

Heavy meson spectroscopy results at BESIII

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Although the charmonium spectrum seems well investigated, charmonia can still be used as benchmarks to test our QCD predictions, as these states lay in the transition region between perturbative and non-perturbative QCD. Despite the need for experimental confirmations, setbacks arise from limited statistics due to the production of non-vector states. Some charmonium states' properties and decay channels are still far from being well-known. Since 2009, BESIII has been scanning and investigating the energy range between 2.0 and 4.9 GeV. Thanks to its largest data sets of charmonium resonances (J/ψ , $\psi(2S)$, and $\psi(3770)$) in the world as well as other data sets at the centre-of-mass energies above 3.8 GeV, BESIII can overcome statistical limitations to shed light on open questions.

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