CH4 Parameter Estimation in CLM4.5bgc Using Surrogate Global Optimization

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

- 1. The authors make clear that the algorithm is applied to deterministic models.
- 2. They provide a clear explanation about how to avoid basis degenerations. This is extremely important in equation 8.
- 3. The computational effort of the method is compensated with the re-use of the computed parameters for future simulations.
- 4. The number of model propagations required during the optimization process is clear now.

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