COORDINATE AND HEIGHT SYSTEMS USED IN GEODESY

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Annotation. The position of a point on the earth in the geographical coordinate system is determined by its latitude and longitude. The geographical coordinates of a point on the earth are divided into astronomical and geodetic coordinates depending on the method of determination.

Keywords: Horizontal Angle, Theodolite Checks, Astronomical Meridian, Geodetic Coordinates, Geodetic Meridia, Parallel Plane.

Geodetic coordinates: In determining the position of any point in the geodetic coordinate system, the reference surface is the reference ellipsoidal surface, and the basic coordinate lines are the geodetic meridian and parallels. In determining the position of any point on the earth, the point of intersection of the meridian and parallel drawn through that point is used. The meridian drawn through a point represents the geodetic length of that point, and the parallel represents the latitude.

The section drawn longitudinally through the small axis of the earth's ellipsoid is the meridian plane, and the line formed by the intersection of this plane with the surface of the ellipsoid is called the geodetic meridian. A section parallel to a plane drawn from a point on the earth's ellipsoid perpendicular to its axis of rotation is called a line parallel to the intersection of this plane with the surface of the ellipsoid.

The parallel section passing through the center of the Earth's ellipsoid is called the equatorial plane.

The geodetic latitude of a point M is calculated from 0 ° to 90 ° from the equator to the poles V, if the point is north of the equator, its geodetic latitude is called north latitude (☐), and if south, it is called south latitude (-). The geodetic length is denoted by L, the angle between the geodetic meridian and the principal meridian The geodetic length is measured from 0° to 180° from the principal meridian to the west (☐) and to the east (-).

Astronomical coordinates. In determining the astronomical coordinates of points on the earth, the geoid is the main surface and the astronomical meridians and parallels are the coordinate lines. The astronomical meridian of a given point is the line formed by the intersection of a plane drawn parallel to the earth's axis of rotation with the earth's surface in the direction of the line drawn from that point.

The angle formed between the astronomical meridian of a point on the earth and the planes of the Greenwich meridian, which is assumed to be the origin, is denoted by l as the astronomical length of that point. The angle formed between a line drawn from a point on the earth and the equatorial plane is denoted by j as the astronomical latitude of that point.

Geographical coordinates. In a geographic coordinate system, the position of a point on the earth is determined by its latitude and longitude.

The geographical coordinates of a point on the earth are divided into astronomical and geodetic coordinates depending on the method of detection.

Geodetic and astronomical coordinate systems are referred to as geographical coordinates with a common name. In this case, the coordinates of the point are assumed to be determined astronomically. The advantage of geographical coordinates is that the position of all points on the earth is determined in a single system

Rappers are usually placed on the vertical walls of buildings as well as near triangulation points. They come in the form of rectangular brass cast plates (180mm ☐ 90mm) with a large cartridge attached to the back. The surface of the cartridge bracket is cemented to a poplar cut in

the wall so that it lies in the same plane as the surface of the object. Such marks used in precision leveling are reinforced with special fittings.

Each flash bracket will have a unique serial serial number and FI Br in the list. It is marked with a net. Flash brackets are placed at intervals of about 2km along the leveling directions and every 5-7km along the secondary leveling directions.

Bolt drills (OSBM bolts) are installed on horizontal surfaces without the possibility of installing other types of bolts.

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