



Vertical NO₂ Profile measurements in Hong Kong using DOAS

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In this presentation we describe our first measurements of vertical NO₂ distributions in a street canyon in Hong Kong using different DOAS techniques. One approach is to use mobile cavity-enhanced DOAS (CE-DOAS) measurements on different floors of a high rise building to assemble a profile. In addition to this we use a ToTaL-DOAS (Topographic Target Light Scattering DOAS) approach to measure vertical and horizontal distributions of NO₂ SCDs of the Hong Kong skyline including the building we used for the CE-DOAS measurements. As a third option to generate profile information, we use data from the Hong Kong Environmental Protection department (EPD) measurement stations. Each measurement location is at a different height and we used a concentration map we assembled using mobile CE-DOAS measurements which again had been corrected for diurnal variations using a continuously measuring LP-DOAS for horizontal extrapolation. We compare parameterized profiles from those three different methods and discuss how profile information can be used to make urban air quality monitoring more comparable.