

Meeting of Consultative Scientific Council “Skolkovo”

May 17-18, 2012



Novosibirsk

SIBERIAN BRANCH OF RUSSIAN ACADEMY OF SCIENCES: STATUS, RESEARCH AND DEVELOPMENT

**Academician A.L. Aseev
Chair of Siberian Branch of RAS**

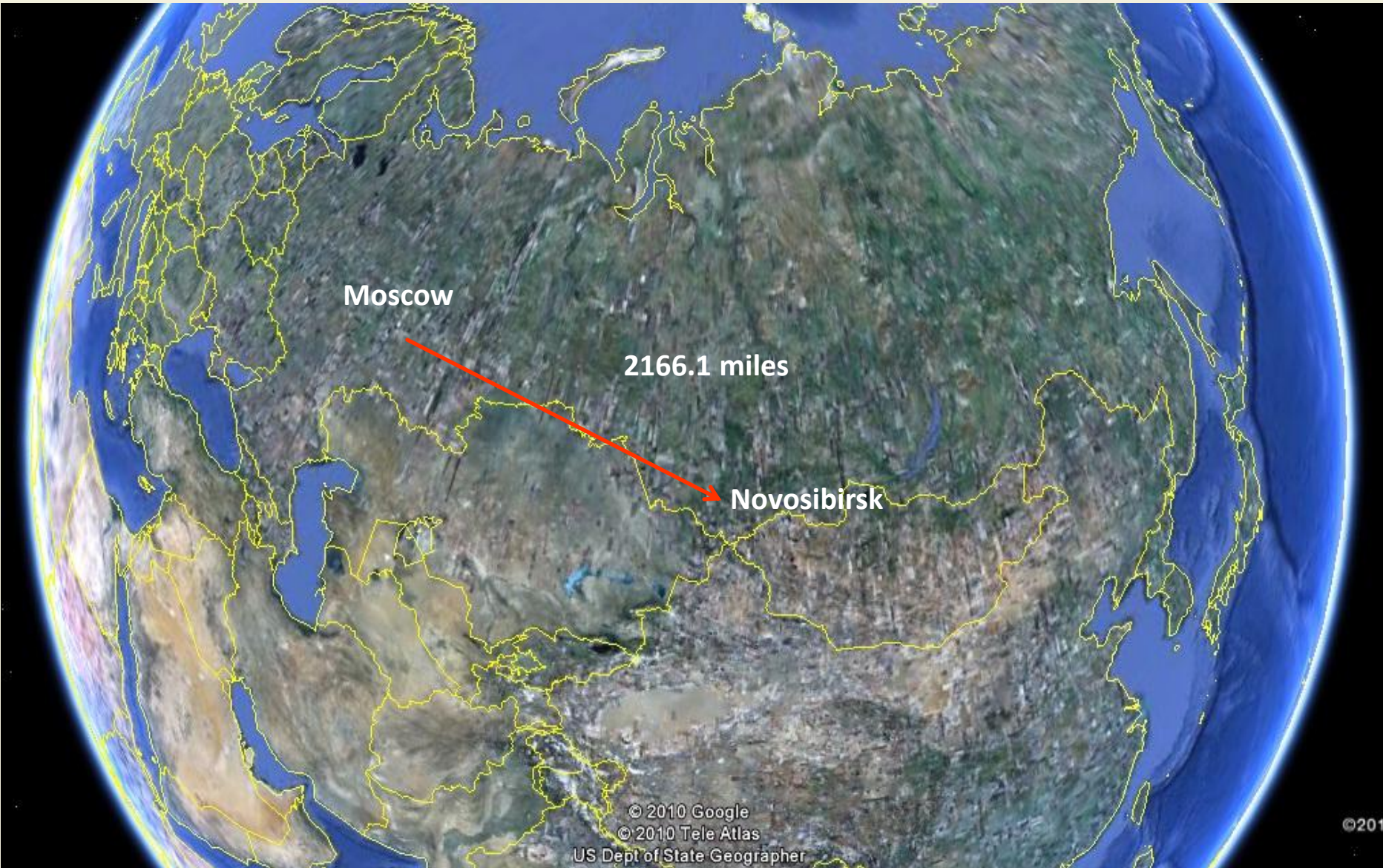
Moscow

2166.1 miles

Novosibirsk

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HISTORY AND CURRENT STATE OF SIBERIAN BRANCH OF RAS



Academician M.A. Lavrentyev, Mathematician and Physicist, Founder of SB RAS

«S.A.Khristianovich, S.A.Lebedev and I saw it more and more clearly that Siberia with its problems is a beneficial field of action for science and its applications, that it was time to move the big science closer to the industrial centers, to the east.»

