

Amplitude analysis of di-charmonium production in di-J/psi and psi-psi(2S) channels with the ATLAS detector

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The discovery of narrow resonant structures in the di-J/psi and psi-psi(2S) mass spectra suggests the existence of fully-charmed tetraquark states. This report presents an amplitude analysis of ATLAS data in these channels to study the properties of these exotic resonances. By performing a simultaneous fit to the mass and angular distributions, we measure the masses and widths of the observed states, and also constrains the possible spin-parity configurations, helping to elucidate the nature of the X(6900) and other nearby structures.

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