



Monitoring of Atmospheric Composition at two Siberian Stations

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There are lots of uncertainties in estimates of possible anthropogenic effect on environment. Mainly, climate changes are associated with rising greenhouse gas (GHG) concentrations, but some opponents doubt of the human role in global warming. One of the sources of such disagreement lies in the discrepancy of climate simulation results, which are mainly caused by the lack of in-situ data on GHG and other constituents responsible for radiative forcing. In particular, this problem is complicated owing to the deficiency in observational data over a vast territory of Russia. Notwithstanding these disagreements, nobody refuses the regional environmental problems.

Understanding the importance of both global and regional problems of air quality, Institute of Atmospheric Optics decided to establish two monitoring stations in West Siberia. One of them is located in a rural area 60 km west from Tomsk (site "Background"; 56°25'3.94"N, 84°4'26.63"E) another one in easterly suburban of Tomsk (site "Base Experimental Complex" or BEC, 56°28'48.84"N, 85°6'8.38"E). Both sites have instrumentation to monitor CO₂, CO, O₃, NO, NO₂, SO₂, and aerosols. BEC is also equipped with CH₄ gas analyser. Gas samplers are mounted at two levels of meteorological masts (10 and 30 m).

Such a location of these sites was chosen to evaluate anthropogenic contribution when a zonal air mass transport occurs and air passes from the "Background" to the BEC through the city. Graphic presentation of in-situ measurement data is available on-line (<http://lop.iao.ru> or <http://meteo.iao.ru>).

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