

Interactive comment on “Soil biogenic emissions of nitric oxide from a semi-arid savanna in South Africa” by G. T. Feig et al.

Anonymous Referee #1

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This manuscript contains an evaluation of NO biogenic emission from soil from a semi-arid savanna from South Africa (Kruger Park region). From meteorological data and NO potential emissions determined in laboratory, authors present an up-scaling methodology to provide an estimate of the emission at the regional scale and for three years (2003 to 2005). Estimate of NO emission at any geographical scale from local to global is definitely of first importance to assess potential impact of this biogenic NO on the atmospheric chemistry in the context of climate and demographically related changes. This estimate provides a valuable contribution to this effort at the regional scale. As mentioned by authors, data are scarce in arid regions, as well as in the tropical region, and more particularly may be in Africa. However, there literature on the subject does not appear to be fully complete. Authors' effort has to be recognized, and this makes

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this manuscript of great interest. The methodology presented to correlate laboratory measurements (emission potential) to field data (meteorological) is correct, and there are no reasons that this manuscript could not be accepted for publication in ACP after some corections. There might be some statistical analysis missing in the results part, and this should be improved in a next version. However, the main findings should not be affected after this statistical work. Non-linear influence of water soil content, soil texture and temperature on the NO emission by soil is not fully addressed and threshold effet on emission should be discussed (more work to be done on available literature, including in ACP).

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