

Peer Review

Review of: "Projectile Excitation to the $2s2p^3P$ and 1P Autoionizing States in Swift Collisions of He-Like Carbon and Oxygen Mixed-State ($1s^2$, $1s2s\ ^3S$) Ion Beams With Helium"

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This article provides very good results for autoionizing states and mixed states.

Before acceptance, some questions should be answered.

Q1: In Fig. 3, three near-lying Auger lines are identified as the $(1s2s\ ^3S)3l$ with $l=0,1,2$ under different selected projectile energies. It appears to be more sensitive at low energy levels. Is this also the case for $(1s2s\ ^1S)3l$?

Q2: Comparing Fig. 10 and Fig. 11, the theoretical results in Figure 10 are in good agreement with the experimental results, while the results in Figure 11 show a slight deviation. Why is this?

Q3: What is the reason for the inconsistency between the energy selection range in Figure 13 and the previous text?

Q4: The entire paper feels more like an experimental summary rather than a formally published paper. It should not only present the results but also discuss the possible reasons for the differences between experiments and theories.

Declarations

Potential competing interests: No potential competing interests to declare.