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## Measurements of charmonia decays at BESIII

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We present recent measurements of charmonia decays from BESIII. Using a sample of 448 million  $\psi(3686)$  events, the branching fraction of the decays  $\chi_c^J \rightarrow \phi\phi$  ( $J=0,1,2$ ) has been measured with improved precision, and the polarisation parameters of the same decay have been determined for the first time via an helicity amplitude analysis. Using the same data sample, the first evidence of  $\eta_c(2S) \rightarrow \pi^+\pi^-\eta$  has been observed in the decay sequence  $\psi(3686) \rightarrow \gamma\eta_c(2S)$ ,  $\eta_c(2S) \rightarrow \pi^+\pi^-\eta$ . The product of the branching fractions of  $\psi(3686) \rightarrow \gamma\eta_c(2S)$  and  $\eta_c(2S) \rightarrow \pi^+\pi^-\eta$  and the individual branching fraction will be presented as well. The process  $e^+e^- \rightarrow \eta J/\psi$  at a center-of-mass energy of 3.773 GeV has been observed for the first time, its Born cross-section measured, and the branching fraction of  $\psi(3770) \rightarrow \eta J/\psi$  has been determined by a combined fit with the cross-sections at other energy points, after considering the interference effect for the first time. Utilising 2700 million  $\psi(3686)$  events, the decays  $\chi_c^J \rightarrow \Omega^+\Omega^-$  ( $J=0,1,2$ ) have been observed for the first time with high significance via the radiative decays of  $\psi(3686) \rightarrow \gamma\chi_c^J$ . The relevant branching fractions have also been measured.

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