

Calculation Of Dielectronic Recombination Cross-Section For Lithium-Like Ni²⁵⁺ Ion-System Using Flexible Atomic Code (FAC)

In this study we used FAC code method to study the dielectronic recombination for three electron system of Lithium-like Ni²⁵⁺. The ground state configuration of Ni²⁵⁺ is (1s² 2s_{1/2}). This configuration has been implemented in the scripts of FAC code that follow the jj coupling scheme. Comparison between our calculations and experimental results for ground states of Ni²⁵⁺ is made. Present calculations were performed for the energy of the resonances and their resonance strength in the excitation of 2s electron to 2p electron and with capturing the incident electron in shell with n ≥ 13 up to n = 19. The energy positions have shown a good agreement with the experimental values, where the resonance strength shows some discrepancies in some of the resonances.

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