



Ozone layer study over Kyiv by Dobson spectrophotometer

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For the first time in Ukraine the Dobson spectrophotometer observations of total ozone content (TOC) in Kyiv have been started in May, 2010. Joint team of scientists from the Space Physics Laboratory of Kyiv National Taras Shevchenko University (KNU) and from Laboratory for Atmosphere Optics of Main Astronomical Observatory of NAS of Ukraine is provided TOC measurements in new site registered in WOUDC as Kyiv-Goloseyev STN498 and with GAWID 'KGV' in the GAWSIS. Finally at the end of 2010 the station has been included in Global Atmosphere Watch Program of the WMO as Regional GAW Station. The Dobson ozone spectrophotometer D040 has been received by KNU from the Royal Meteorological Institute of Belgium. Before the installation of the instrument at the newly established ozone monitoring station in Kyiv the spectrophotometer was refurbished at the European Regional Dobson Calibration Center RDCC of Meteorological Observatory Hohenpeissenberg with installation of new electronics and calibration. Dobson 040 has been calibrated against the secondary European reference D074 at the Solar and Ozone Observatory (SOO) in Hradec Kralove by KNU and SOO scientists. New N-Tables, Q-Tables and the Reference R-Readings were derived for the D040 instrument. After intercomparison in SOO Dobson spectrophotometer has been delivered to Kyiv and installed at the Main Astronomical Observatory in Goloseyev forest. The secondary possible purpose of D040 is to serve in the future as the backup instrument for the Vernadsky station's instrument D123 in Antarctica. To continuously verify the operation of the D040, it is to be used as normal operational instrument at the Kyiv-Goloseyev site. When the D040 spectrophotometer will be installed at the Antarctic station, D123 will be returned from Antarctica for calibration under agreement with British Antarctic Survey. The results for the first eight month observations at Kyiv-Goloseyev including comparison with satellite data are discussed. The measurements show standard season variations except result that all data are below of the mean values for 1972-2008 on about 20DU.