# Comparative estimation of atmosphere and snow cover long-term contamination at Novosibirsk Hydrometeoservice net stationary posts

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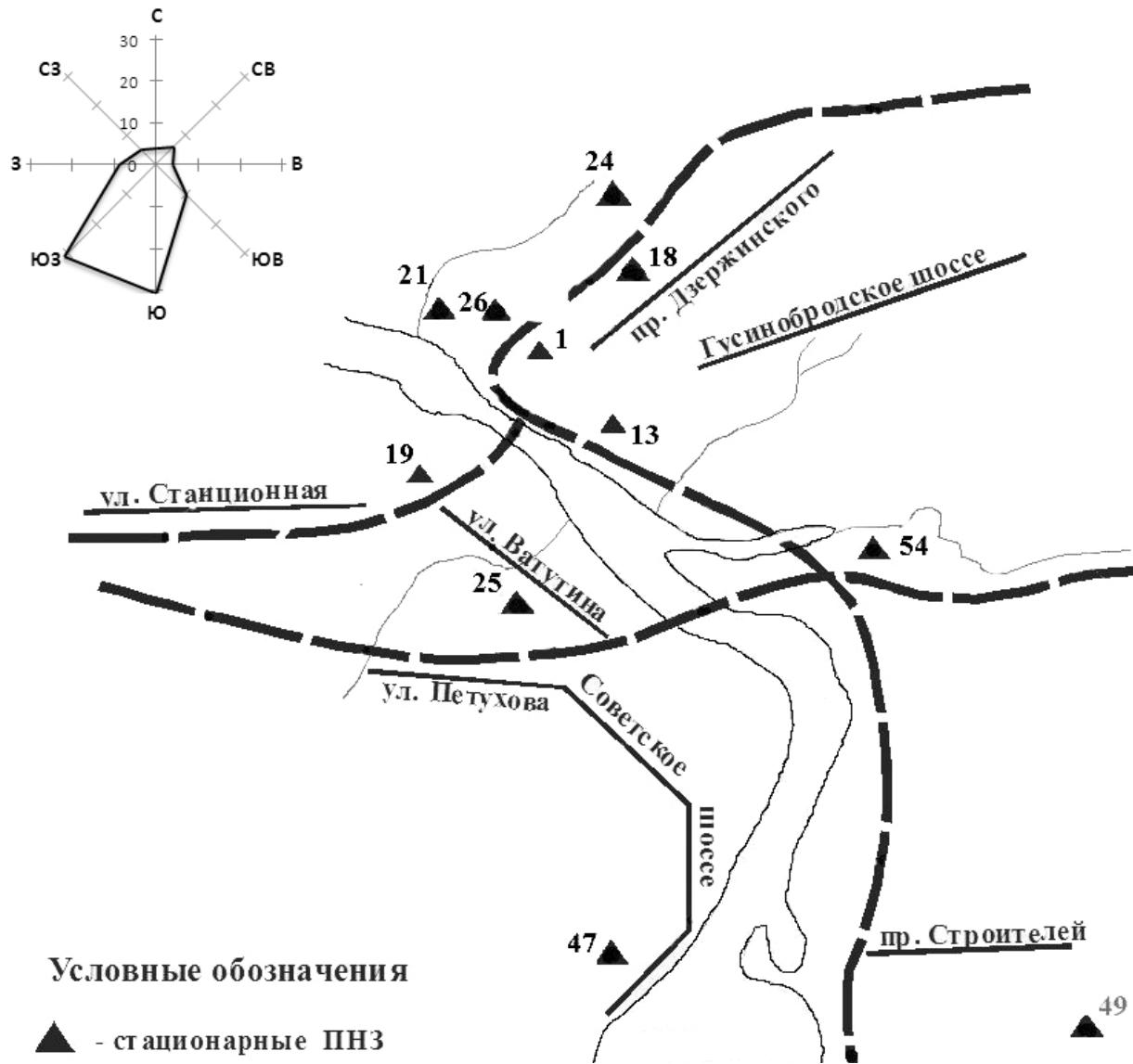
Location of Hydrometeoservice net stationary posts in the city of **Novosibirsk**

I. Components for comparison

Снеговые пробы анализировались на полиароматические углеводороды (ПАУ), нефтяные углеводороды (НУ), определялся анионный и микроэлементный состав.

