Abstract Submitted
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Infrared Transitions in Fe II ALAN HIBBERT, GWENAELLE CORREGE, Queen's University Belfast — The spectral analysis of the star η Carinae has been undertaken by Verner *et al.* [1]. This analysis requires, as input, oscillator strengths of a wide range of transitions. Many of the transitions in the ultraviolet region have recently been studied both experimentally and theoretically (e.g. Pickering *et al.* [2]). However, the required infrared transitions have received little attention. In this work, we have used configuration interaction methods to calculate oscillator strengths of Fe II transitions of the form $5s - 5p$. Both lower and upper states of these transitions are highly excited, so it is necessary also to include many other states in the calculation, partly because of strong configuration interaction mixing between states.

We will present results for these transitions and compare them with results by Raassen and Uylings [3].

[1] Verner E.M. *et al.*, *Astrophys. J.* **581** 1154 (2002)
[2] Pickering J.C. *et al.*, *Astron. Astrophys.* **396** 715 (2002)
[3] Raassen A. J. J., Uylings P. H. M., *Astron. Astrophys.* **340** 300 (1998)

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