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Recent results on spectroscopy of XYZ states from BESIII

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Exotic hadrons beyond the simple quark model are allowed for and predicted within quantum chromodynamics. They offer laboratories to study the strong interaction. Experimental searches are performed since decades, however, most of them were not conclusive yet. Since the beginning of the millenium, a new era has begun with the discovery of the so-called charmonium-like (exotic) XYZ states. With the observation of tetraquark candidates, the BESIII experiment has discovered manifestly exotic states in the meson sector. We give a selected overview on recent results on XYZ states as obtained with the BESIII experiment at BEPCII in Beijing, China. Especially, we report evidence for a new state $Y(4710) \to K_s^0 K_s^0 J/\psi$ and the first observation of three vector charmonium-like states in an open charm decay that we find consistent with Y(4230), Y(4500) and Y(4660)

Collaboration

BESIII

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