



VOEIKOV
MAIN
GEOPHYSICAL
OBSERVATORY



Federal Service for
Hydrometeorology and
Environmental Monitoring

Radiometric standard group in Russia and organization of the unit transfer to the Russian solar radiometric network

Rodionov Artem, Iakovlev Vladislav

The Voeikov Main
Geophysical Observatory

About The Voeikov MGO

the oldest meteorological institution in Russia was founded in 1849 by Kupffer A.T., and was named "Main Physical Observatory"



Kupffer, Adolph Theodor



First building of Main Physical Observatory

in 1949 it was renamed in honor of the famous Russian climatologist A.I. Voeikov to "Voeikov Main Geophysical Observatory"



Voeikov Alexander Ivanovich



Now The Voeikov MGO is the scientific institution of The Federal Service For Hydrometeorology and Environmental Monitoring of Russian Federation (Roshydromet)

About The Voeikov MGO



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Main directions of researches and developments:

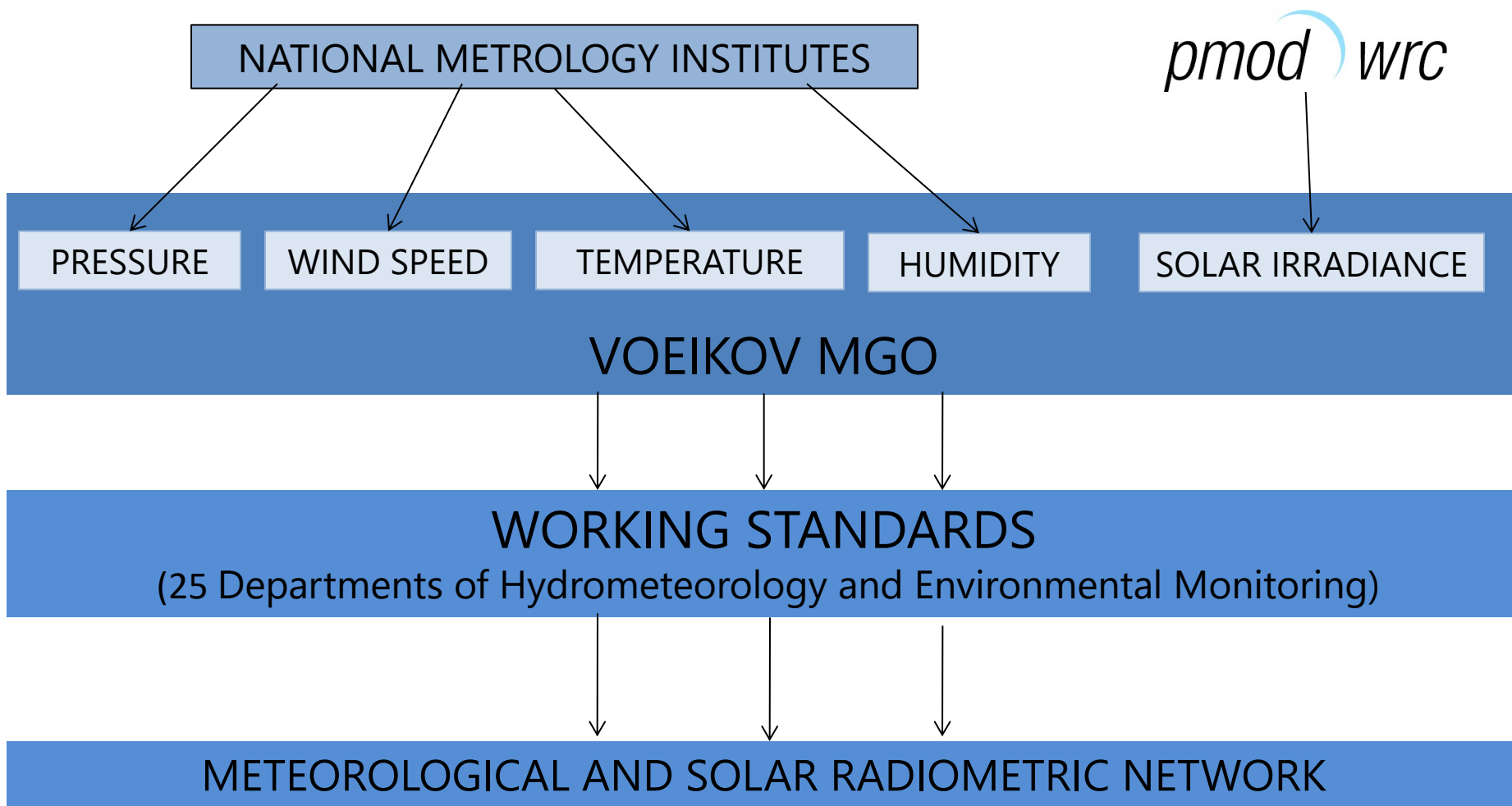
- Long-term weather forecasting
- Climate theory
- General and applied climatology
- Cloud physics and weather modification
- Monitoring the state and pollution of the atmosphere and the chemical composition of atmospheric precipitation
- Methodologies for the construction and operation of meteorological observational networks and networks for monitoring the state and pollution of the atmosphere and the chemical composition of atmospheric precipitation
- The development of methods, instruments, measurement and information systems, information technology in meteorology
- Metrological support of net measurements, standardization in meteorology



