

Air composition over industrial cities of Siberia

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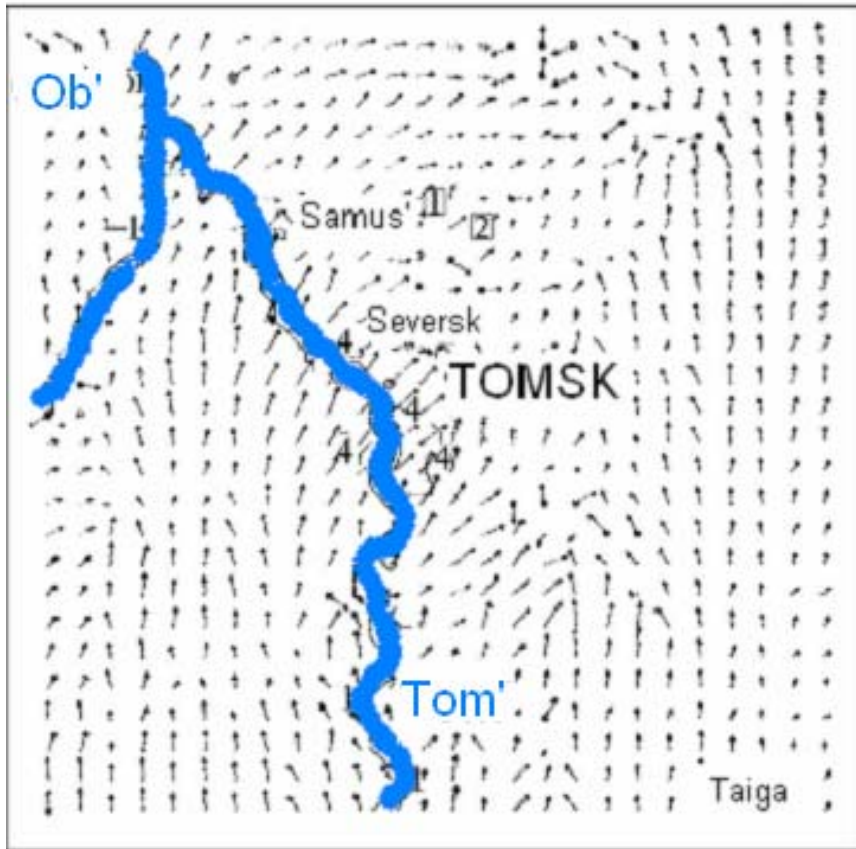
³Institute of Chemical Kinetics and Combustion SB RAS, Novosibirsk, Russia

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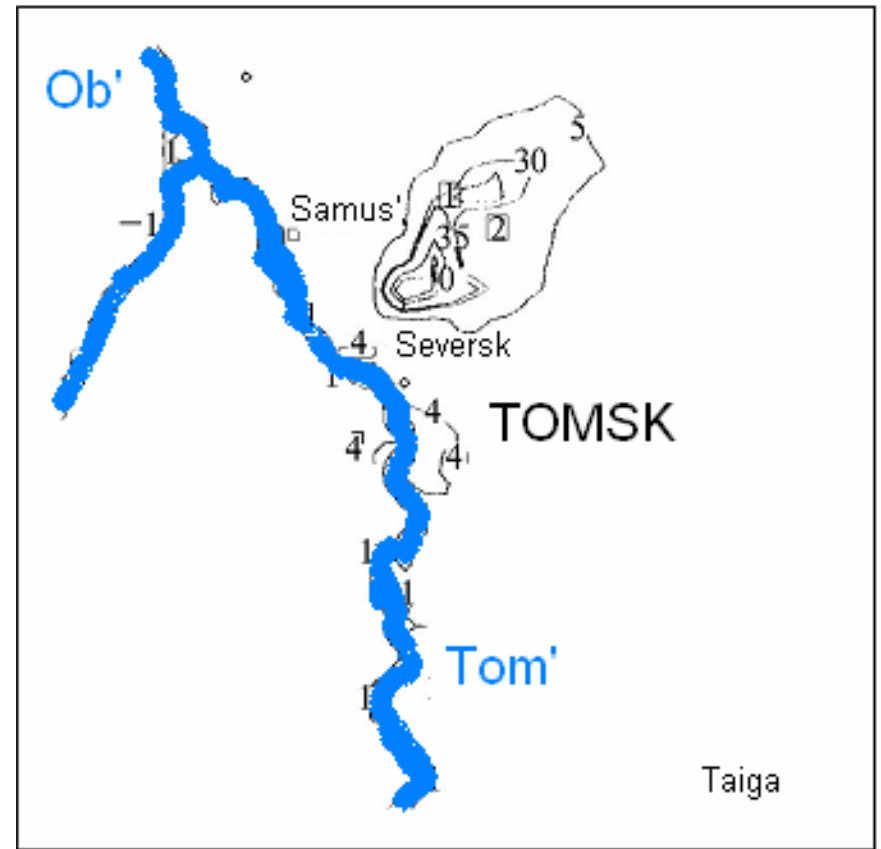
⁵Institute of Computational Mathematics and Mathematical Geophysics SB RAS, Novosibirsk, Russia

Local circulation over Tomsk

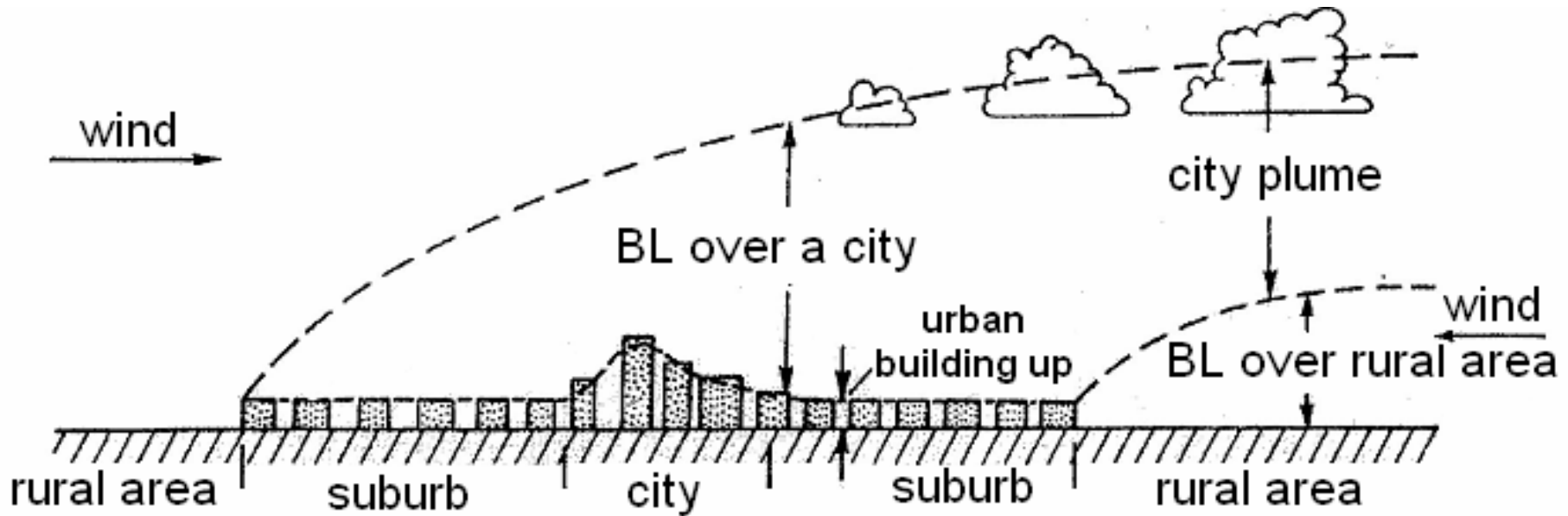
Wind pattern over Tomsk City
at 50 m height



