

AZIMUTHS OF NORMAL SECTION'S CURVE OF SPHEROID IN THE UNITARY CARTESIAN SYSTEM OF GEOCENTRIC COORDINATES

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The article provides new formulas for calculating the azimuth of the normal section by the coordinates of its endpoints in the unitary Cartesian system of geocentric coordinates. The solution is made with using the vector algebra. Existing formulas for calculating the azimuth of the normal section by the coordinates of its endpoints are present in the system of curved geodetic coordinates – latitude and longitude of these points. The proposed vector formulas, as well as already known in the system of curved coordinates, solve the problem with precision “to the position in space”. In terms of computation, all solutions are almost equivalent.

Obtaining formulas in the unitary Cartesian system of geocentric coordinates initiated by the fact that in solving geosatellite problems such coordinates are basic.

Key words: cartesian system of geocentric coordinates, vector of the unit length of the gradient, tangent vector of the unit length, normal plane.

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