Table 1.

Components in air   *Components in snow*

Soot   Benz(a)pyren, PAH

SO_2 SO_4^{2-} ion

NO_2 NO_3^- ion

NO NO_2^- ion

Dust   precipitation

II. Comparison of SO$_2$ (mg/m³) and sulfate-ions (mg/L)

Зимний сезон 2007-2008
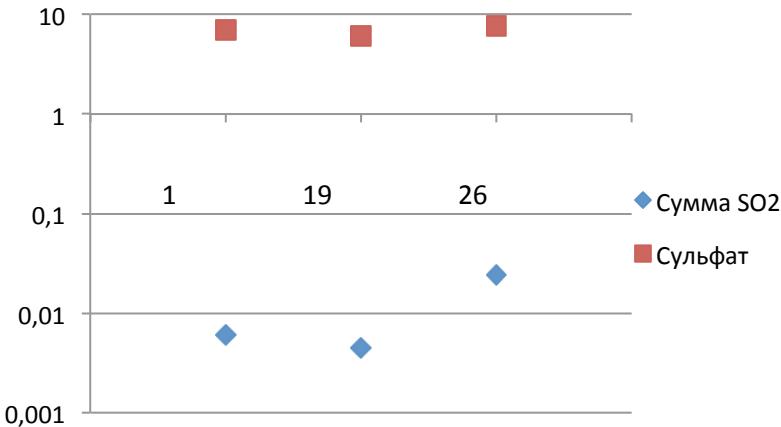
Зимний сезон 2008-2009
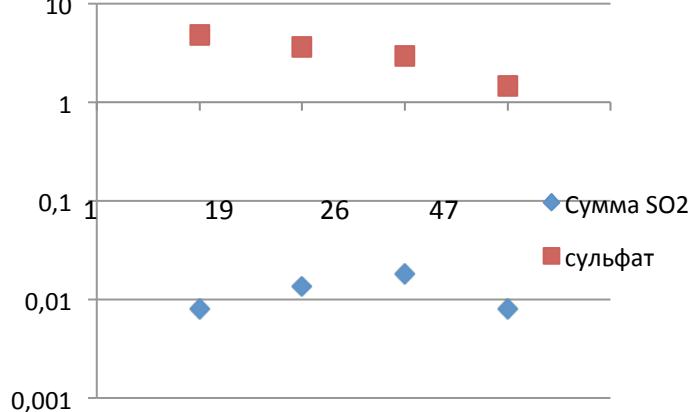
К сульфат/SO$_2$
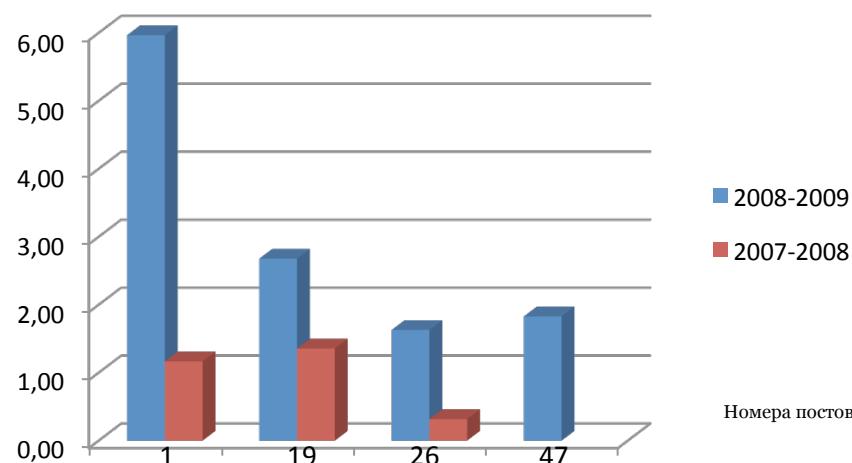
III. Comparison of NO$_2$ (mg/m^3) and nitrate-ion (mg/L)

