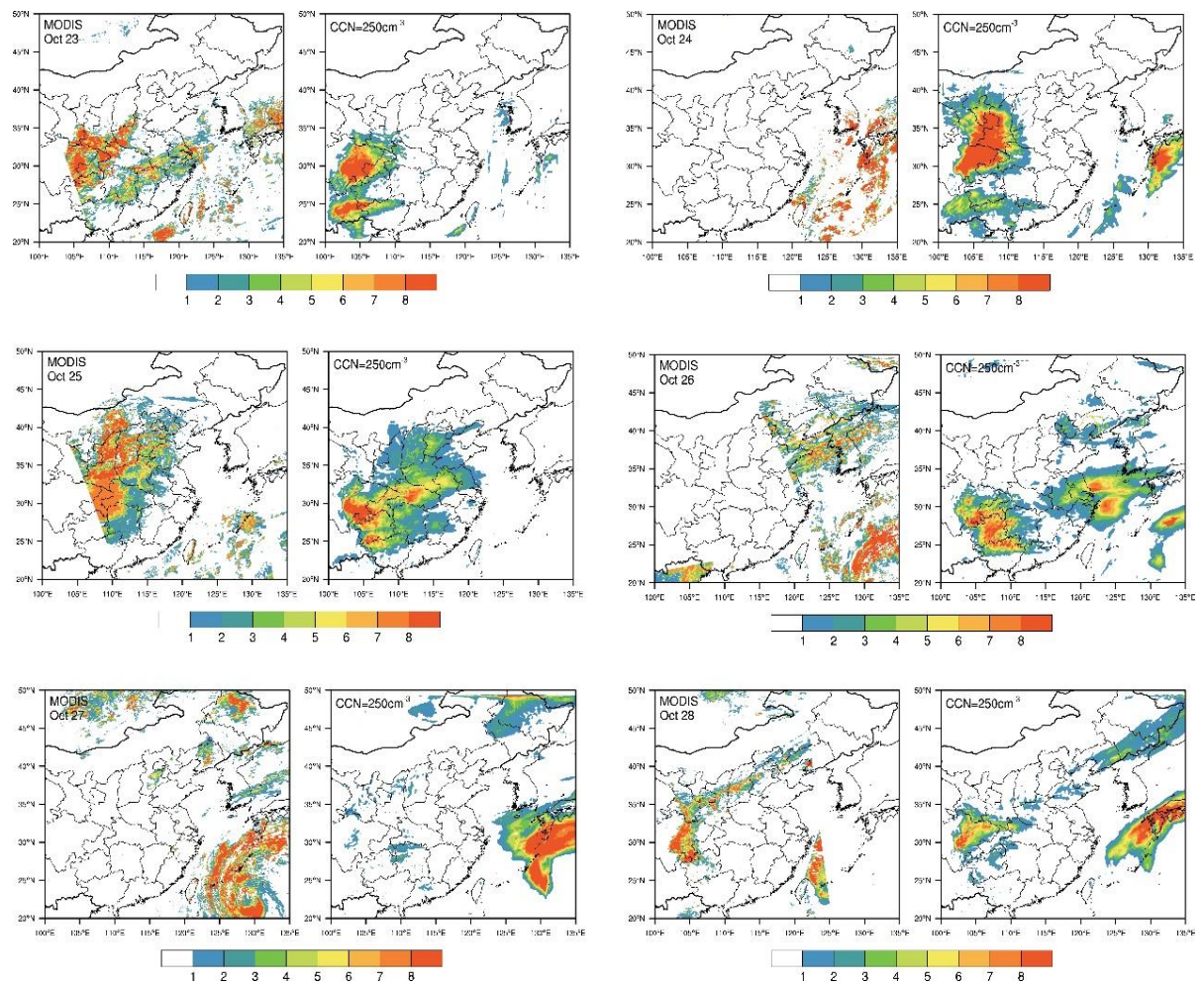
**Figure S2.** Averaged COD from 5 to 7 January 2017 (Left: MODIS data; Mid: WDM6 Scheme; Right: Morrison Scheme)



**Figure S3.** Averaged CLWP ( $\text{g m}^{-2}$ ) from 5 to 7 January 2017 (Left: NCEP data; Mid: WDM6 Scheme; Right: Morrison Scheme)

