Contribution ID: **411** Type: **Oral**

COMPARISON OF MATHEMATICAL MODELLING RESULTS WITH RESULTS OF SPECIAL AIR POLLUTION MONITORING

An area on the Czech-Polish border is one of the most inhabited and industrial region in Europe. Even one of the most polluted. In this region is huge concentration of heavy industry which is focus on metallurgy processes and associated industries. Air pollution may cause adverse effects on human health and the environment. Our research deals with the comparison of various method for air pollution characterization.
Mathematical dispersion modelling system (ADMOSS) provides information about relation distribution of concentration with pollution sources. This model is capable to modelling relationships using the parallel clusters computing and geographic information system. In the present research are modelling result supplemented by moss biomonitoring results. Based on the results from mathematical modelling biomonitoring was carried out in the regular mesh of monitoring sites located in core of the polluted area. Samples were analysed by neutron activation analysis, inductively coupled plasma, atomic absorption spectroscopy.
Unmanned air vehicles (UAV) has used for assessment of vertical profiles of air pollution. These vertical profiles have been gained by unmanned airship with equipment for continual measurements of concentration in six fractions of particulate matter. Results from airborne measurements are automatically processed in laboratory information system (LabKey) and geographic information systems. Then these results could be compared with mathematical air pollution model created on meteorological data from the place during the measurement.

Primary author: Mr SVOZILÍK, Vladislav (JINR)

Presenter: Mr SVOZILÍK, Vladislav (JINR)

Track Classification: Life Science