Geophysical Research Abstracts
Vol. 14, EGU2012-11260, 2012
EGU General Assembly 2012

Results of Studies of The Monitoring System for Aircraft and Vehicles Based on GNSS

J. Cwiklak (1), H Jafernik (1), J Sledzinski (2), and A Fellner (3)

(1) Polish Air Force Academy, Deblin, Poland (jcwiklak@wp.pl), (2) Warsaw University of Technology, Poland (jsledzinski@gik.pw.edu.pl), (3) Silesian University of ,Technology, Katowice, Poland (afellner@wp.pl)

Presently a lot of countries carry out aviation tests of Automatic Dependent Surveillance – Broadcast ADB-S). The on-board GPS receiver is used as a basic source of information on position and time for that system. According to the CNS/ATM plan, traditional radars using by ATC will be replaced for ADB-S in the near future. One the vital elements of the system is Global Navigational Satellite System (GNSS).
According to the project a research team is going to work out an aviation tracking system for control an air traffic and ground movement in the border area. Moreover, the team will examine the system in the areas of accuracy, range of tracking and reliability as well. The proposed system consists of three basic components: the positioning, airborne GNSS receivers, the transmission of data and the ground station.
The research plan is carried out taking into account a variety of air operations, such as a takeoff, a route on a low height, approaching and landing.
The idea of monitoring system for aircraft using satellite navigation systems is in line with the concept of the use of GNSS in aviation, both in Europe and worldwide.