

Table 1: Direct experimental measurements of $\phi_s^{c\bar{c}s}$ and, wherever applicable, $\Delta\Gamma_s$ using $J/\psi K^+K^-$, $\psi(2S)K^+K^-$, $J/\psi\pi^+\pi^-$ and $D_s^+D_s^-$ decays. The first error is due to statistics, the second one to systematics. The last (last but one) line gives our averages, where the $\Delta\Gamma_s$ uncertainties have been multiplied by 1.65 (1.57) to account for inconsistencies between the $B_s^0 \rightarrow J/\psi K^+K^-$ measurements. Only solution (a) of Ref. [1] is used.

Exp.	Mode	Dataset	$\phi_s^{c\bar{c}s}$ (rad)	$\Delta\Gamma_s$ (ps ⁻¹)	Ref.
CDF	$J/\psi K^+K^-$	9.6 fb ⁻¹	[-0.60, +0.12], 68% C.L.	+0.068 ± 0.026 ± 0.009	[2]
D0	$J/\psi K^+K^-$	8.0 fb ⁻¹	-0.55 ^{+0.38} _{-0.36}	+0.163 ^{+0.065} _{-0.064}	[3]
ATLAS	$J/\psi K^+K^-$	4.9 fb ⁻¹	+0.12 ± 0.25 ± 0.05	+0.053 ± 0.021 ± 0.010	[4]
ATLAS	$J/\psi K^+K^-$	14.3 fb ⁻¹	-0.110 ± 0.082 ± 0.042	+0.101 ± 0.013 ± 0.007	[5]
ATLAS	$J/\psi K^+K^-$	80.5 fb ⁻¹	-0.081 ± 0.041 ± 0.022	+0.0607 ± 0.0047 ± 0.0043	[1]
ATLAS	above 3 combined		-0.087 ± 0.036 ± 0.021	+0.0657 ± 0.0043 ± 0.0037	[1]
CMS	$J/\psi K^+K^-$	19.7 fb ⁻¹	-0.075 ± 0.097 ± 0.031	+0.095 ± 0.013 ± 0.007	[6]
CMS	$J/\psi K^+K^-$	96.5 fb ⁻¹	-0.073 ± 0.022 ± 0.010	+0.0761 ± 0.0040 ± 0.0024	[7]
CMS	above 2 combined		-0.075 ± 0.023	+0.0778 ± 0.0046	[7]
LHCb	$J/\psi K^+K^-$	3.0 fb ⁻¹	-0.058 ± 0.049 ± 0.006	+0.0805 ± 0.0091 ± 0.0032	[8]
LHCb	$J/\psi\pi^+\pi^-$	3.0 fb ⁻¹	+0.070 ± 0.068 ± 0.008	—	[9]
LHCb	$J/\psi K^+K^-$ ^a	3.0 fb ⁻¹	+0.119 ± 0.107 ± 0.034	+0.066 ± 0.018 ± 0.010	[10]
LHCb	$\psi(2S)K^+K^-$	3.0 fb ⁻¹	+0.23 ^{+0.29} _{-0.28} ± 0.02	+0.066 ^{+0.41} _{-0.44} ± 0.007	[11]
LHCb	$D_s^+D_s^-$	3.0 fb ⁻¹	+0.02 ± 0.17 ± 0.02	—	[12]
LHCb	$D_s^+D_s^-$	6.0 fb ⁻¹	-0.09 ± 0.11 ± 0.03	—	[13]
LHCb	$J/\psi\pi^+\pi^-$	1.9 fb ⁻¹ ^b	-0.057 ± 0.060 ± 0.011	—	[14]
LHCb	$J/\psi K^+K^-$	6 fb ⁻¹ ^b	-0.039 ± 0.022 ± 0.006	+0.0845 ± 0.0044 ± 0.0024	[15]
LHCb	$J/\psi K^+K^-$ ^c	3.0 fb ⁻¹	+0.00 ± 0.28 ± 0.07	+0.115 ± 0.045 ± 0.011	[16]
LHCb	above 9 combined		-0.033 ± 0.018	+0.084 ± 0.004	
$B_s^0 \rightarrow J/\psi K^+K^-$ combined			-0.061 ± 0.014	+0.075 ± 0.004	
All combined			-0.053 ± 0.013	+0.076 ± 0.004	

^a $m(K^+K^-) > 1.05$ GeV/ c^2 ^b Run 2 ^c $J/\psi \rightarrow e^+e^-$

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