

## Announcement

The exhibition of the most significant results of scientific, technical and innovative activities dedicated to the Day of Belarusian Science

February 4, 2022

Minsk, Presidium of the National Academy of Sciences of Belarus, Independence Avenue, 66

At the exhibition BSUIR will introduce

### Radar detector of buried objects

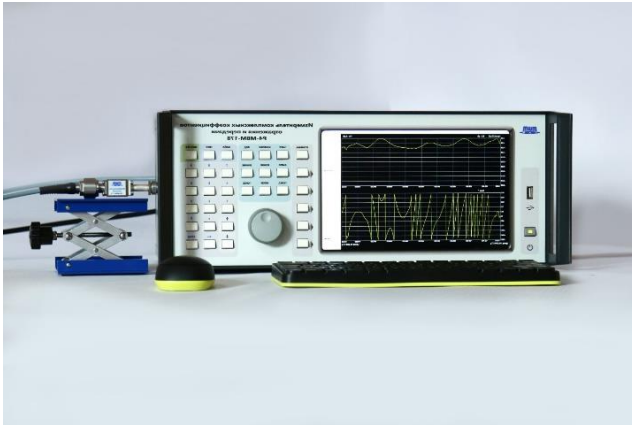


The instrument is designed for the detection of deep buried objects (dielectric and metal) and determining of the depth of their occurrence. It allows to visualize the internal structure of building structures, as well as to determine defects in the pavement (cracks, air cavities).

Features and advantages:

- the detection of buried objects at a depth of up to 40 cm;
- increased dynamic range;
- improved channel balance;
- high technological effectiveness;
- the stability of characteristics.

## Control, measurement and test microwave equipment: vector network analyzer and calorimeter



The equipment is designed for technical maintenance and repair of jamming stations, as well as for the replacement of outdated material and technical base in the defense and telecommunication industries of the Republic of Belarus. The instruments are included in the Register of Measuring Instruments of the Republic of Belarus and Russian Federation.

Features and advantages:

- operating frequency range: 118–178 GHz;
- high measuring precision;
- can be integrated into a measuring system via standard Ethernet interface.

### Spectral-acoustic cavitometer indicator (cavitometer)

The indicator is designed for measuring cavitation activity, as well as for the research of spectral characteristics of cavitation noise and the dynamics of the development of the cavitation region in liquids with a temperature up to 1200 °C. Application area: industry, metallurgical research, chemistry, sound chemistry, biology, and medicine.

Features and advantages:

- equipped with an in-built SD card and a USB interface;
- the possibility to visualize cavitation noise spectrum;
- the spectral analysis range of cavitation noise from 10 kHz to 25 MHz;
- contains a program for measurement registration and data processing in real time with visualization of data in the form of graphs;
- automatic correction of spectral sensitivity of cavitation sensors by means of comparison with the sensitivity of an exemplary cavitation sensor.

## Portable cavitometer

The equipment is designed for cavitation activity measurement and control in powerful ultrasonic fields and hydrodynamic cavitators. The instrument can be used to optimize ultrasonic technological processes, to detect and measure the intensity of cavitation in hydraulic systems, as well as to measure cavitation thresholds.

Application area: industry, metallurgical research, chemistry, sound chemistry, biology, and medicine.

Features and advantages:

- ensures the separation of the contributions of stationary and non-stationary cavitation;
- equipped with an in-built SD card and a USB interface;
- the set includes software for processing measurement results.



Spectral-acoustic cavitometer indicator



Portable cavitometer