

Interactive comment on “Technical note: The libRadtran software package for radiative transfer calculations – description and examples of use” by B. Mayer and A. Kylling

B. Mayer and A. Kylling

Received and published: 7 June 2005

We thank reviewer 1 for his constructive comments! Following are the comments (in italic) and our replies:

1) I was confused about the polar angle integration limits in Eqs. (4) and (6) which imply a sign convention. For example in the case of an isotropic radiation field ($L=\text{const.}$) integration of Eqs. (5) and (6) yield $2\pi L$ for F_{\downarrow} and $-2\pi L$ for F_{\uparrow} . Thus the net (vertical) flux cancels out, but of course the total flux corresponds to $4\pi F$. The authors should address this point.

The reviewer is certainly correct! The integration limits were wrong and we corrected

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper

EGU

Interactive
Comment

them in the revised manuscript.

2) On page 1328, line 26 and the following, layer and level properties are discussed. The layer concept used by the program is also illustrated in Fig. 4. The authors should add a note on how many layers are used in the actual RT calculations and whether or not this is an adjustable parameter.

Done. The default number of levels in the standard atmosphere is 50, between 0 and 120km. This number is easily changed and we used up to 1000 layers for our calculations.

1) Page 1329, line 22 (twice) and 1351, lines 11 and 13: Replace 'specie' by 'species'. Species is both singular and plural.

Done.

2) Page 1352, line 5: Replace automagically by automatically (unless magic is involved in RT calculations).

The authors first became aware of the word automagically while reading the "Programming Perl" book by Larry Wall and Randal L. Schwartz. Larry Wall is a linguist and is careful in his wording. Automagically describes a process that occurs automatically and with a certain level of mystery so that it seems somewhat magical. There is certainly nothing magical about radiation transport. However, in the paper the word is used about a script which main purpose is to set a number of options for the compiler, linker etc. This process is automatic and may for the non-programmer appear as magical as well. Hence, we choose to use the word automagically.

3) A wavelength should be indicated in Fig. 7.

Done. The figure is actually true for the whole visible wavelength range, as the observations were not spectrally resolved.

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper