

***Interactive comment on “A linear mixed model,
with non-stationary mean and covariance, for soil
potassium based on gamma radiometry” by
K. A. Haskard et al.***

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Received and published: 18 June 2010

We are grateful to the referees for their helpful comments, which we have considered carefully in revising the paper. We describe below how we have responded. The revised paper has been uploaded as a supplement to the response to comments from Referee 1.

Referee 2

Comment 1. Model selection. See our additions in the third paragraph of section 5.

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Comment 2. We do not think that it is feasible, or within the scope of this paper, to set out an introductory account of the Linear Mixed Model, but we do direct the reader to two references which give a more expansive treatment; see the last sentence in section 2.1.

See our response to Comment 4 from Referee 1, ‘Since the model was fitted by likelihood not least-squares, a conventional R^2 cannot be computed. To give the intuitive indication of the goodness of the model predictions that the referee suggests, we introduced a prediction adjusted coefficient of determination, R_{PA}^2 , see Equation (10) and Table 1. These show that almost 75% of the variability in the validation data is accounted for by the predictions from the models using the radiometric data as a covariate.’

Interactive comment on Biogeosciences Discuss., 7, 1839, 2010.

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