

The second round review of 'Non-singular spherical harmonic expressions of geomagnetic vector and gradient tensor fields in the local north oriented reference frame' by Du et al.

The authors have revised the paper properly and I can recommend its publication, but there are still some minor issues, which must be considered and the paper should be corrected accordingly. I will present them below:

1. The use of language. You should either use American or British not a mixture of them. I suppose that you are writing in American then please correct the followings:
Page 3, Line 34: modelled -> modeled
Page 4, Line 48: modelling -> modeling
2. When you refer to any section or subsection by their number the first letter should be written in capital form for example:
Page 5, Line 70, Page 6, Line 91, section 3 -> Section 3
Page 16, Lines 259, section 2.1 -> Section 2.1 and section 2.3 -> Section 2.3
3. Please use parenthesis using the mathtype or your equation editor and not those from the keyboard in all your equations, this make the mathematical formulae to appear better.
4. Please change $\frac{\partial P_l^m}{\partial \theta}$ to $\frac{dP_l^m}{d\theta}$ in all of your equations as the Legendre functions are only function of the co-latitude and you cannot use the partial derivative operator for them.
5. Page 17, Line 278, The satellite gradiometry mission is related to the gravity gradiometry and has nothing to do with the magnetic field. Please make this sentence clearer!

Best regards
Mehdi Eshagh.