

O4-08 AIR POLLUTION MONITORING BY USING DOAS

TECHNIQUE

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Air pollution in cities has become one of the most serious environmental problems in China. For improvement of air quality and air pollution monitoring in Beijing, three categories of DOAS were developed recently in Institute of Atmospheric Physics, CAS. That are: Open-path slant and horizontal paths DOAS by using the sun as a radiation source, single end DOAS with infrared He-Ne, CO and CO₂ lasers as radiation sources, multi-path DOAS with tungsten and deuterium lamps as a continuum radiation source. By using the developed DOAS techniques, monitoring of some trace pollution gases such as CO, NO_x, O₃, CH₄ C₂H₄ etc. were conducted in the near surface atmosphere in Beijing. Technical specifications, proper selection of the used wavelengths, advantage and shortage of different DOAS systems, some monitoring results and error analysis are presented and discussed in the paper.