

## Light-Cone 2024: Hadron Physics in the EIC era



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# Hadron productions in the BESIII experiment

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The BESIII experiment locates at the BEPCII  $e^+e^-$  collider in Beijing, China, running in a center-of-mass energy range from 1.8 GeV to 4.95 GeV. After 16 years of successful running of the experiment since 2009, BESIII has accumulated a large statistics of electron-positron annihilation sample, such as data set at  $J/\psi$ ,  $\psi(2S)$  and  $\psi(3770)$  peaks, and fine scan data between 1.8 GeV and 4.95 GeV. From these samples, BESIII has produced many interesting results in studying the mechanism of the hadron production in the energy region below 5 GeV, which corresponds to the non-perturbative QCD region. The topics include the inclusive single hadron production, Collins asymmetry in two hadron spin correlations, R values and baryon form factors in threshold pair productions. In this talk, the BESIII progress of QCD studies will be reported and the future prospects will be discussed.

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