Pollutant distribution during the accident
at Seversk nuclear plant



City column



Two-layer air motion structure over a city formed under the influence of urban building up

Mobile station AKV-2



Parameters monitored

Temperature&RH

Wind velocity

CO, CO₂, NO, NO₂,
SO₂, O₃

Aerosol number
concentration:

0.003-0.2 μm

0.4-10.0 μm

The route of mobile station 2004-2005

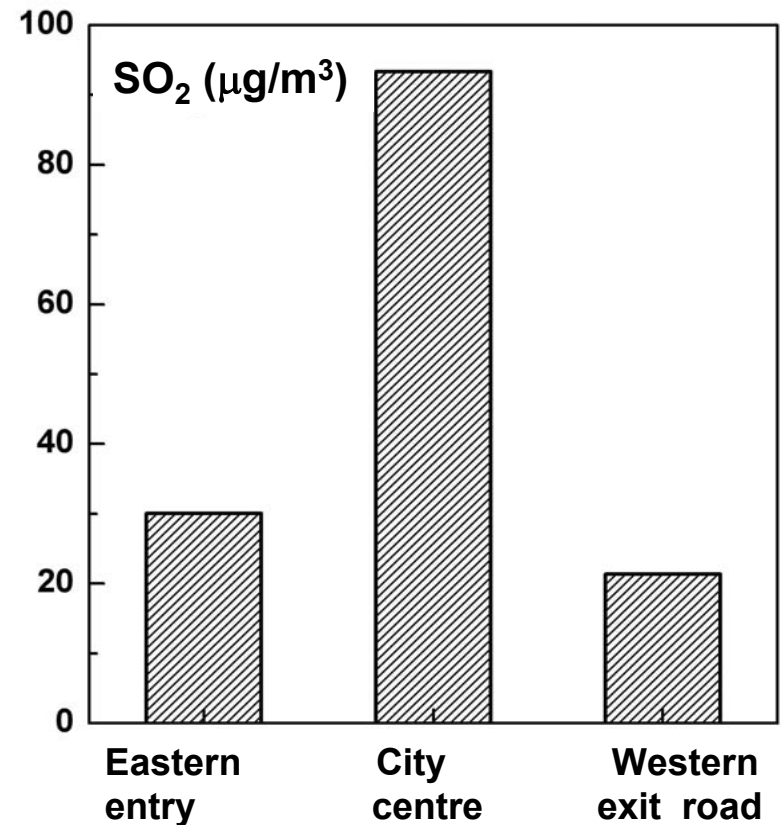
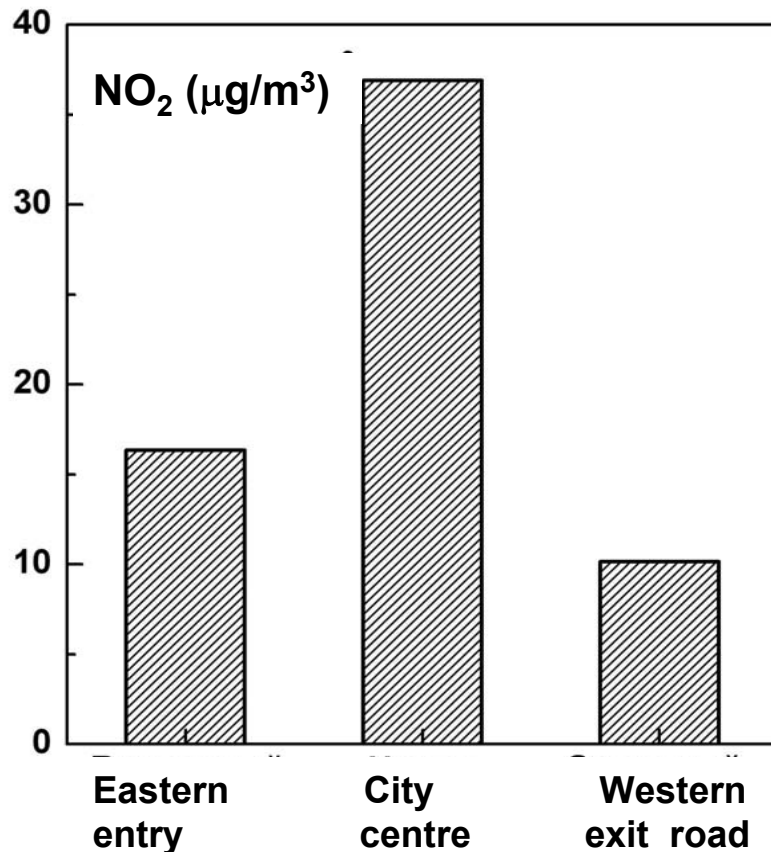


Case of 29th February 2004

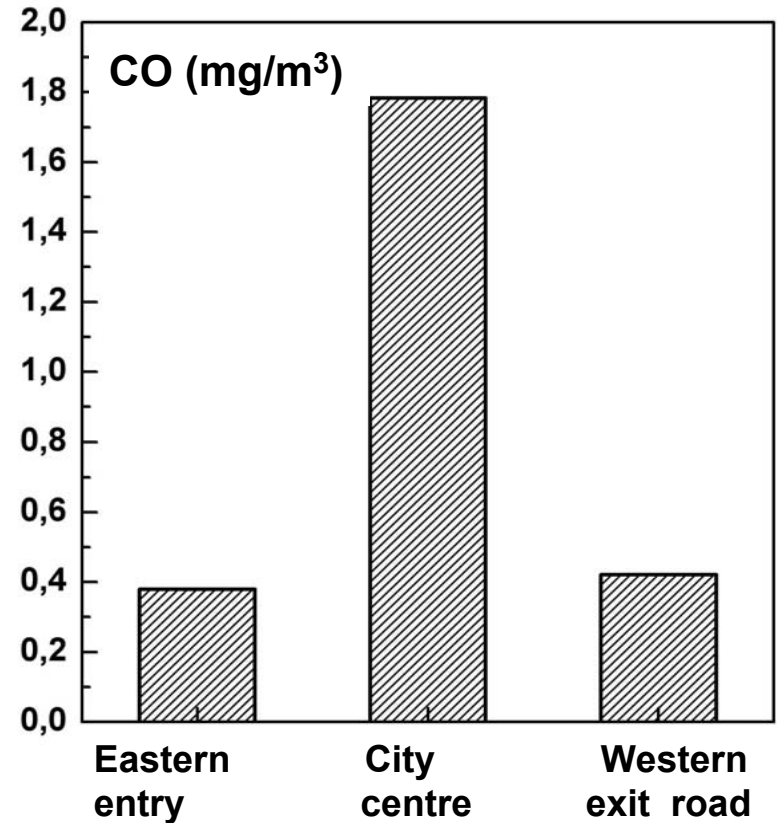
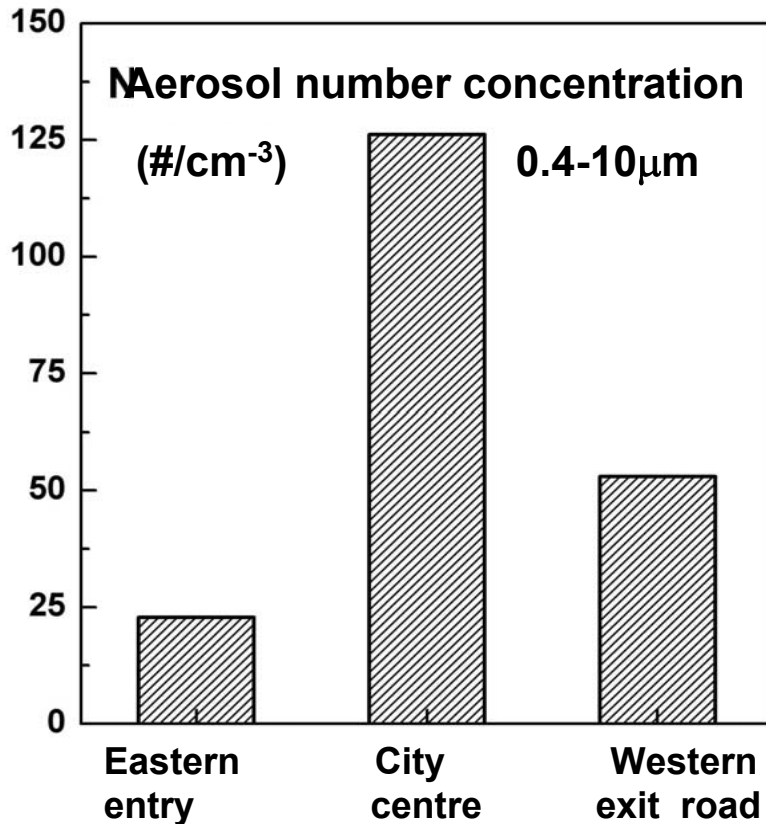
(07-11 local time)



