Stratospheric NO2 over Indonesia: Annual variation and perspective from latitudinal variation

Makoto Koike [1], Yutaka Kondo [2], Yongjing Zhao [3]

[1] STEL, Nagoya Univ., [2] STEL, Nagoya Univ, [3] STE Lab., Nagoya Univ.

Measurements of the column amount of NO2 have been made using a visible spectrometer based on the twilight zenith-sky technique near the equator, Ciater Observatory, Indonesia (6.7S, 107.7E), since August 1994. The annual average of the slant column amount at a SZA of 90 degrees was 3.5 and 6.0e16 cm-2, at sunrise (AM) and sunset (PM), respectively. The amplitude of the annual variation was 20 % in which the maximum and minimum values appeared in November to January and May to July, respectively. The annual average and the amplitude of the annual variation were systematically smaller as compared to those at northern midlatitudes and the Antarctica.