

## ***Interactive comment on “Ellipsoids (v1.0): 3D Magnetic modelling of ellipsoidal bodies” by Diego Takahashi Tomazella and Vanderlei C. Oliveira Jr.***

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I could not find any flaws in this paper, it is diligently prepared with a keen eye for details and clearly presented; it was a pleasure to read. Dr Clark already addressed minor corrections and avenues for further development. I recommend the paper for publication.

This paper presents a review of the existing literature and mathematical descriptions of magnetic modelling of ellipsoids. I consider this a relevant scientific contribution as it integrates key points of the many different published papers on the matter into one paper. Equations for calculating demagnetization factors for ellipsoidal bodies are provided in

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one consistent framework. Furthermore the 0.1 SI threshold for self-demagnetisation is here, apparently for the first time, analytically quantified and a practical formula is provided to estimate the threshold level as a function of a maximum demagnetization factor. The various equations have been integrated into the ‘Fatiando a Terra’ open source modelling package which provides the opportunity for researchers to replicate and validate the results shown.

One small nit-pick: p.6, ln 24: “which supported the Maxwell’s (1873) postulate” – delete “the”

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