Newspaper "Pravda", February 14, 1956.

«The future of the Siberian branch depends entirely on how successfully we manage to keep the harmonic three unity "science – education – industry"».



Basic Principles for Organization of Siberian Branch of RAS

- **Multidisciplinarity and concentration of Institutes in Scientific Centers;**
- **Development of priority trends of fundamental researches;**
- **Integration of science and education: involvement of staff and facilities of academic institutes in teaching at Novosibirsk State University and other Siberian universities; graduation of students for research institutes, higher schools and industry of Siberia;**
- **Application of scientific results into industry and practice, first of all, in Siberian region.**



SIBERIAN BRANCH OF RAS



SIBERIAN BRANCH OF RUSSIAN ACADEMY OF SCIENCES

- Total employment – 29 631
- Number of researchers – 8 878
- Number of Doctors of Sc. – 1 853
- Number of Members of the Russian Academy of Sciences – 155
- Four academic towns (in Novosibirsk, Irkutsk, Krasnoyarsk and Tomsk)
- Nine scientific centers (in Novosibirsk, Irkutsk, Krasnoyarsk, Tomsk, Yakutsk, Ulan-Ude, Kemerovo, Omsk and Tyumen)
- Single institutes in Barnaul, Biisk, Kyzyl and Chita
- More than 100 scientific schools in field of Mathematics, Physics, Chemistry, Biology, Geology and Geophysics, Computer Science, History, Economy, Humanity a.o.
- Budget from different sources in 2011 – above 21 Bln. Rub. (0,7 Bln \$)



Scientific Potential of the Siberian Branch of the RAS

Network of Field Stations of SB RAS

- helio-cosmophysical
- seismic
- permafrost
- geographic
- biospheric



System of Science
Centres and Institutes



Mechanics and Mathematics

Physics and Engineering



Chemistry



Life Sciences



Earth Sciences



Social Sciences



*International research centres founded under
the auspices of the SB RAS*



*Universities with chairs formed on the basis of SB RAS
institutes*

INTEGRATION OF SB RAS INSTITUTES WITH UNIVERSITIES

- The institutes of SB RAS integrate with universities, and as a result there are **179 basic chairs**, 80 research-education centers, 52 objects of joint scientific infrastructure and 42 other education structures functioning with participation of SB RAS;
- The joint chairs involve **5660 students** of the 3rd – 5th years and 866 undergraduates;
- **1879 researchers** (including 647 doctors and 969 candidates of science) from the SB RAS institutes supervise 2758 students preparing their graduation and master's theses;
- **2410 scientists give lectures in the universities**, among them 967 doctors and 1240 candidates of science. 1327 researchers supervise the graduate students, including 859 doctors and 465 candidates of science;
- **15 textbooks and 255 manuals** have been prepared by the joint efforts of the institutes and universities.

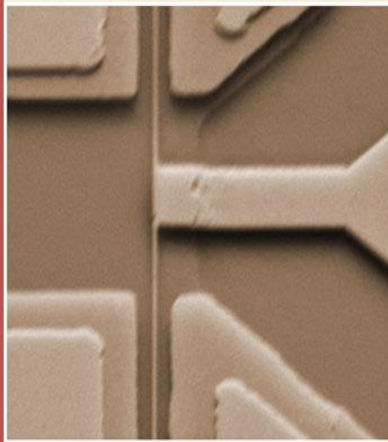


Novosibirsk State University - National Research University

- Established in 1958, simultaneously with the Siberian Branch of Academy of Sciences of the USSR. On September 29, 1959, Academician S.L.Sobolev gave the first lecture to the students of the new university;
- Number of students today is 6011, 1407 students graduated in 2011;
- 80 % of the NSU faculty are the scientists from 26 institutes of SB RAS, including 55 RAS members, more than 450 doctors and 700 candidates of sciences. 90 chairs of NSU are located in the SB RAS institutes;
- More than 50 thousands of specialists have been graduated, more than 6 thousands of them became candidates of sciences, and more than 1600, doctors. 48 graduates of NSU are members of Russian Academy of Sciences. There are winners of prestigious international and Russian awards and prizes among the NSU graduates.
- The NSU graduates are directors of more than 20 institutes of RAS. Many of them are employed as managers of large industries and business organizations.
- Today NSU carries out six megagrants of Russian Ministry of Education and Science with participation of scientists from abroad.



