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The spectrum of doubly ionized silver: Ag III[1] ANKITA SAXENA, TAUHEED AHMAD, Aligarh Muslim University, India — Doubly ionized silver, isoelectronic with Rh I has ground configuration $4p^6 4d^9$ and the excited configurations are of the type $4d^8$nl (n>3) and $4p^5 4d^{10}$. The spectrum of Ag III has been studied in the wavelength region 350-2074 Å. The spectra needed for the analysis were recorded on 3-m normal incidence vacuum spectrograph at Antigonish Laboratory, Canada. The analysis of this spectrum was started by Gibbs and White establishing the ground doublet followed by Gilbert, Shadmi and lastly by Benschop et al. At present only two excited configurations $4d^8 5p$ and $4d^8 5s$ have been studied apart from the ground doublets. In the present work we have undertaken the study of two major configurations $4d^8$(5d+6s) which comprising of 83 energy levels,with the aid of Relativistic Hartree-Fock (HFR) method and least square fitted parametric calculations using Cowan Code. All the previously reported values for $4d^8 5p$ and $4d^8 5s$ have been confirmed except the two levels of $4d^8 5p$ configuration. J value of one of the level at 135626.7 cm-1 has been changed from J=0.5 to J=1.5 and new level for J=0.5 is established at 135778.4 cm-1. The work is still in progress and the new findings will be presented.

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