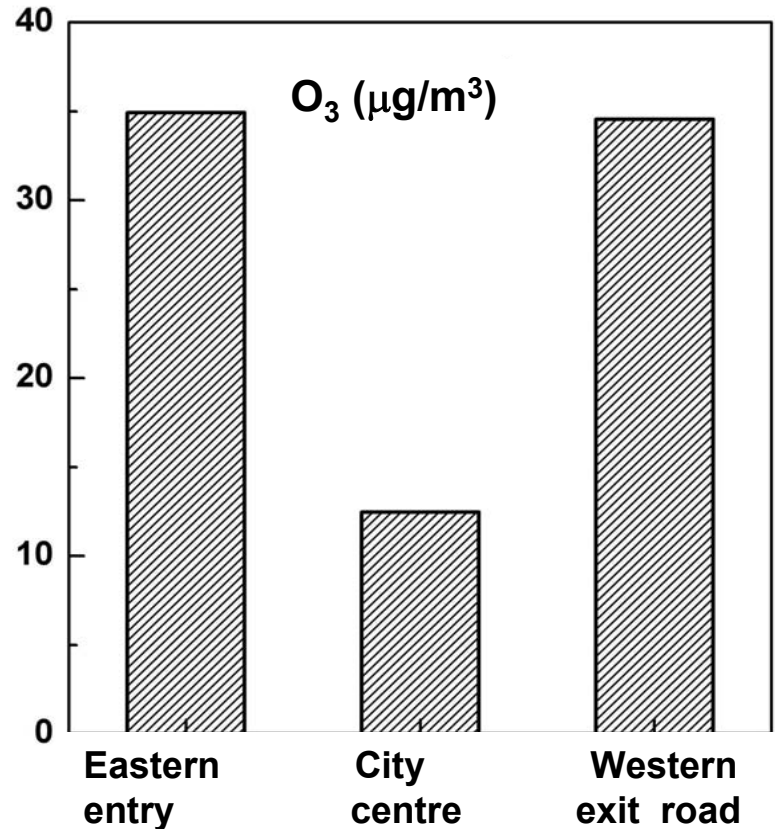
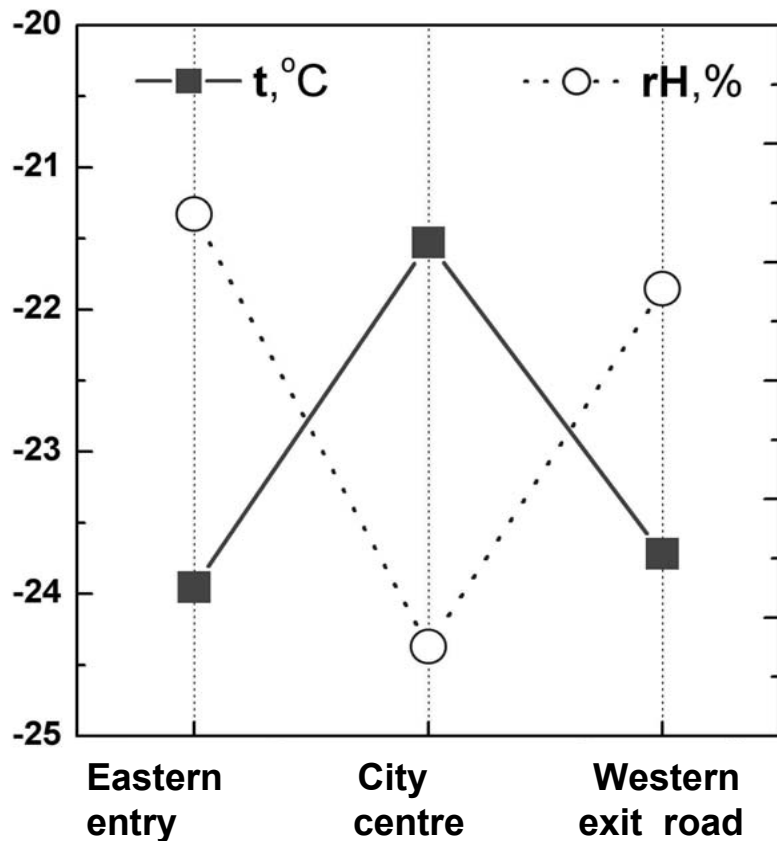
Concentration of NO₂ and SO₂ Achinsk 29.02.2004



Aerosol and CO concentration Achinsk 29.02.2004



Temperature & RH and O₃ concentration



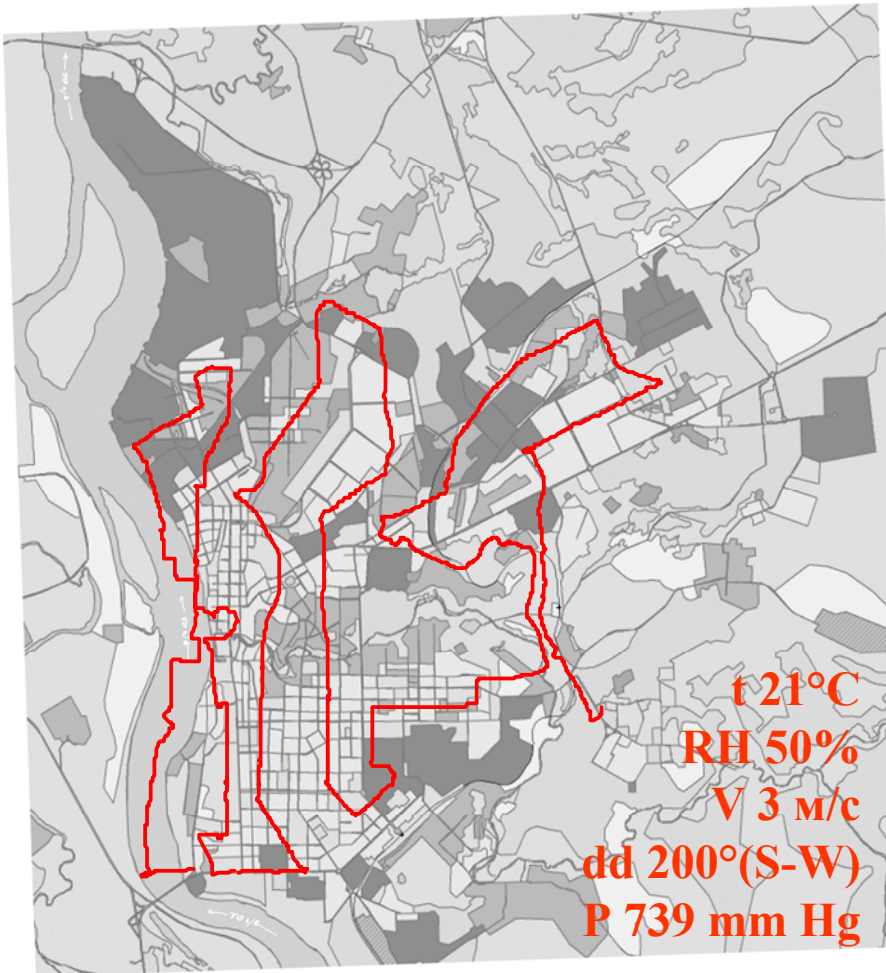
Difference in impurity concentrations and meteorological parameters measured at city centres and their suburbs

