WHAT IS A NON-BEERIAN EFFECTIVE PHASE
OF A MACROPOROUS MEDIUM?

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ABSTRACT. Within a real phase associated with a non-Beerian effective phase of a macroporous medium, the distances between interfacial source points and the associated interfacial impact points are not statistically independent of the associated cosines of the incidence angles at the impact points. On the other hand, an effective phase is also non-Beerian when the discrete scale of a radiative REV and the continuous scale of the modelling are not separated. When a phase is statistically anisotropic the study of its Beerian or non-Beerian behavior has to be undertaken from an anisotropic modelling.
Interfacial emission is modelled from the reciprocity theorem. The radiative transfer model has to account for the memory effect of all the interfacial sources: In the statistical approach, it is based on a Generalised Radiative Transfer Equation.