Abstract Submitted
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Electron Impact Excitation of S III[1] CLAIRE HUDSON, CATHY RAMSBOTTOM, Queens University Belfast, UK — We present collision strengths and effective collision strengths for the electron impact excitation of S III. The paralell RMATRX II suite of codes have been used, which perform the calculation in intermediate coupling, and we have incorporated 29 LS states in our calculation, which gives rise to 53 fine structure levels and a total of 1378 transitions. Collision strengths have been generated over an electron energy range of 0-12 Ryd, and from these effective collision strength data are determined for electron temperatures in the range $\log_{10}$T(K)=3.0-6.0. Results are given for transitions between the the fine structure levels within the ground state configuration of $3s^2 3p^2$. Comparisons are made with the previous R-matrix calculations of Galavís, Mendoza & Zeippen [1] (carried out as part of the IRON Project) and that of Tayal & Gupta [2]. Our current work helps to resolve a large discrepancy which existed between the these two earlier calculations for some of the data within the ground state transitions.

1] Galavís ME, Mendoza C, & Zeippen CJ 1995, Astron. Astrophys. Suppl. Ser. 111 347;
[2] Tayal SS & Gupta GP 1999 ApJ 526 544.

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