



Ionospheric effects of high Solar activity during 2003 – 2004.

J.Boška, D.Burešová, D.Kouba, P.Šauli.

Institute of Atmospheric Physics AS CR.

Boční II/1401, 14131 Prague 4, Czech republic. boska@ ufa.cas.cz.

Abstract

During October – November 2003, in descending phase 11- year Solar sunspot cycle, two periods of a suddenly enhanced solar activity were observed. Two geomagnetic storms (28.10 – 5.11.2003 and 19.11 – 23.11.2003) with $K_p = 9$ were accompanied by sudden disturbances in Earth's ionosphere and strong ionospheric storms with duration of 4 – 5 days.

Espacially during second storm, many extraordinary phenomenon (auroral ionospheric layers at midlatitudes, quick changes in electron density profiles) were observed. The effects of these strong ionospheric storms, as were observed at Průhonice observatory (49.59 N; 14.33E) and other European ionospheric stations are main object of this paper.

New digisonde DPS 4 started (not only ionospheric soundings, but ionospheric drift measurements also) at Průhonice observatory in January 2004. The second part of this paper deals with effects of high solar and geomagnetic activity, which were observed at Průhonice observatory in ionospheric drifts measurements during 2004 year.