

## **1.153 Recent trend of atmospheric emissions due to open crop residue burning in the central east China .**

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Abstract:

Serious open crop residue burning (OCRB) is held after harvest in the granary areas, and that has been well known as significant sources of atmospheric pollutants including primary aerosols and precursors of photo-oxidants and secondary organic aerosols. The atmospheric pollutants emitted from OCRB not only stagnate in the source areas but are transported downwind, therefore OCRB might largely affect on wider regional atmospheric environment and climate. The activities of OCRB over the central east China are highest in June, which associate with the harvest season of winter wheat. The next highest month is October after the corn harvest season. The annual amounts of both grain productions in China slightly increased until 2013, and then the production amounts had remained almost unchanged. The long-term record of the fire detection counts (FDCs) have been obtained from Moderate Resolution Imaging Spectroradiometer (MODIS), which can be connected with OCRB over the cropland especially. The monthly-accumulated FDCs in June over the central China indicated a significant increase during the period of 2007-2012, though accompanied by a large variability. Thereafter the FDCs from MODIS indicated a decreasing trend after 2012 and the FDCs in June 2016 reached approximately 17% of those in June 2012. The decreasing trend on the FDCs from MODIS may connect with the reinforced OCRB regulation employed by both central and local governments of China. We will also report recent trend of atmospheric emissions due to OCRB in the central east China coupling with fire counts detected from satellite.