

## Ozone column density variation over Sri Lanka

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Ozone depletion is a global issue and not just a problem limited to the countries in the polar region. The ozone column density is measured in many countries all over the world to understand the amount of harmful UV<sub>B</sub> radiation reaching to the earth surface and to study the recovery rate of depleted ozone layer since implementation of the Montreal Protocol in 1989.

This paper describes an attempt made to study the ozone columnar density in various locations in Sri Lanka. To the best of our knowledge this is the first time such a ground base study has been carried out in Sri Lanka. Measurements were conducted in six places -Colombo, Galle, Hambanthota, Monaragala, Diyatalawa and Kandy during the period November 2002 to May 2003. Microtops II 5-channel Ozone Monitor & Sun photometer tested and calibrated using Dobson Spectrometer was used for this measurement. The instrument measures direct solar radiation at 300 nm, 305.5 nm and 312.5 nm windows and calculate the ozone column density in Dobson Units. Hourly ozone column density data between 8.00 a.m.- 5.00 p.m. were obtained and downloaded to a computer coupling to the instrument. Accurate location parameters needed for ozone calculation, were obtained using a GPS instrument. Data were analyzed using Minrtab Statistical package to obtain diurnal variation and monthly variation of ozone columnar density.

The highest ozone density was observed at the noon and the results tally with those of international measurements. The average ozone columnar density value obtained for those seven month period was (283 ±20) DU with maximum value record 385 DU and minimum 215 DU. The monthly averaged ozone columnar density value during the above period was found to be highest in April and lowest in February. Research is being continued to investigate long period variations.