

The proposed pendulum instrument is designed for determining changes of the gravity vector direction and can be used in geodetic, geophysical, astronomical, or metrological measurements. The instrument contains a vertical pendulum element and a horizontal pendulum element. The vertical pendulum element is designed as a rigid rod, which is suspended to a ground-based support made as a knife blade that defines the direction of the horizontal axis perpendicular to the measurement plane in which the vertical pendulum element will oscillate when the gravity vector changes its direction. At the other end of the rod, the horizontal pendulum element is rigidly fixed. The horizontal pendulum element is sensitive to the change of the position of the vertical pendulum element in the measurement plane. The proposed instrument provides a possibility to directly determine the gravity vector direction with an error of no more than 0.001 of angular minute.