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New Data Analysis for Hypernuclear Spectroscopy Experiment E01-011 at Jefferson Laboratory Hall C YUNCHENG HAN, Hampton University, HKS/HES COLLABORATION — The E01-011 experiment was performed at JLab Hall-C by (e, e'K^+) reaction in 2005 to investigate hypernuclear structures, concentrating on spectroscopy of ${}^{7}_{\Lambda}He$, ${}^{12}_{\Lambda}B$, and ${}^{28}_{\Lambda}Al$. The result of ${}^{7}_{\Lambda}He$ has already been published. However, the following 2009 experiment demonstrated issues may affect the accuracy of the ${}^{28}_{\Lambda}Al$ spectroscopy, considering that the previous analysis separated the kinematics space into two regions and allowed applying independent optical matrices. It is necessary to make a verification of ${}^{28}_{\Lambda}Al$ spectrum with a more reliable analysis to ensure its correctness. The new analysis started with an investigation on the asymmetry of the spectrometer magnetic fields and then followed by mathematical optimization (MINUIT) for the magnetic optics using the calibration events with known masses. The results from the new analysis will be presented in this talk.

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