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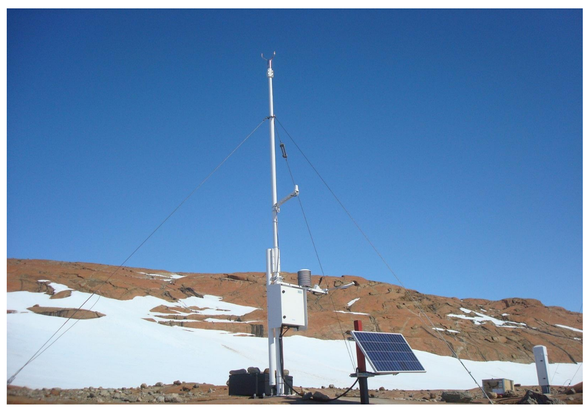
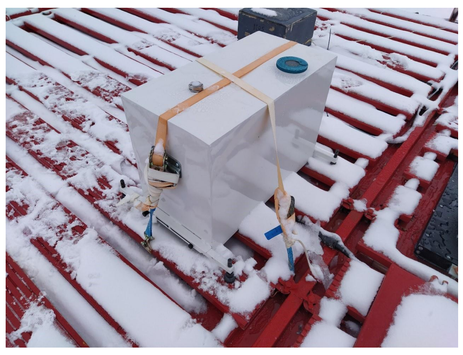
The practice of using next-generation scientific instruments for remote sensing of the natural environment of Antarctica at the Belarusian Antarctic Station



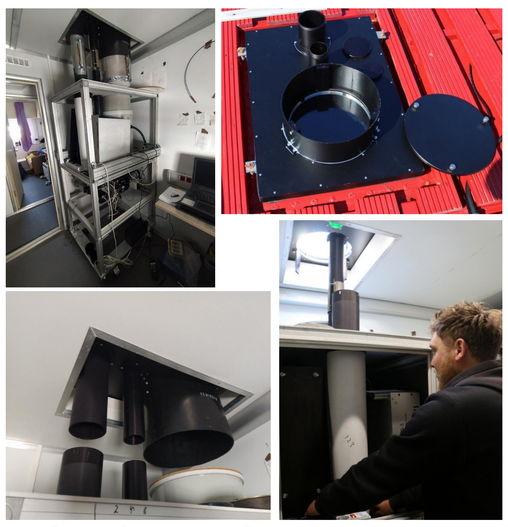
Automatic weather station Vaisala AWS 310
Produced by Vaisala, Finland. Provides round-the-clock measurements and automatic registration of basic meteorological parameters (air temperature, humidity, atmospheric pressure, wind speed/direction, visibility range/precipitation intensity and cloud cover depth) with a measurement discreteness of 1 minute. Measurement data are automatically transmitted via satellite communication channels to the database of NASB



Ultraviolet Spectroradiometer PION-UV
Developed at the National Center for Monitoring of the Ozone Layer of the Belarusian State. It is designed for registering spectra of energy illumination in the range of 280-460 nm

Automated Actinometric Observation System Peleng-SV
Developed by the Belarusian JSC"PELENG". It automatically records the following parameters: incoming solar radiation, reflected solar radiation, radiation balance, and duration of sunshine

Spectrum albedometer AS-A
Developed at the Institute of Physics, National Academy of Sciences of Belarus. Designed to measure reflectance spectrums of the underlying surface in the visible and near-infrared range



Multivolume polarizing lidar “Pole”
Designed at the Institute of Physics of the National Academy of Sciences of Belarus (NASB). Designed for remote sensing of atmospheric aerosol and clouds, measuring concentration of aerosol particles, determining parameters of aerosol and cloud microstructure, measuring water vapor content in the atmosphere

Automatic Ground level ozone meter PION-PO
Developed at the National Center for Monitoring of the Ozone Layer of the Belarusian State University. It is designed for measuring ground-level ozone concentration

UV Radiation Meter PION-V
Developed at the National Center for Monitoring of the Ozone Layer of the Belarusian State University. It is designed to measure levels of solar ultraviolet radiation

Automatic scanning photometer CIMEL CE 318N-EBM9
Produced by "CIMEL Electronique", France. It is designed for measuring optical characteristics and microstructure of aerosols in the spectral range of 340 - 1020 nm. The Belarusian Radiometric Station has been conducting measurements in Antarctica since 2008 as part of the global radiometric network AERONET. The arrays of radiometric measurement data are stored in the databases of the international networks AERONET, EARLINET, and CIS-LiNet

Seismological monitoring station
Software development and hardware complex formation were carried out at the Geophysical Monitoring Centre of NASB

Overhauser magnetometer
Developed by the Quantum Magnetometry Laboratory, Ekaterinburg, Russia. Designed to measure the geomagnetic field modulus and can be used both for walking surveys and as a stationary variation station

A20-X unmanned aircraft complex
Country of manufacture - China. Designed for aerial photography and video surveying using a wide range of additional scientific equipment with a payload of up to 3 kilograms, as well as for search and rescue work

Unmanned underwater vehicle GNOM
Country of manufacture - Russia. It is designed for conducting underwater photo/video shooting and sampling of marine life at depths up to 150 meters