

ALARO-0 developments in radiative scheme

(intro to documentation)

Table of contents

1. Brief overview of the new developments (in human language)
2. Basics of ACRANEB radiative transfer scheme (bit of theory)
3. Localization of the code (ascii graphics)
4. Description of changes (pieces of code)
References (who is guilty)

1) Brief overview of the new developments

1. Improved parameterization of cloud optical properties
2. Introduction of Voigt effect in computation of gaseous transmissions
3. New statistical model for bracketting technique in the NER formalism (thermal band only)

2) Basics of ACRANEB radiative transfer scheme

- theoretical part summarizing basic assumptions used in ACRANEB
- it partially overlaps with talks of Jean-Francois
- concentrates mostly on solar computations (easier :-)
- saturation problem is mentioned only marginally

3) Localization of the code

- shows calling tree for concerned subroutines
- trivial since the changes are well localized

4) Description of changes

- modifications in each area described in following manner:
 - list of concerned subroutines
 - list of driving logical keys
 - description of changes subroutine by subroutine

Remarks and warnings

- not a final version, there are still few things to be corrected and some parts to be improved
- beta version available on demand

What to remember

- basic principles of radiative transfer are simple
- what makes life complicated are 2 things:
 - multiple scattering (easier of the two)
 - saturation effect due to band approach (really tough, but satisfaction is life in the colorful world :-)

Microscopic part follows ...

Sorry for those sitting in the
back part of the room! :-)