City	t°C	RH, %	CO, mg/m ³	O ₃ , µg/m ³	SO ₂ , µg/m ³	NO ₂ , µg/m ³	NS, µg/m ³	Remark
Irkutsk	1.74	-9.5	0.23	-29.4	35.4	29.1	6.9	
Angarsk	0.13	0.8	0.30	-22.9	23.0	12.2	10.3	
Usolye-Sibirskoe	0.78	8.9	-0.36	22.7	-49.9	-20.0	-2.5	Suburb is located in the industrial area
Tulun	0.90	2.9	0.21	-7.5	34.2	15.9	8.5	
Nizhneudinsk	-0.48	0.7	0.04	-10.8	6.8	0.3	3.6	
Taishet	-1.27	8.3	2.32	-16.2	11.6	3.3	50.8	smog
Kansk	1.57	-8.8	-0.03	13.1	-24.5	-9.3	-11.3	Suburb is located in the industrial area
Krasnoyarsk	6.80	2.2	-0.18	-1.5	63.0	7.8	4.5	smog
Achinsk	2.19	-15.1	1.36	-22.1	71.9	26.7	73.2	
Novosibirsk	1.65	0.3	0.35	-39.9	77.5	29.8	10.7	

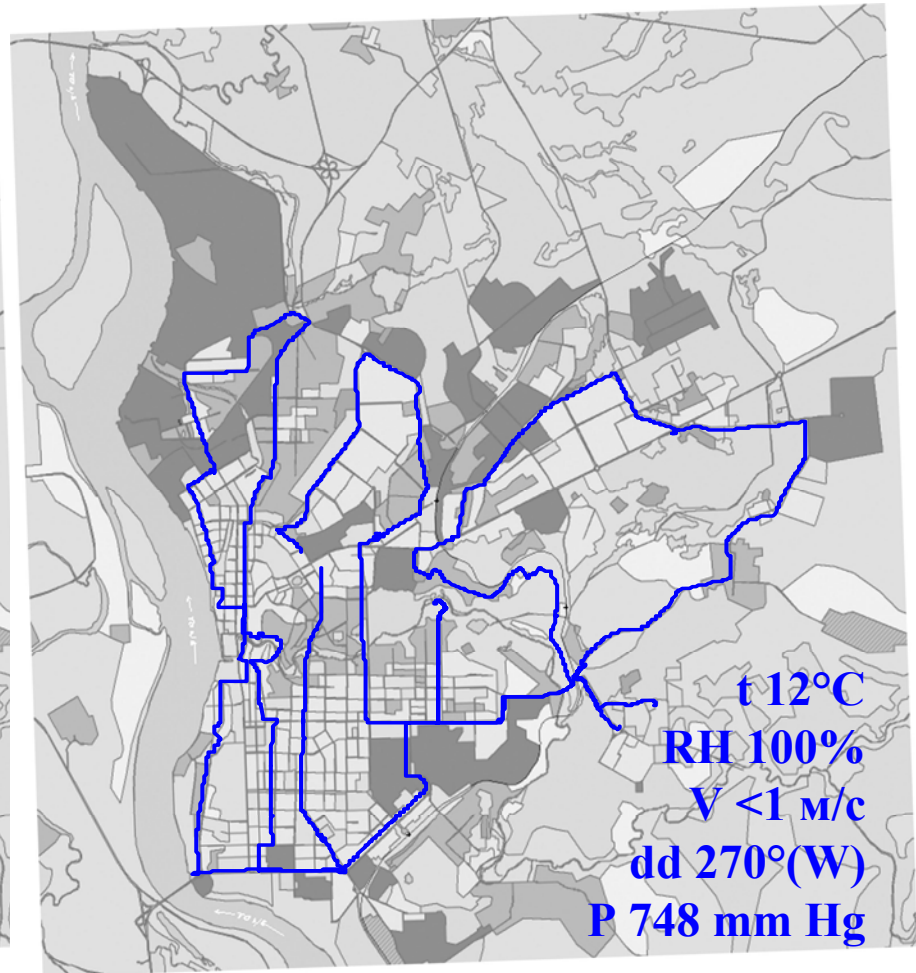
Complex survey of Tomsk



11.07.2005 14:38-17:10



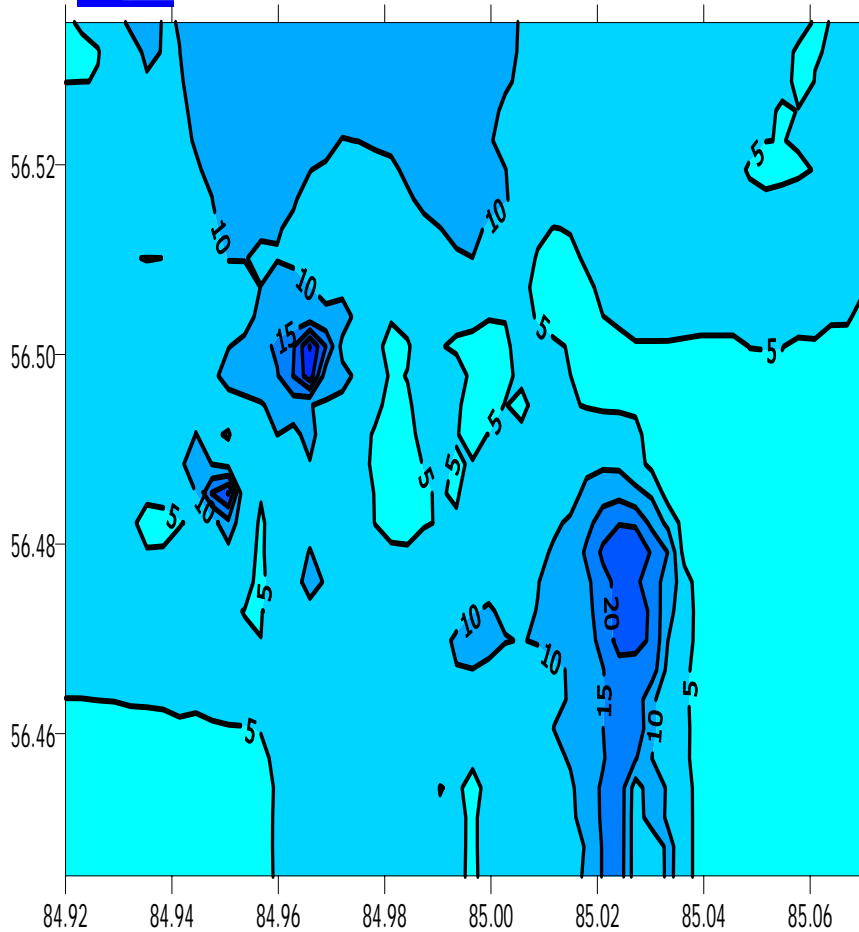
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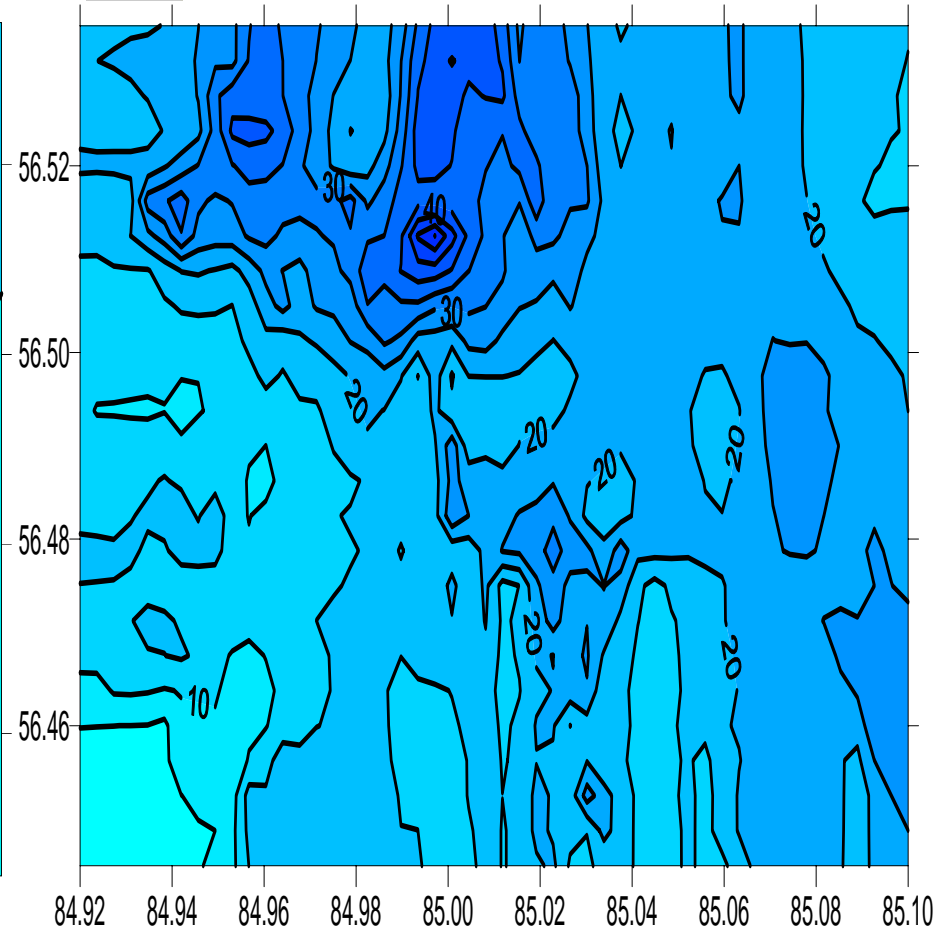
Aerosol number concentration



11.07.2005



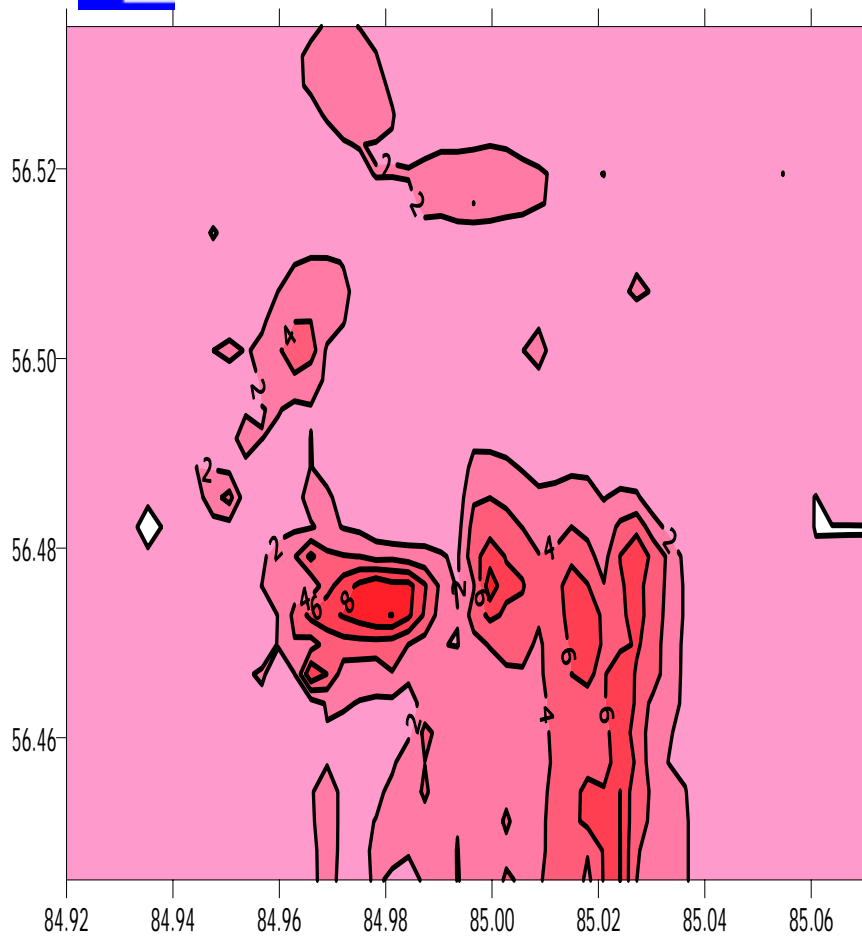
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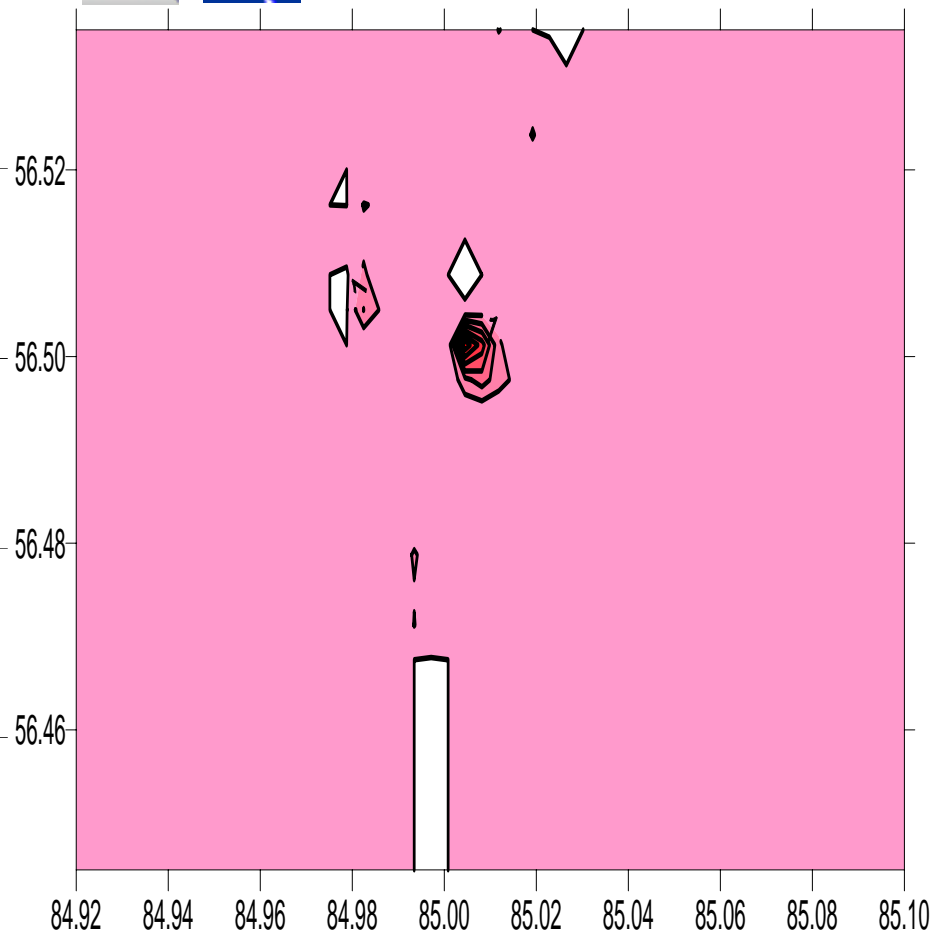
CO, mg/m³



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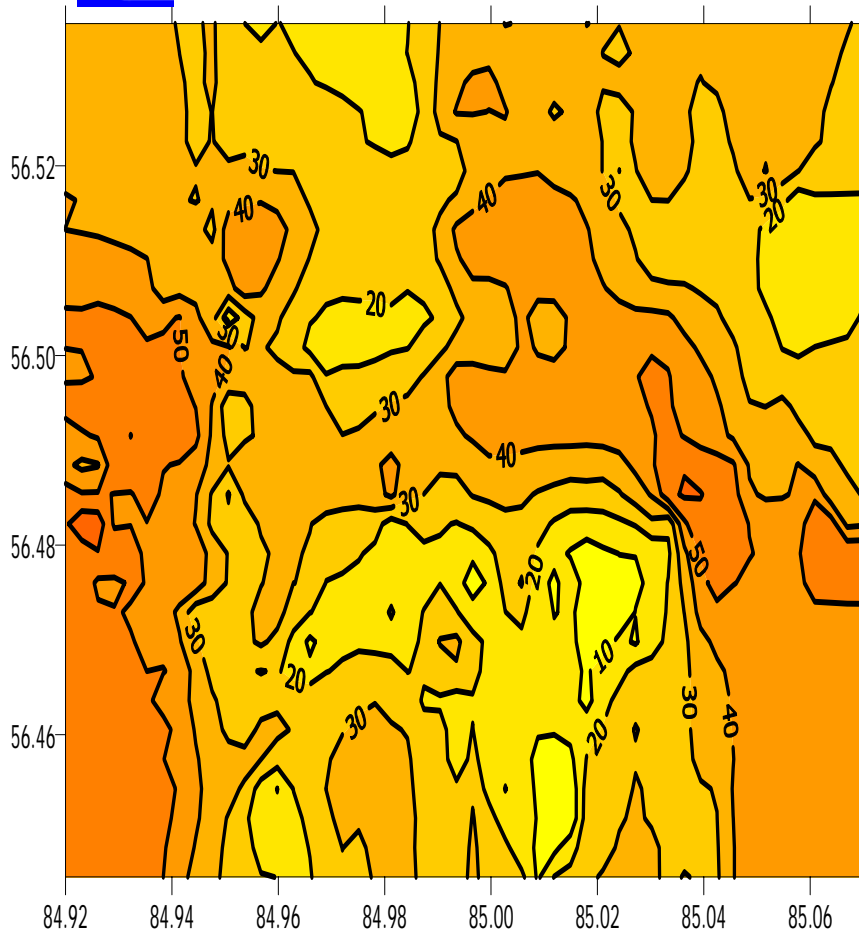
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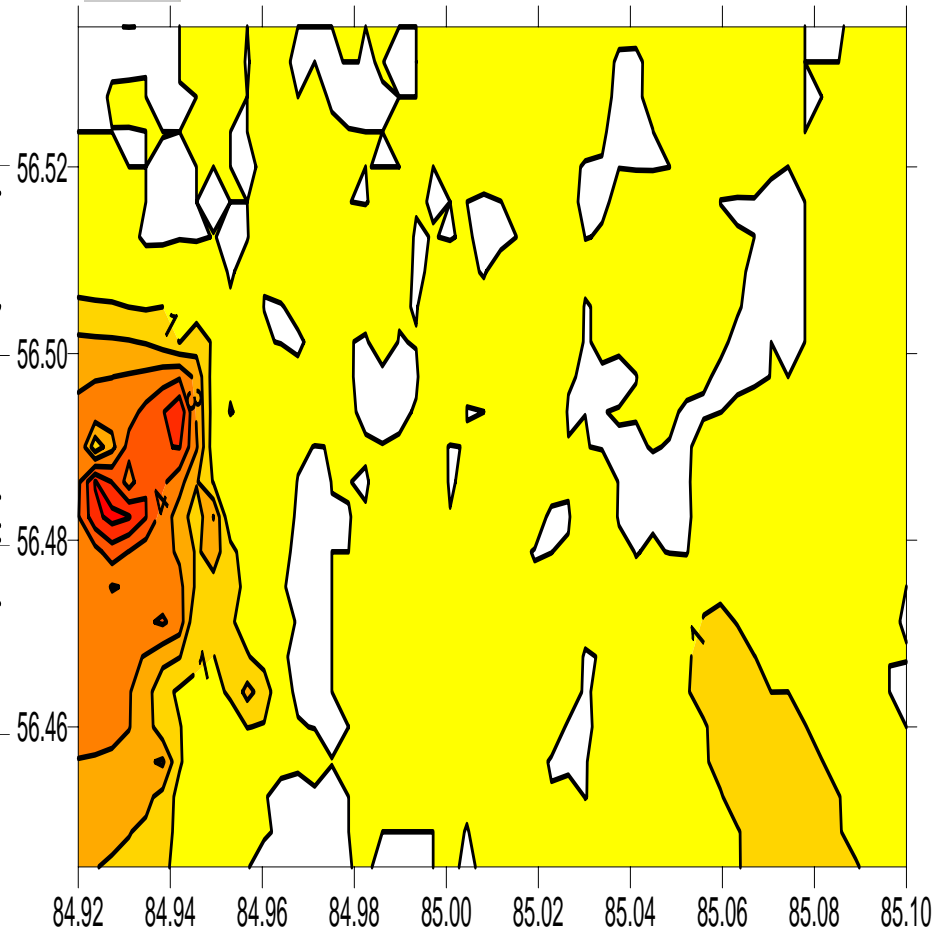
O₃, μg/m³