- World Radiation Data Center (WRDC)

The WRDC centrally collects and archives radiometric data from the world to ensure the availability of these data for research by the international scientific community.

Metrology department of Voeikov MGO



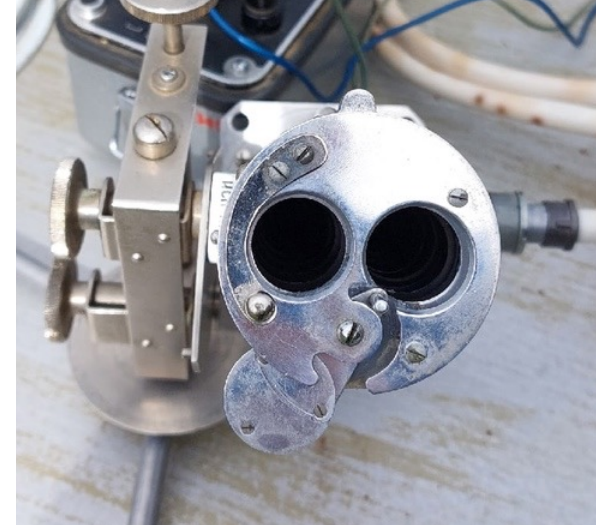
Our radiometric standard group



PMO6 № 0817

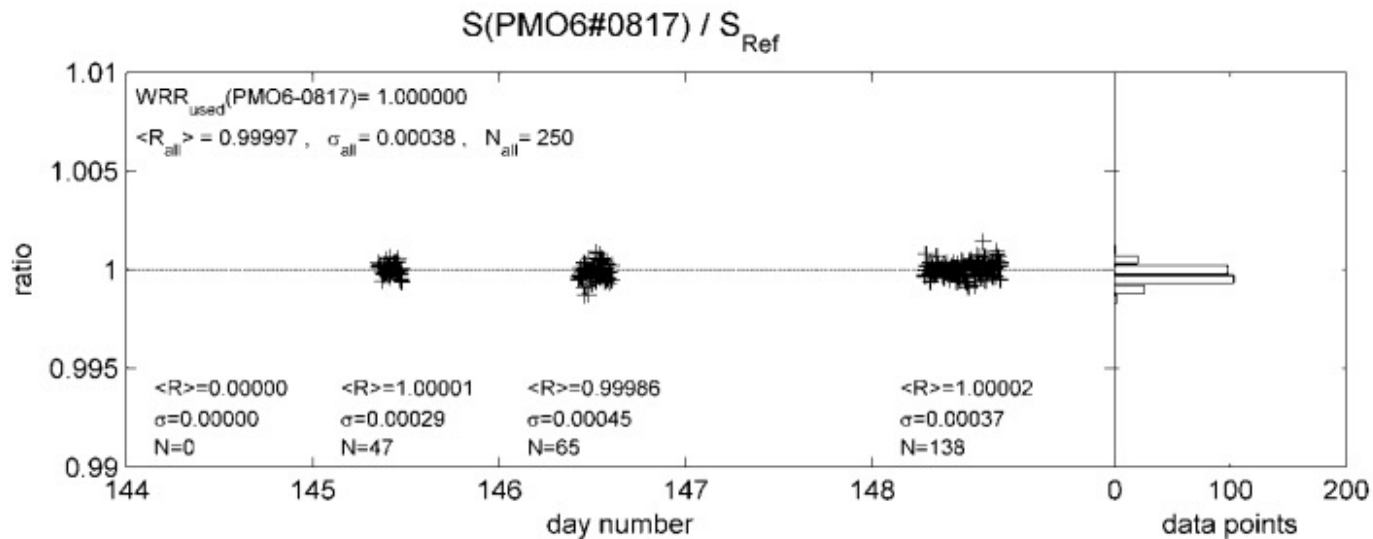


Two M-59 pyrhelimeters (Angstrom type)
№ 14 & № 15 (designed by MGO in 1970's)

