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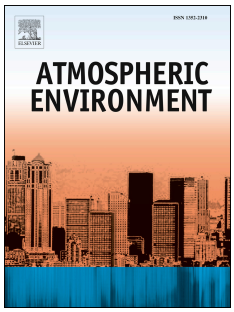

OMI-measured SO_2 in a large-scale national energy industrial base and its effect on the capital city of Xinjiang, Northwest China

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OMI-measured SO_2 in a large-scale national energy industrial base and its effect on the capital city of Xinjiang, Northwest China

Jinxiang Wang [a], Jingyue Mo [b], Jixiang Li [b], Zaili Ling [a], Tao Huang [a], Yuan Zhao [a], Xiaodong Zhang [a], Xiaoxuan Mao [a], Hong Gao [a], Yanjie Shen [e], Jianmin Ma [a, c, d,*]

[a] Key Laboratory for Environmental Pollution Prediction and Control, Gansu Province, College of Earth and Environmental Sciences, Lanzhou University, Lanzhou 730000, China
[b] College of Atmospheric Sciences, Lanzhou University, Lanzhou 730000, China
[c] Laboratory for Earth Surface Processes, College of Urban and Environmental Sciences, Peking University, Beijing, 100871, China
[d] CAS Center for Excellence in Tibetan Plateau Earth Sciences, Chinese Academy of Sciences, Beijing 100101, China
[e] Hydrology Bureau, Yellow River Conservancy Commission of the Ministry of Water Resources, Sanmenxia 472000, China

HIGHLIGHTS

- OMI columnar SO_2 were used to assess the air quality in an energy industrial base.
- SO_2 emissions from energy industrial base are much higher than nearby Urumqi city.
- The energy industrial base markedly contributed to SO_2 contamination in Urumqi city.
- Higher emission from energy industrial base offsets city's emission control efforts.

ABSTRACT

Although considerable efforts have been made to improve air quality in Urumqi, the capital of Xinjiang-Uyghur Autonomous Region in northwestern China and one of the ten cities with worst air quality in China, this city is still experiencing heavy air pollution during the wintertime. The satellite remote sensing of air quality using Ozone Monitoring Instrument (OMI) measured data discerned an increasing trend of the planetary boundary layer (PBL) columns of sulfur dioxide (SO_2) in Midong national petrochemical and coal chemical industry base from 2005 to 2016, located in the northeast of Urumqi. The increasing trend of OMI columnar SO_2 in this area is in contrast to the widespread decreases of SO_2 emissions in eastern and southern China.