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Dependence of columnar aerosol size distribution, optical properties, and chemical components on regional transport in Beijing

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## ACCEPTED MANUSCRIPT

1	Dependence of columnar aerosol size
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22	Highlights
23	1) The combination of the variation of columnar aerosol physical and chemical
24	properties with regional transport process was report for the first time.
25	2) Seasonal columnar aerosol properties of different clusters were qualitatively and
26	quantitatively retrieved.
27	3) Concentration of BC showed weakly dependent on long range transport in the
28	autumn and winter, while BrC showed weakly dependent on different clusters
29	during spring and summer.

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