

Interactive comment on “The libRadtran software package for radiative transfer calculations (Version 2.0)” by C. Emde et al.

C. Emde et al.

claudia.emde@lmu.de

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We would like to thank the anonymous reviewer for the helpful comments and suggestions. Please find below our response to all points (reviewer comments in italics):

1) Section 3: The authors present the main features of the basic solvers used in libRadtran and the improvements that have been implemented in them. However, they do not provide a comparison with other codes/models. Moreover, it would very useful if they could provide a table containing the estimated uncertainties in the derived irradiances/radiances (possibly as a function of solar zenith angle), to help users select the right solver for their particular needs.

This is a very good suggestion since libRadtran participated in various intercomparison studies where the uncertainties of the different solvers were assessed. A Subsection

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on the "accuracy of solvers" has been included in Section 3. References to model intercomparison studies are provided. A reference to a comparison between the MYSTIC and the DISORT solver is also given. Further it is suggested to use MYSTIC as reference solver in order to estimate the uncertainties of other solvers. A table has not been included because the range of applications is too large and there are too many parameters despite solar zenith angle that can influence the accuracy of the result (e.g. viewing angles, cloud optical properties, aerosol optical properties, surface properties ...).

2) Section 8.2: *In the LibRadtran manual, it is mentioned that the "translate.py" function can be found under the directory "src_py/" but it is not clear at this point in the text.*

The path has been included in Section 8.2.

3) Section 11: *It would nice if the authors could provide the input files (possible as a supplement) so that the example presented here can be easily repeated by interested users. Moreover, the package itself includes a number of examples under the directory "examples/" that could be used (especially by new users) to create input files they would need.*

The "examples" directory is now mentioned. Input files and python scripts to loop over various parameters are provided as supplement to the paper.

Interactive comment on Geosci. Model Dev. Discuss., 8, 10237, 2015.

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