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\pardThe Study of $5s^2 5p^3$- $5s5p^4$ Transitions in Sb-Like Cerium Ion: Ce VIII\pard ABDUL WAJID, Aligarh Muslim University — h $-abstract-$\pard Seven-times ionized cerium ion has Sb I-like structure, and $5s^2 5p^3$ $^4S_{3/2}$ as the ground state. The $5s^2 5p^3$- $5s5p^4$ transitions transition array was studied using observed cerium spectrum. This spectrum was recorded on a 3-m normal incidence vacuum spectrograph at Antigonish laboratory (Canada). In this study all possible energy levels of the ground configuration were established using the Visual Line-and-Level Identification Program (IDEN2). This analysis was theoretically supported by relativistic (multiconfiguration Dirac-Hartree-Fock) and pseudo relativistic (Hartree-Fock with relativistic correction) method followed by configuration interaction. Along with the energy levels, transition probabilities, oscillator strength and lifetimes were also calculated. The energy levels were then optimized using observed electronic transitions using the level optimisation computer code "LOPT". \pard-/abstract-\

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