



NO₂ flux evaluation using laser induced fluorescence measurements and eddy covariance technique, in the Borneo forest during OP3 campaign

Cesare Dari Salisburgo (1), Piero Di Carlo (1,2), E. Aruffo (1), Ben Langford (3), James Dorsey (4), and F. Giammaria (2)

(1) Centro di Eccellenza CETEMPS Università degli Studi di L'Aquila, via vetoio 67010 Coppito, L'Aquila, (2) Dipartimento di Fisica, Università degli Studi di L'Aquila, via vetoio 670101 Coppito L'Aquila, (3) Environmental Science Department, Lancaster University, Lancaster, (4) Centre for Atmospheric Science University of Manchester, Oxford Road, Manchester

Emissions (both anthropogenic and biogenic) are extremely important to reduce the uncertainty of most models used to predict the atmospheric chemical species evolution. Measurements of emission of compounds such as nitrogen dioxide (NO₂) are very rare because they require measures with high sensitivity and frequencies (above 5 Hz). Direct measurements of NO₂ using laser-induced fluorescence (at 10Hz) combined with those of three components of wind are used to quantify directly the NO₂ flux applying the eddy covariance technique. In this presentation will be described the technique of measurements and results of the observations made in the forests of Borneo (Malaysia) during the OP3 campaign in summer 2008.