

Monitoring Ionospheric Scintillations and TEC at the Polish Polar Station on Spitsbergen: Instrumentation and Preliminary Results

Andrzej W. WERNIK, Mariusz POŻOGA, Marcin GRZESIAK,
Andrzej ROKICKI, and Marek MORAWSKI

Space Research Center, Polish Academy of Sciences, Warszawa, Poland
e-mails: aww@cbk.waw.pl (corresponding author), pozoga@cbk.waw.pl,
pajak@cbk.waw.pl, rokicki@cbk.waw.pl, morawski@cbk.waw.pl

A b s t r a c t

As a partial contribution to the International Polar Year, the Space Research Centre of the Polish Academy of Sciences has installed on the Polish Polar Station, located in the region of the Hornsund Bay in southern Spitsbergen, the equipment intended to monitor ionospheric scintillation and total electron content. We describe the equipment setup and the aims of the experiment. As an illustration of data analysis, we present the reconstruction of irregular structure of the ionosphere from the complex amplitude data, and the estimate of the form and drift of diffraction pattern based on the spaced receiver measurements.

Key words: ionosphere, ionospheric scintillation, International Polar Year.