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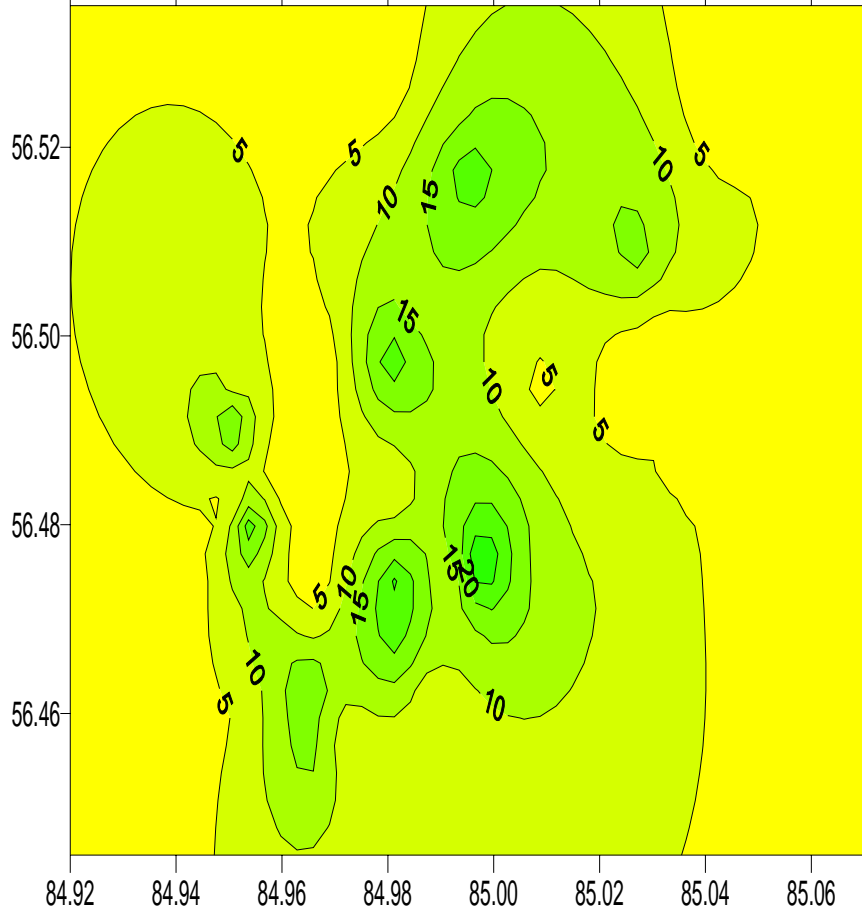
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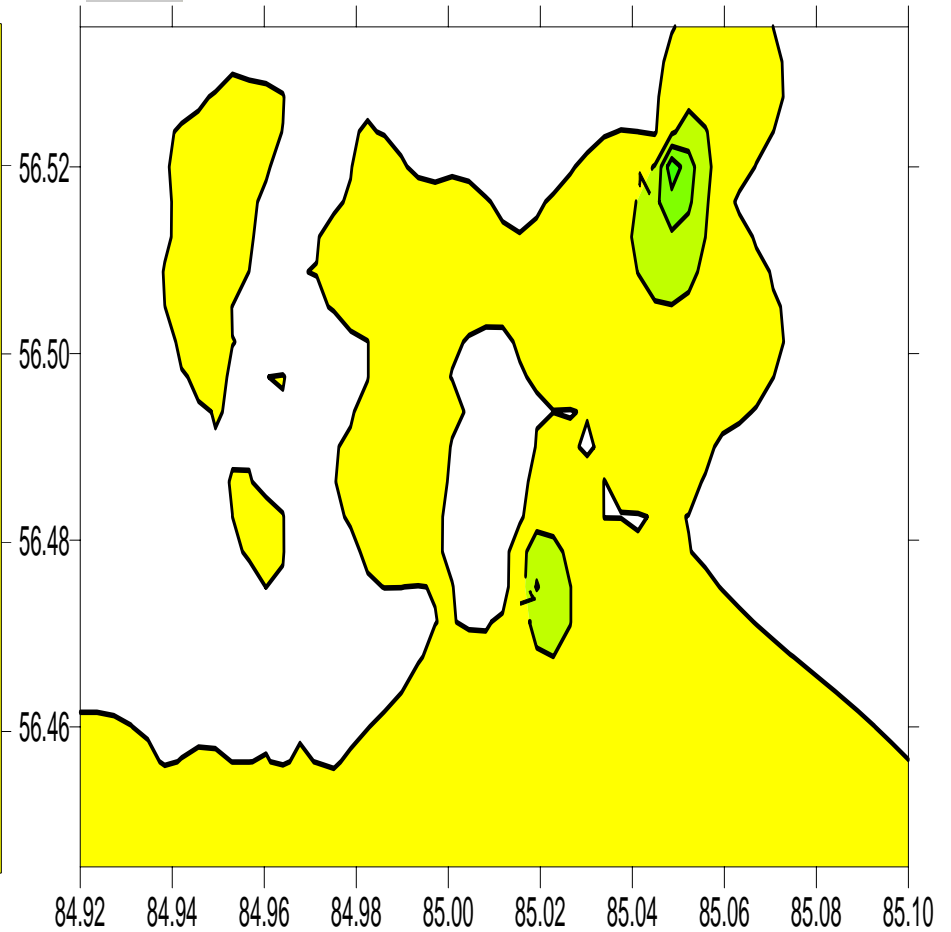
SO₂, μg/m³



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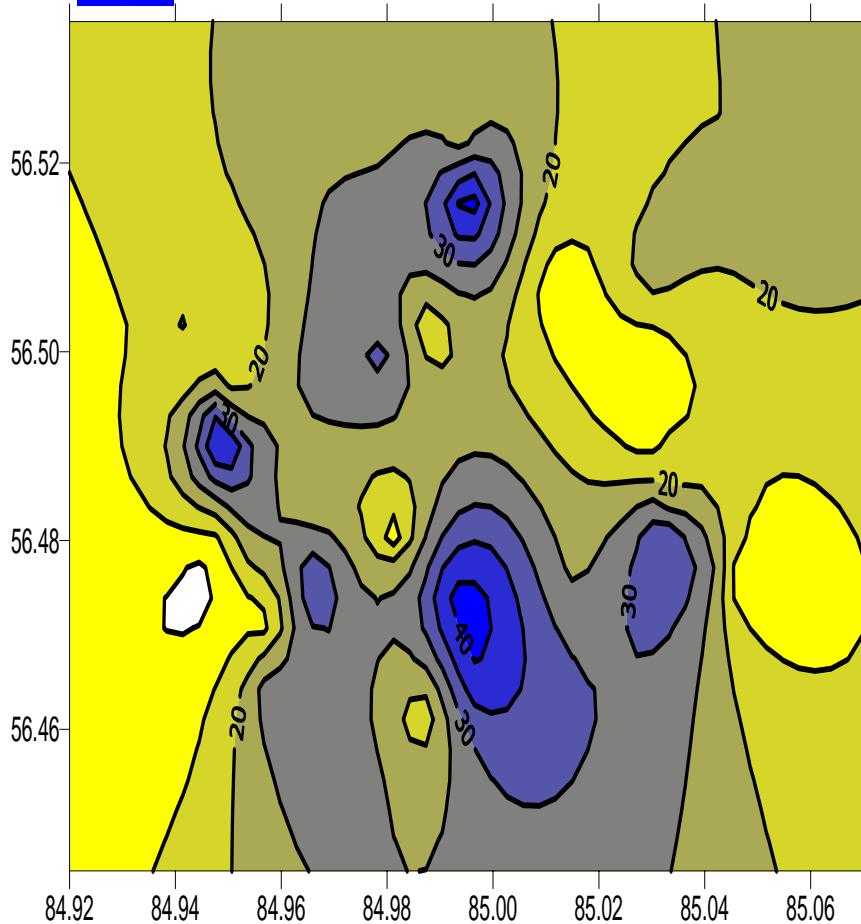
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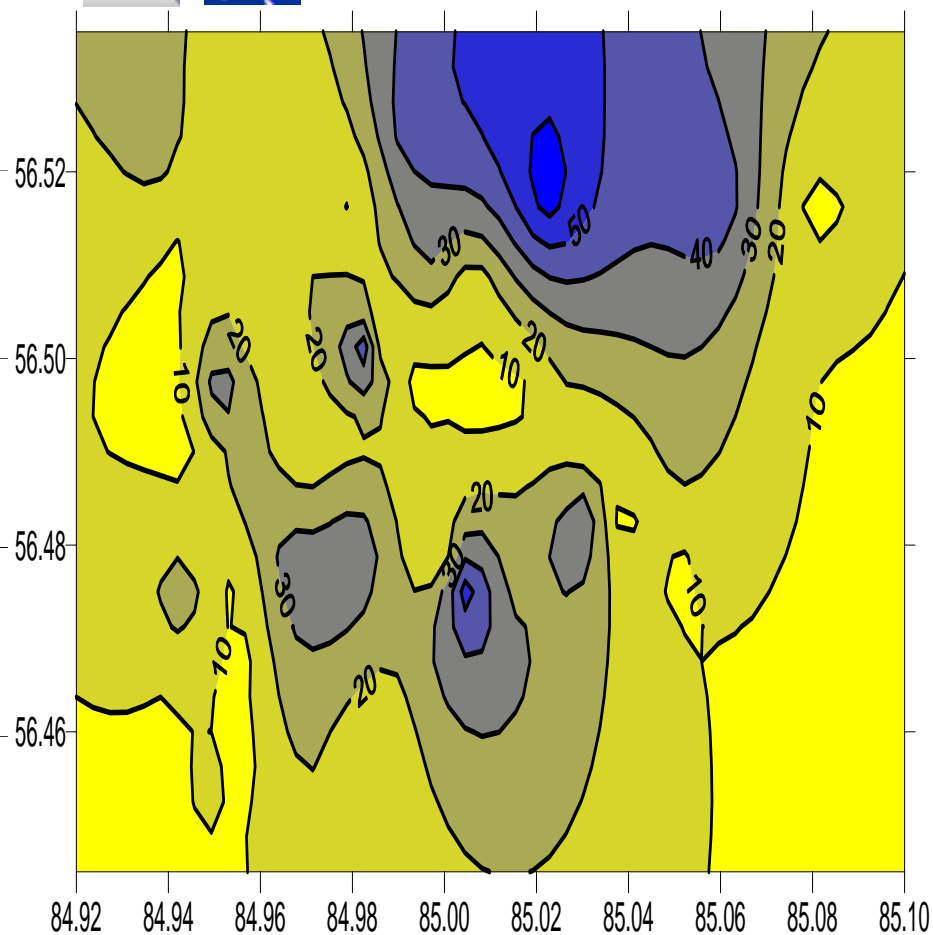
NO₂, μg/m³



