



Chemical composition of PM10 and PM2.5 observed at the Cape Fuguei, Taiwan during the period of EMeRGe-Asia

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The Cape Fuguei locates at the northern tip of Taiwan Island, which is in the downwind area of the East-Asian winter monsoons and thereby receives air pollutants transported with the East-Asian continental outflows. During the field campaign period of EMeRGe-Asia (12 March – 11 April 2018), aerosol samples were collected at the Cape Fuguei Research Station (CAFÉ) of the Academia Sinica on daily base. The samples were off-line analyzed in the lab of RCEC, Academia Sinica and 24-hr averages for mass concentrations of PM10 and PM2.5, respectively, as well as the corresponding chemical compositions were reported. In addition, the chemical composition of PM2.5 was also measured using an Aerodyne m-AMS instrument located at the research station, which has provided a highly time-resolved aerosol dataset. The aerosol measurements were further analyzed together with the data of trace gas mixing ratios (CO, SO₂, NO_x, O₃) and the meteorological parameters to investigate the variations in the background air quality for Taiwan. Moreover, the ground-based time-series measurements will compensate the lost continuity in the air-borne measurements on the HALO and contribute to a more complete picture of the characteristics of aerosols transported on the Asian outflows. This presentation will provide a quick look upon the preliminary results of this study.