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Measurement of double-charmonium production in e^+e^- annihilation around $\sqrt{s} = 10.58$ GeV at BABAR ELISA FIORAVANTI, Universita' di Ferrara, BABAR COLLABORATION — Prompt production of J/ψ or $\psi(2S)$ in association with a second charmonium state has been observed by both the BaBar and Belle experiments in e^+e^- annihilation around $\sqrt{s} = 10.58$ GeV. These processes provide an opportunity to study both perturbative and non-perturbative effects in QCD and to search for new charmonium states recoiling against the reconstructed J/ψ or $\psi(2S)$. I will present a study of such events using the full BaBar dataset, where the J/ψ and $\psi(2S)$ are reconstructed via the decays $J/\psi \to \ell^+\ell^-$, $\psi(2S) \to J/\psi\pi^+\pi^-$, and $\psi(2S) \to \ell^+\ell^-$.

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