

Di-charmonium studies in ATLAS

A search for potential tetraquarks decaying into a pair of charmonium states will be presented. Two different decay channels, $J/\psi + J/\psi \rightarrow 4\mu$ and $J/\psi + \psi(2S) \rightarrow 4\mu$, are studied. Backgrounds are estimated with a hybrid data-driven and MC-based approach. The statistical significance of possible excesses in the di- J/ψ and $J/\psi + \psi(2S)$ channels will be discussed in detail.

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