Particulate Matter Concentration Analysis over Europe and China

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PM2.5 is particulate matter (PM) with diameter less than 2.5 micrometers, which is a significant indicator for air quality. Both ground based measurement and satellite-derived PM concentration can provide valuable information to policy-maker, scientist and citizen. van Donkelaar et al. (2006) developed the first approach which provides a potential of obtaining global PM2.5 concentration. And the main idea of Van Donkelaar et al. (2006) follows a simple and efficient way for converting AOD to PM concentration by a converting-factor calculated from chemical transport model named GEOS-Chem.

In this study, the temporal and spatial characteristics PM concentration over Europe and East China will be analyzed utilizing both ground-based measurements and satellite-derived results. Some extreme atmospheric cases like Beijing haze in 2013 will also be included and analyzed.