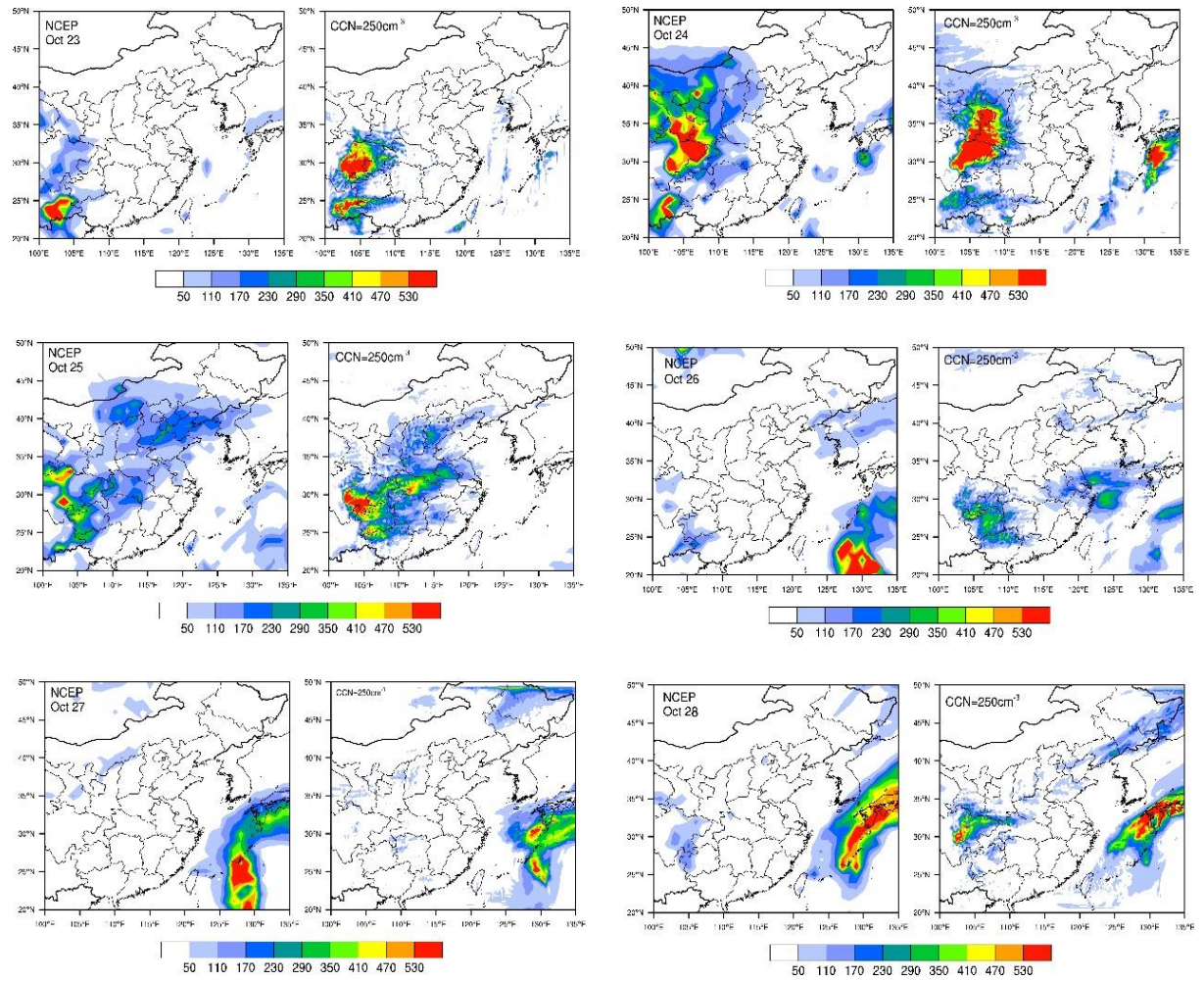


**Figure S4.** Comparison between MODIS and CCN=250cm<sup>-3</sup> Rc from 23 to 28 October 2017



**Figure S5.** Comparison between MODIS and CCN=250cm<sup>-3</sup> COD from 23 to 28 October 2017





**Figure S6.** Comparison between NCEP and CCN=250cm<sup>-3</sup> CLWP from 23 to 28 October 2017

**Table S1.** Comparison of observed and average Rc, COD and CLWP with CCN values of 250cm<sup>-3</sup> simulated by Morrison and WDM6 scheme from 5 to 7 January 2017

	Morrison		WDM6	
	CORR	RMSE	CORR	RMSE
Rc (μm)	0.55	8.6	0.31	-12.2
COD	0.59	-3.3	0.15	10.7
CLWP (kg/m <sup>2</sup> )	0.52	-0.8	0.24	1.9