SATELLITE REMOTE SENSING ATMOSPHERIC COMPOSITIONS AND THEIR APPLICATION IN AIR QUALITY MONITORING IN CHINA

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This paper summarizes the achievements related to atmospheric compositions remote sensing from the bilateral cooperation under the framework of MOST-ESA Dragon Programme. The algorithms to retrieve Aerosol, ozone amount and profile, NO2, SO2, CH4, CO2, etc. have been developed since 2004. Such algorithms are used to process FY-3 series (Chinese second generation polar orbit satellites) observation and ground based FTIR observation. The results are validated with in-situ measurements. Aerosol, total ozone amount shows the very good consistent with the ground measurements. The temporal and spatial characteristics of the important atmospheric compositions, such as aerosol, O3, NO2, SO2, CH4, CO etc., have been analysed from satellite derived products. These works demonstrate the satellite¡¯s capacity on atmospheric composition monitoring, as well as the possible application in the air quality monitoring and climate change research.