Зимний сезон 2007-2008

Зимний сезон 2008-2009

К нитрат/NO$_2$
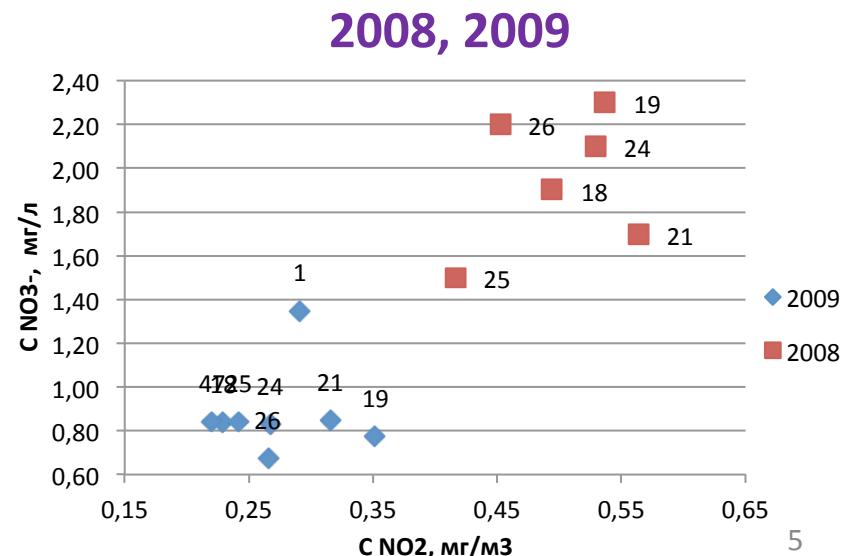
2008, 2009

IV. Comparison of NO (mg/m³) and nitrite-ion (mg/L)
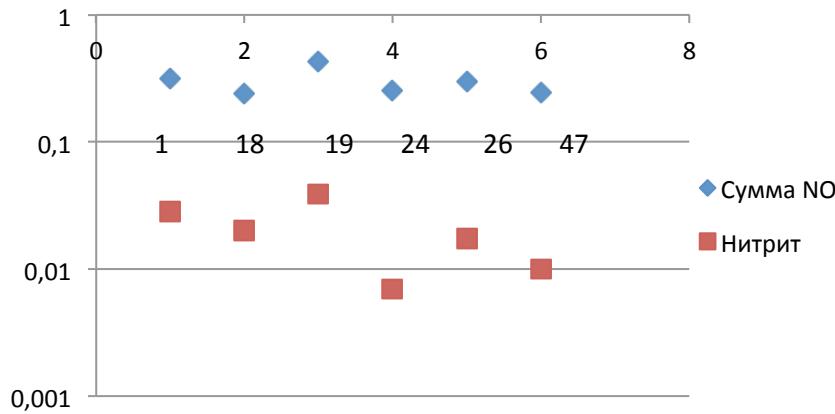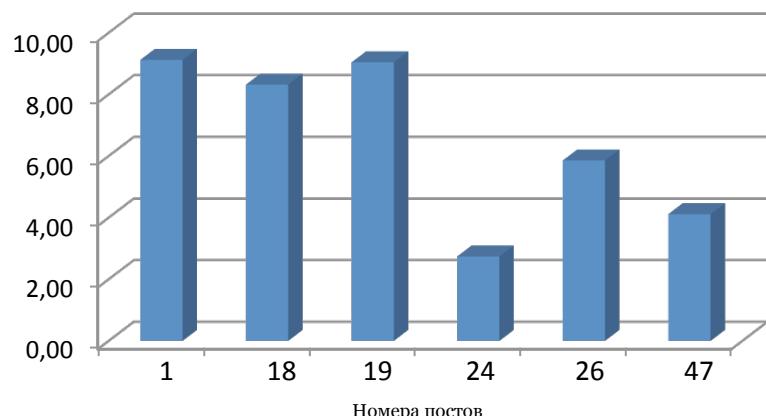
V. Comparison of suspended substances (mg/m³) and precipitation (mg/L)
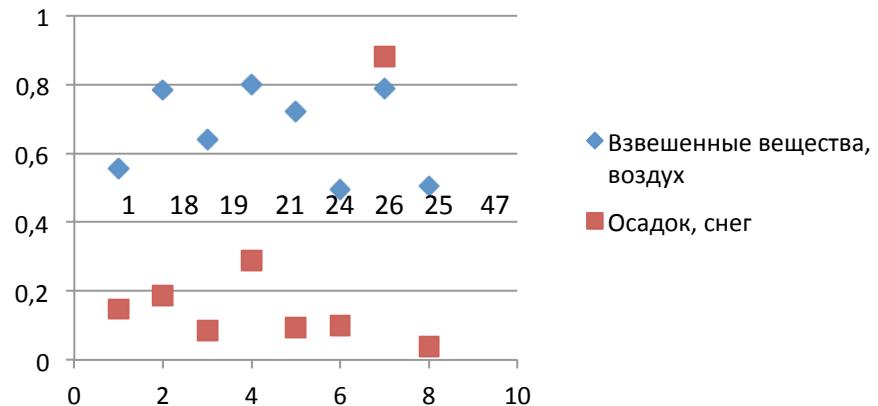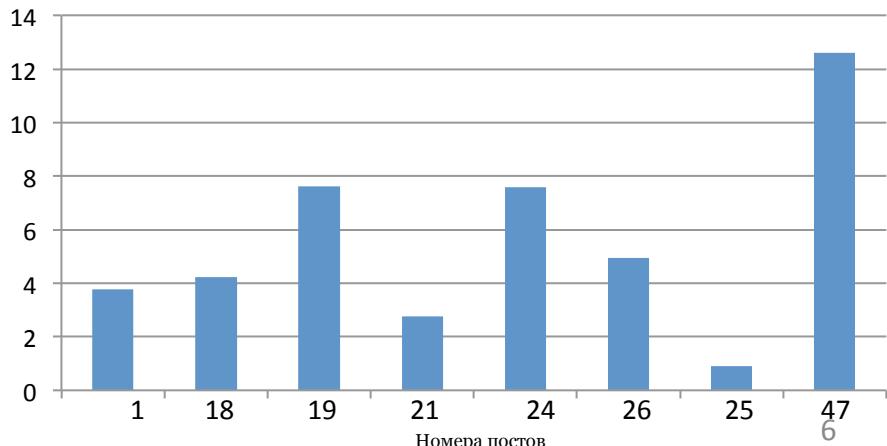
# VI. Comparison of soot concentration (ng/m³) and benz(a)pyrene and PAH (ng/L)
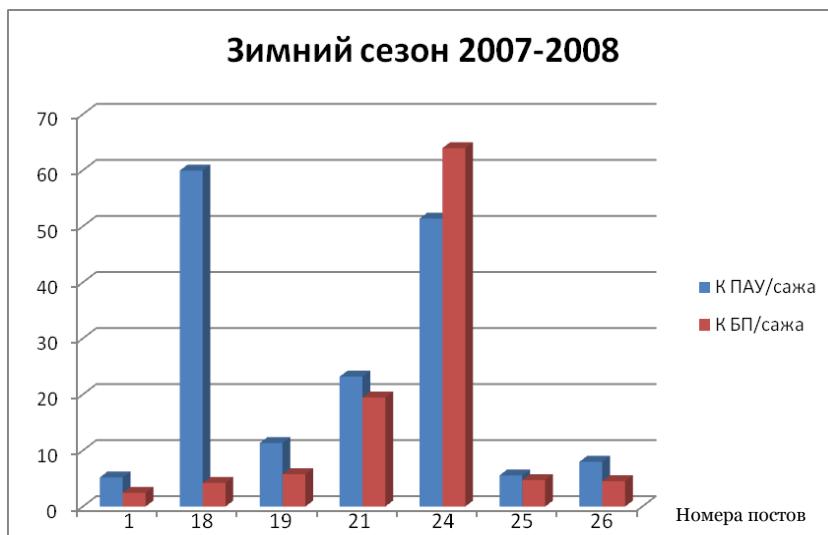
Conclusion

- Snow cover is a perfect indicator of dust and aerosol contamination of atmosphere. It gives an economical way for environs monitoring.

- Quantitative and qualitative regularities are obtained for the distribution of some components between air (SO_2, NO, NO_2) and snow cover (SO_3^{2-}, NO_2^-, NO_3^-)

- There was shown a similar beharvior for both compared winter seasons in changes of PAH and benz (a)pyrene content in snow cover and soot in air at all stationary net posts.