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Using of EGM08 for Normal Heights Determination

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The determination of physical heights using EGM08 is very attractive for many scientific workers in Physical Geodesy. The second modified geodetic boundary value problem in two modified forms was studied for determination of normal heights. The first form uses EGM08 spherical harmonic coefficients up to degree and order 2160 and point gravity data around GNSS site in different radius of spherical cap. The second form uses theory of simple Molodensky problem with special coefficients computed from EGM08 up to degree and order 2160 and point gravity data around GNSS site in different radius of spherical cap. The results were tested by GPS/leveling data in the area of Slovakia. The discussion about used both theories and results will be presented at the EGU2009 General Assembly.