

Monitoring the effects of the Montreal Protocol on ozone and UV radiation levels in polar regions

The interdisciplinary Solar UV radiation group studies the increasing UV irradiation at ground due to stratospheric ozone depletion and its effects on the biosphere.

Complex temporal and spatial distribution of global, diffuse and direct radiation towards evaluation of potential of solar radiation. Long-term analysis of trends of the ozone layer based on satellite in connection with expected of the ozone recovery. Simulation of changes of UV radiation as an important natural biological factor in polar regions. Comparison and correlation of total ozone detected by ground-base and satellites measurements.

Future changes in ozone will remain an important influence and so whether ozone recovers or not will have a big influence on future UV radiation. Beginning of the ozone recovery is expected at the end of this decade and therefore is necessary to analyse long-term measurements. Contemporary and future level of UV radiation in typical regions relates with ozone layer over specific areas. CHMI is dealing with long-term monitoring of total ozone (since 1962) which can be used for identification of the ozone recovery. The results will be used for description of the field of and for identification of the positive impacts of the Montreal Protocol.

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