

### 4.3: Specific Intensity

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Instead of the word "radiance", for which we have hitherto used the symbol  $L$ , the name commonly used in the context of stellar atmosphere theory is *specific intensity* and the symbol used is  $I$ . In most branches of physics, the word "specific" is used to mean "per unit mass", but that meaning is not intended in the present context. It might be noted that the word "specific" is often omitted, so that what we have hitherto called "radiance"  $L$  is now "intensity"  $I$ . Note also that this is not the same as what is meant in "standard" usage by "intensity", for which the symbol, in standard usage, is also  $I$ . In this and subsequent chapters, I shall always include the word "specific".

The quantity we have in earlier chapters called "radiance" was used to describe the brightness of an extended radiating surface, and the new term "specific intensity" can equally be used in a similar context. More often, however, you may need to imagine yourself embedded somewhere within a stellar atmosphere and you are looking around to see the watts per square metre per steradian arriving at you from various directions.

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