A comprehensive IR line list for atomic transitions on the WWW

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Abstract

We will present our new and comprehensive IR line list for atomic transitions which can be freely accessed on the WWW. This line list gives the wavelength and the relevant information for the upper and lower level of each transition. The list comprises both allowed and forbidden transitions and is presented together with a search tool, which makes it very useful for identifying atomic features in infrared spectra between 1 and 200 micron. We will discuss the completeness of the line list and the capabilities of the search tool. Some examples will be shown.

Furthermore, we have a list of IR lines which is complete for all the transitions within the ground term for all ions up to Ar-like (N=18) for all elements up to Zn (Z=30). This list includes both wavelengths and transition probabilities. In future work, we wish to combine these lists, to extend our collection of transition probabilities and make all these data available on the WWW.