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**$K^*$  photoproduction within Regge approach** SHO OZAKI, RCNP, Osaka University, HIDEKO NAGAHIRO, Nara Women's University, ATUSHI HOSAKA, RCNP, Osaka University — Recently strangeness photoproduction has been of interest in hadron physics. Several photon facilities such as CLAS, LEPS, SAPHIR and CBELSA/TAPS have been providing rich and variety of data. There interesting phenomena are reported including the observation of the pentaquark. Also unexpected peak structures near the threshold are found in  $\phi$  photoproduction and in  $\Lambda$  resonance photoproduction. In order to understand those interesting phenomena, we have to understand a fundamental mechanism of the open strangeness photoproduction. In this contribution, we study  $K^*$  photoproduction within Regge approach in a gauge invariant manner.  $K^*$  is a vector meson like a  $\phi$  meson. In  $\phi$  photoproduction Pomeron contribution successfully reproduces various cross sections as well as spin observables. Therefore one can expect that Reggeons play an important role also in  $K^*$  photoproduction. We calculate the energy and  $t$  dependence of various cross sections and spin density matrices. We find that the energy dependence differs from that of the  $\phi$  photoproduction due to the different trajectories which are allowed in the reactions. In spin density matrices we find that there are obvious differences between our model with Regge phenomenology and the previous work based on the Feynman amplitude of the effective Lagrangian method.

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