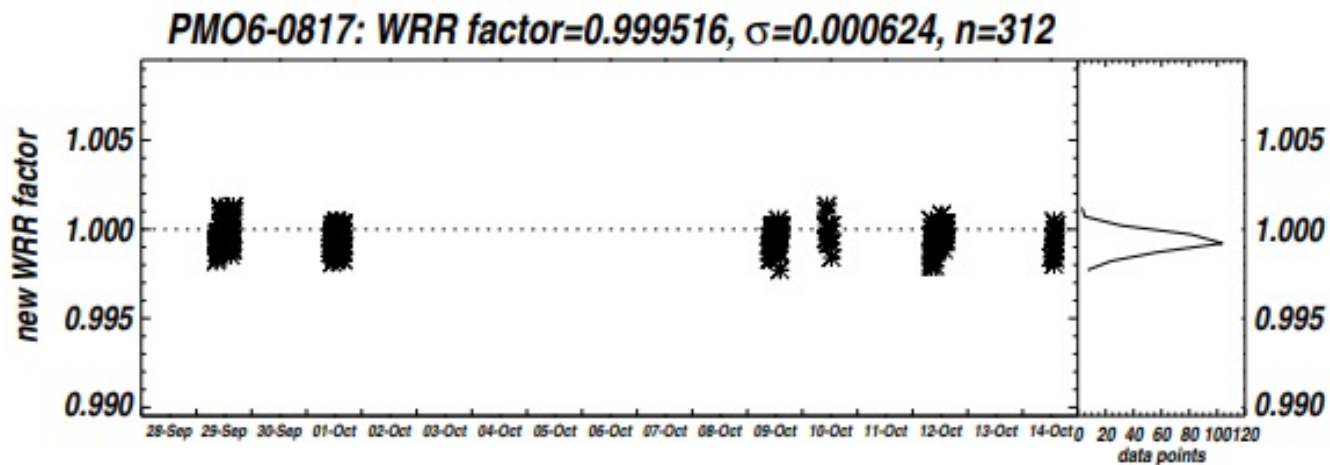


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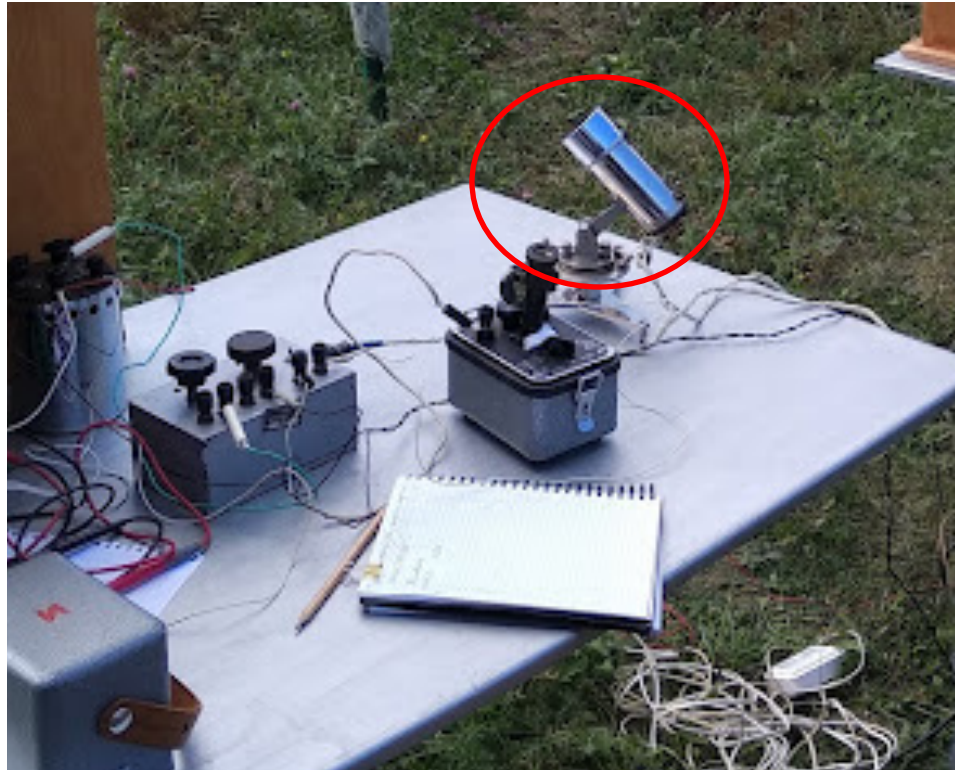
