

## **Satellite radio signal phase measurements and modeling for April 15-20, 2002 period**

Yu.A.Shapovalova<sup>1</sup>, A.A. Namgaladze<sup>1,2</sup>, A.N. Namgaladze<sup>1</sup>, B.Z.Khudukon<sup>1</sup>

<sup>1</sup> *Polar Geophysical Institute, Murmansk;*

<sup>2</sup> *Murmansk State Technical University; E-mail: [namgaladze@mstu.edu.ru](mailto:namgaladze@mstu.edu.ru)*

The satellite radio signal phase measurements were made at the Kola Peninsula in April 2002 using the chain of four receivers situated approximately along the geomagnetic meridian. The same signal parameters (phase and time derivative of phase) have been calculated using the electron density distributions obtained with the Upper Atmosphere Model (UAM) and the results of the model phase calculations and measurements have been compared between. A quite good agreement has been found in general. Several typical forms of the  $d(\text{phase})/dt$  dependence on time have been revealed and the relation of these forms to the latitudinal gradients of the electron density has been found.

This work was supported by the Grant No.02-05-64141 of Russian Foundation for Basic Research.