

1.1: Introduction

The subject of planetary photometry is, in substantial part, a subset of that branch of mathematical physics known as *radiative transfer*, for which the classical and definitive work is that of Chandrasekhar (1960).

Here we present this aspect of the subject in a modern context and although we have adhered as much as possible to the symbols, nomenclature and notation of Chandrasekhar, the following changes and additions have been made.

1. The quantity called by Chandrasekhar *intensity* I is here called *radiance* L . I make no apology for this since it conforms with modern international radiometric standards.
 2. A plane parallel beam of radiation is specified by its *radiant flux density* F rather than its *net flux* πF , the latter being a more generally defined quantity.
 3. Shorthands for incident, reflected and transmitted radiation, with subscripts i , r and t have been introduced.
 4. Reflectance functions in addition to Chandrasekhar's formulations are presented.
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