

# CH<sub>4</sub> Parameter Estimation in CLM4.5bgc Using Surrogate Global Optimization

Review

The paper has been considerably improved and now my comments have been properly addressed:

1. Small technical details such as size of caption in figures 2 and 5 have been fixed.
2. The authors provide a clear picture about what are the main contributions of their paper. Even more, the authors provide a clear difference between their method and the methods proposed in the next papers:
  - Haylock, M. R., N. Hofstra, A. M. G. Klein Tank, E. J. Klok, P. D. Jones, and M. New (2008), A European daily high-resolution gridded data set of surface temperature and precipitation for 1950-2006, *J. Geophys. Res.*, 113, D20119, doi:10.1029/2008JD010201.
  - P. Goovaerts, Geostatistical approaches for incorporating elevation into the spatial interpolation of rainfall, *Journal of Hydrology*, Volume 228, Issues 12, 21 February 2000, Pages 113-129, ISSN 0022-1694, [http://dx.doi.org/10.1016/S0022-1694\(00\)00144-X](http://dx.doi.org/10.1016/S0022-1694(00)00144-X).
  - Uwe Haberlandt, Geostatistical interpolation of hourly precipitation from rain gauges and radar for a large-scale extreme rainfall event, *Journal of Hydrology*, Volume 332, Issues 12, 1 January 2007, Pages 144-157, ISSN 0022-1694

**Since all my comments have been taken into account in order to improve the paper, I suggest to accept this revision.**