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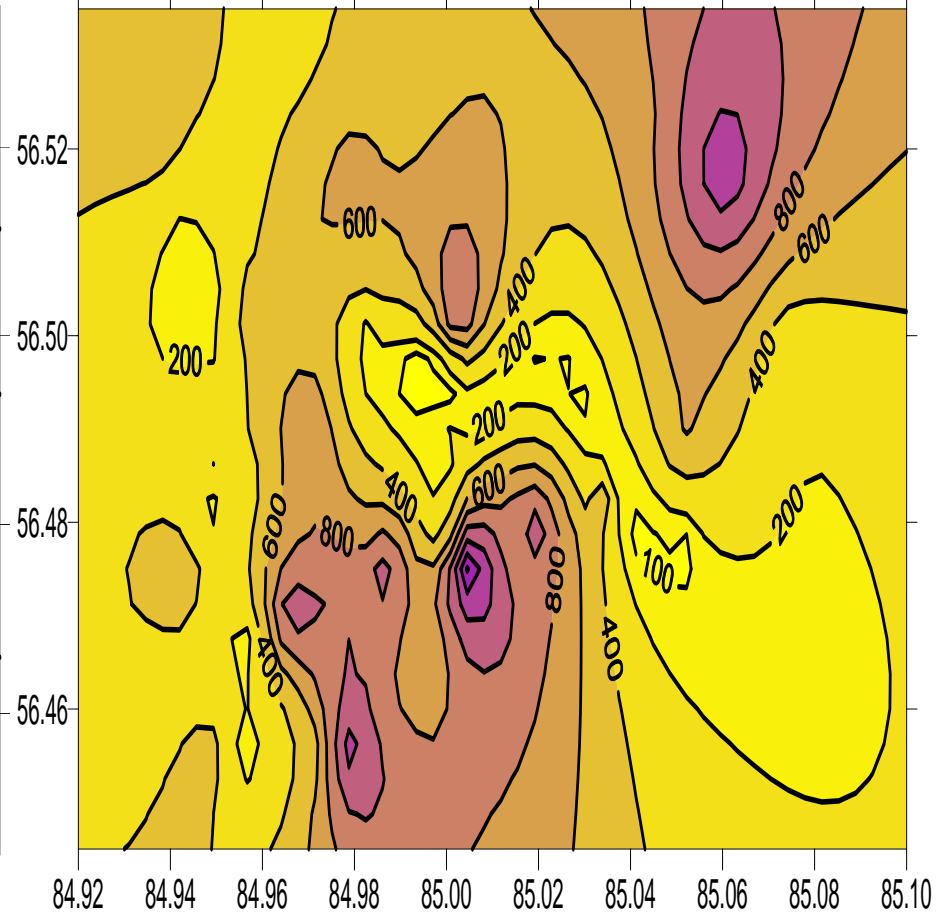
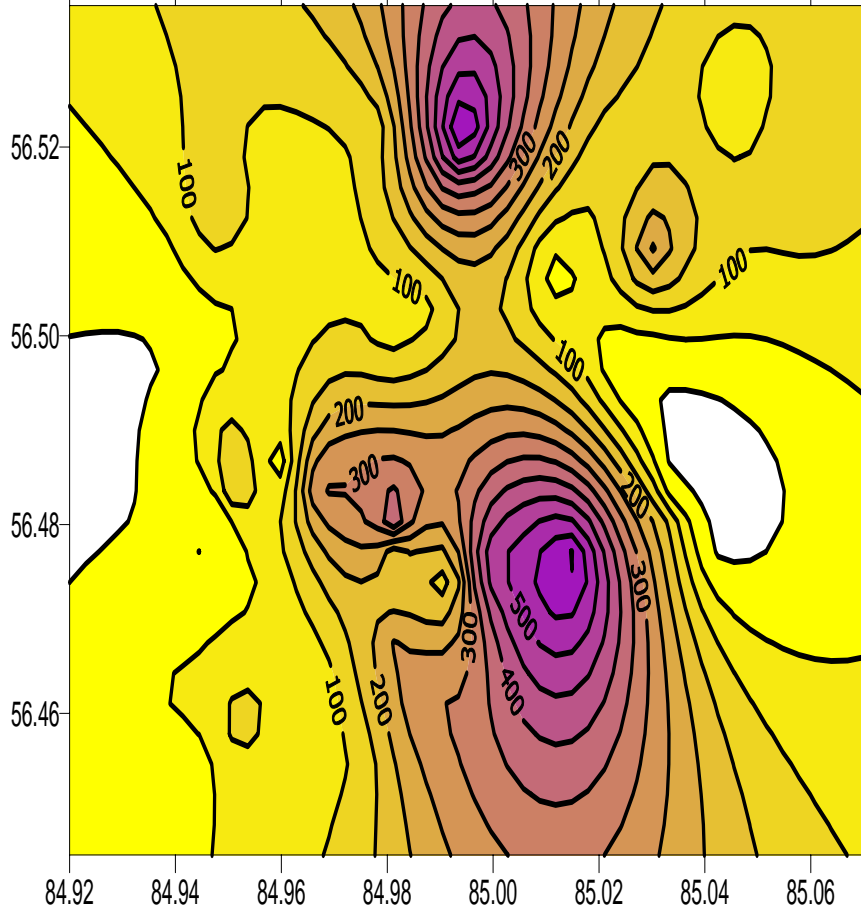
NO₂, μg/m³



11.07.2005



26.08.2005



**Thank you for
your attention**