Baltic Region Pyrheliometer Comparisons, 2012



IPC-XII, 2015

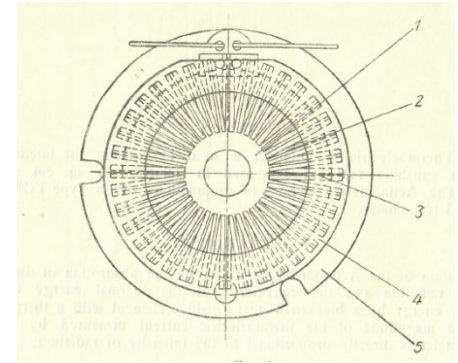
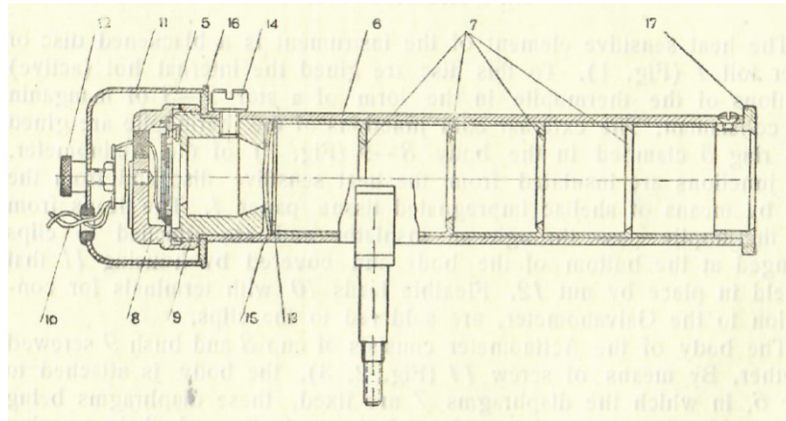


