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Exotic multiquark states in $p\bar{p}$ collisions at D0

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We use the full Run II dataset consisting of 10.4 fb −1 of $p\bar{p}$ collisions recorded by the D0 detector at the Fermilab Tevatron collider at sqrt s = 1.96 TeV to search for new exotic multiquark states. We report the evidence of a new state X(5568) decaying to $B_s\pi$ seen in the $B_s \to J/\psi\varphi$ decay channel and its independent confirmation in the semi-leptonic channel $B_s \to \mu^{\pm} D_s^{\mp} X$. We also report on the search for other exotic states.

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