Scientific and Education Center at Novosibirsk State University “Nanosystems and Modern Materials”



Элемент транзистора



Биологические отложения со дна озера Байкал

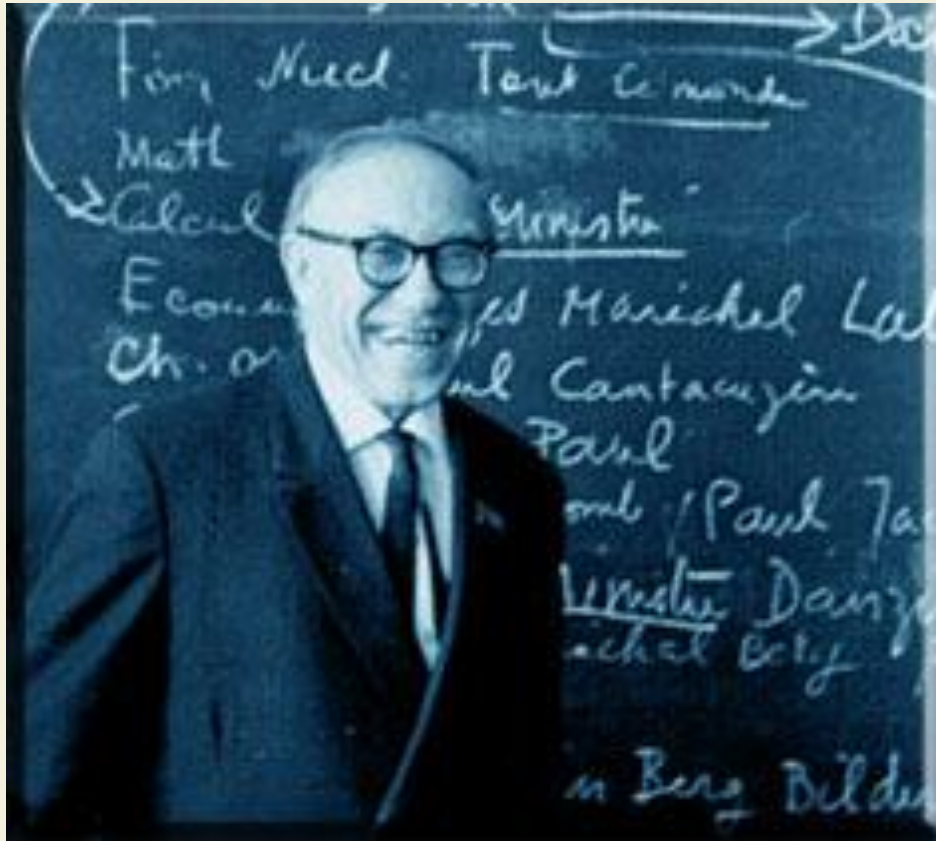


Various equipment for scanning and transmission electron microscopy, scanning tunneling and atomic force microscopy, spectroscopy and electrical measurements





Special Education-Scientific School of Novosibirsk State University



Founder of the physical-mathematical school of Novosibirsk State University,
Academician Mikhail Alekseevich
LAVRENTYEV

- The Special Education-Scientific School of physical-mathematical and chemical-biological specializations was organized in accordance with the decree of Council of Ministers of the USSR № 1241 of October 21, 1988, on the basis of Novosibirsk boarding high school of physical-mathematical and chemical-biological specializations named after Academician M.A. Lavrentyev.
- Every year more than 300 scholars graduate from the school, and more than two thirds of them enter NSU.

Young researchers of SB RAS receive the prizes of outstanding scientists
April 21, 2011
House of Scientists, Novosibirsk Akademgorodok



Ranking Web of World Research Centers and Universities

Ranking Web of World Research Centers

January 2012

RANKING			POSITION				
RUSSIA	EUROPE	WORLD	INSTITUTION	SIZE	VISIBILITY	RICH FILES	SCHOLAR
1	20	48	Siberian Branch of Russian Academy of Sciences	243	134	70	31
2	35	80	Joint Institute for Nuclear Research	93	315	101	74
3	44	97	Russian Academy of Sciences	412	127	199	116
4	83	173	Ural Branch of Russian Academy of Sciences	620	560	86	68
4	126	264	State Institute of Information Technologies and Telecommunications	269	205	1,0321	210

Ranking Web of World Research Centers and Universities

Ranking Web of World Universities

January 2012

RANKING			INSTITUTION	POSITION			
RUSSIA	EUROPE	WORLD		SIZE	VISIBILITY	RICH FILES	SCHOLAR
1	41	147	Lomonosov Moscow State University	638	271	297	68
2	195	465	Tomsk State University	1,794	528	827	444
3	233	538	Saint Petersburg State University (1)	1,617	1,122	664	295
4	264	604	Novosibirsk State University	1,582	338	1,533	932
5	303	701	Moscow Institute of Physics and Technology	16	207	1,191	905
19	44	1317	Siberian Federal University	626	4,923	897	1,003