History of Å212



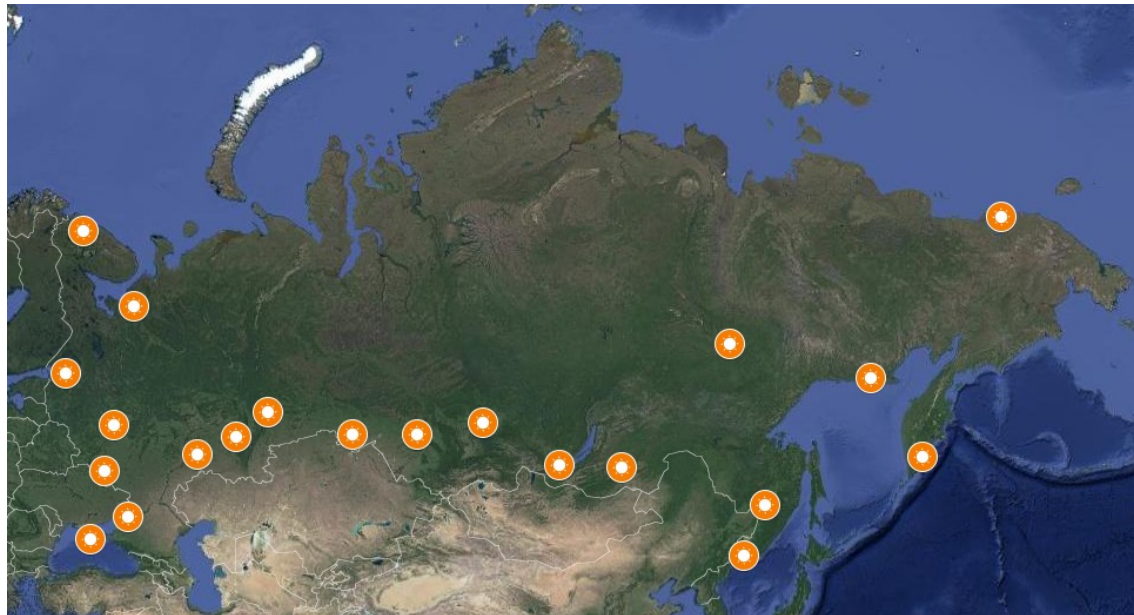
<i>Instrument</i>	<i>IPC-V</i>	<i>IPC-VI</i>	<i>IPC-VII</i>	<i>IPC-VIII</i>	<i>IPC-IX</i>	<i>IPC-X</i>	<i>IPC-XI</i>
A212	1.019121	0.999320	1.001542	1.001750	1.000650	1.003381	0.996482

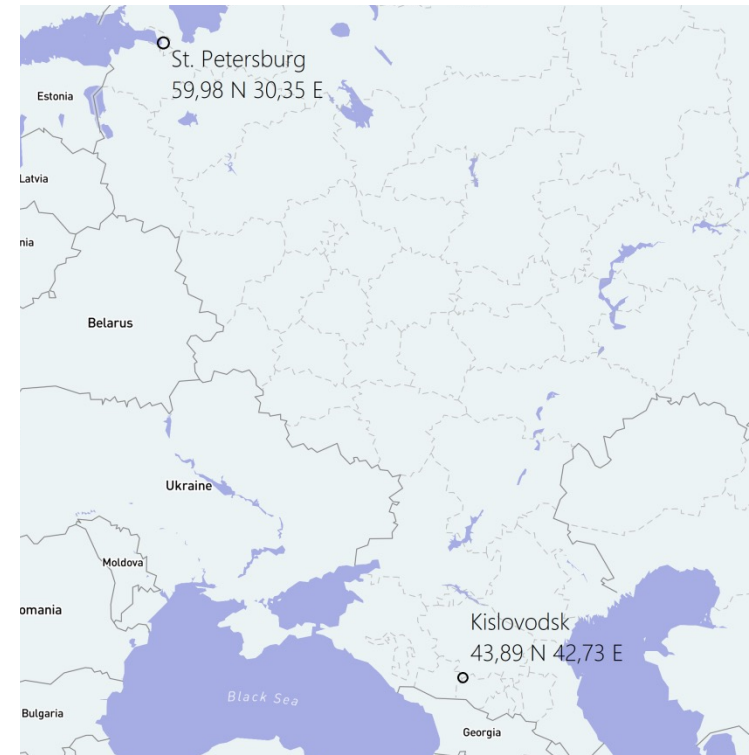
Working standards



M-3 actinometer

63 actinometers in 21 Departments of Hydrometeorology and Environmental Monitoring





National actinometer comparisons
September 2019



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Thank you for attention!

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International Pyrheliometer Comparisons IPC-XIII
Davos, 2021