



Motion of North and South magnetic poles in 2001-2009

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We created the daily average spherical harmonic models of the main geomagnetic field ($n = m = 10$) with an interval of 4 days using vector data CHAMP satellite during May 2001 – December 2009 (2001.5-2009). Using obtained set of the models coordinates of the North and South magnetic poles (i.e. the point on the Earth's surface where the magnetic field lines are vertical) were calculated. Both poles continue to move northward and westward. North pole shifted 400 km, South pole moved 10 times slower.

Accelerated motion of the North magnetic pole stopped around year 2003, when rate of motion increased to ~ 62.5 km/yr. Then the motion of North pole started to decelerate to ~ 45 km/yr in 2009. At the same time it should be noticed that North pole began to retrace in the direction of Canada, moving northwestward as before. This follows from the fact that during this period the rate of the pole latitude movement decreased from 58 to 35 km/yr, while the longitude speed increased from 23 to 32 km/yr. Thus, we can hope that North magnetic pole just "wanders" and will not leave Canadian anomaly and will not reach Siberia in approximately 50 years, as predicted earlier.