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## Measurement of the CP-violating phase $\phi_s^{J/\psi\phi}$ using the flavor-tagged decay $B_s^0 \rightarrow J/\psi\phi$ in $8 \text{ fb}^{-1}$ of $p\bar{p}$ collisions

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### Abstract content

We report an updated measurement of the CP-violating phase,  $\phi_s^{J/\psi\phi}$ , and the decay-width difference for the two mass eigenstates,  $\Delta\Gamma_s$ , from the flavor-tagged decay  $B_s^0 \rightarrow J/\psi\phi$ . The data sample corresponds to an integrated luminosity of  $8.0 \text{ fb}^{-1}$  accumulated with the D0 detector using  $p\bar{p}$  collisions at  $\sqrt{s} = 1.96 \text{ TeV}$  produced at the Fermilab Tevatron collider. The 68% confidence level intervals, including systematic uncertainties, are  $\Delta\Gamma_s = 0.163 + 0.065 - 0.064 \text{ ps}^{-1}$  and  $\phi_s^{J/\psi\phi} = -0.55 + 0.38 - 0.36$ . The  $p$ -value for the Standard Model point is 29.8%.

### Summary

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