Differential cross section for the elastic scattering of electrons and positrons by helium atoms at intermediate energies

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Corrigenda

Radiative lifetimes of excited states of rubidium up to quantum number $n = 12$
J Marek and P Münster 1980 *J. Phys. B: Atom. Molec. Phys.* **13** 1731–41

In table 1 the labelling of footnotes h and i should be interchanged, i.e.

[h] Lindgård and Nielsen (1977).
[i] Theodosiou (1979, private communication).

Differential cross section for the elastic scattering of electrons and positrons by helium atoms at intermediate energies
G P Gupta and K C Mathur 1979 *J. Phys. B: Atom. Molec. Phys.* **12** 3071–6

In this paper we have found some errors in the part of the calculation dealing with positron impact. The results marked PB and P for positron impact are thereby altered. The corrected results are presented in table 1. This error also effects our calculations on positron–hydrogen scattering (Gupta and Mathur 1978, 1979). The corrected values for positron–hydrogen scattering are included in table 2.

Table 1. Differential cross sections (in a_0^2 sr^{-1}) for the elastic scattering of helium atoms by positron impact at the energies shown.

	100 eV		200 eV	
Angle (deg)	PB	P	PB	P
0	4·99−02	2·46−01	4·99−02	2·69−01
5	2·57−05	1·23−01	6·91−03	7·86−02
10	3·14−02	5·00−02	7·88−02	4·65−02
20	1·40−01	2·74−02	1·86−01	8·11−02
30	1·88−01	3·83−02	1·68−01	7·87−02
40	1·77−01	4·00−02	1·16−01	5·66−02
60	1·09−01	2·79−02	4·78−02	2·44−02
80	6·20−02	1·69−02	2·18−02	1·15−02
100	3·78−02	1·07−02	1·19−02	6·36−03
120	2·57−02	7·44−03	7·63−03	4·12−03
140	1·96−02	5·77−03	5·62−03	3·06−03
160	1·67−02	4·95−03	4·71−03	2·57−03
180	1·58−02	4·71−03	4·44−03	2·43−03

Notation: $a \pm b = a \times 10^{\pm b}$.

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Table 2. Differential cross sections (in a_0^2 sr^{-1}) for the elastic and inelastic scattering of hydrogen atoms by positron impact at the energies shown.

Angle (deg)	Elastic scattering				1s→2s excitation			
	100 eV		200 eV		54·4 eV		200 eV	
	PB	P	PB	P	PB	P	PB	P
0	9·97−01	1·14+00	9·97−01	1·05+00	1·62−01	2·28−01	9·05−03	1·23−01
5	8·99−02	2·14−01	7·39−03	4·79−02	2·86−01	2·00−01	4·68−01	4·01−01
10	2·18−02	3·07−02	1·32−01	1·04−01	4·79−01	2·88−01	4·65−01	4·29−01
20	2·47−01	1·65−01	2·53−01	2·12−01	4·12−01	3·03−01	5·00−02	5·06−02
30	2·42−01	1·72−01	1·38−01	1·18−01	1·62−01	1·37−01	3·10−03	4·29−03
40	1·59−01	1·16−01	6·46−02	5·59−02	4·71−02	4·79−02	2·26−04	7·40−04
60	5·82−02	4·39−02	1·75−02	1·53−02	3·59−03	7·32−03	2·47−06	1·23−04
80	2·48−02	1·90−02	6·53−03	5·92−03	3·72−04	2·23−03	2·54−08	4·19−05
100	1·29−02	1·00−02	3·36−03	2·98−03	5·85−05	1·06−03	1·52−10	2·07−05
120	8·09−03	6·31−03	2·07−03	1·84−03	1·39−05	6·40−04	2·01−09	1·24−05
140	5·87−03	4·61−03	1·49−03	1·33−03	4·97−06	4·60−04	2·28−09	8·92−06
160	4·90−03	3·84−03	1·24−03	1·10−03	2·66−06	3·81−04	2·13−09	7·38−06
180	4·61−03	3·62−03	1·16−03	1·04−03	2·15−06	3·58−04	2·06−09	7·18−06

Notation: $a \pm b = a \times 10^{\pm b}$.

The corresponding versions of figures can be obtained from the authors.

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References

Gupta G P and Mathur K C 1979 *Phys. Lett.* **72A** 322
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