

$P_{c\bar{c}}(4312)^+$

$I(J^P) = \frac{1}{2}(?)$ Status: *

OMITTED FROM SUMMARY TABLE
Was $P_c(4312)^+$.

$P_{c\bar{c}}(4312)^+$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
$4311.9 \pm 0.7^{+6.8}_{-0.6}$	AAIJ	19W LHCb	pp at 7, 8, 13 TeV

$P_{c\bar{c}}(4312)^+$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
$9.8 \pm 2.7^{+3.7}_{-4.5}$	AAIJ	19W LHCb	pp at 7, 8, 13 TeV

$P_{c\bar{c}}(4312)^+$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad J/\psi p$	seen
$\Gamma_2 \quad \Lambda_c^+ \bar{D}^0$	not seen
$\Gamma_3 \quad \Lambda_c^+ \pi^+ D^-$	not seen
$\Gamma_4 \quad \bar{\Lambda}_c^- \pi^+ D^+$	[a] not seen

[a] Searched for the charge conjugate mode from $\bar{P}_{c\bar{c}}^-$ decays.

$P_{c\bar{c}}(4312)^+$ BRANCHING RATIOS

$\Gamma(J/\psi p)/\Gamma_{\text{total}}$					Γ_1/Γ
VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	
seen	246k	¹ AAIJ	19W LHCb	pp at 7, 8, 13 TeV	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
not seen	797	² AAIJ	22H LHCb	pp at 7, 8, 13 TeV	

¹ Amplitude analysis of $\Lambda_b^0 \rightarrow J/\psi p K^-$.
² Amplitude analysis of $B_s^0 \rightarrow J/\psi p \bar{p}$. AAIJ 22H finds evidence at just over 3 σ for a $J/\psi p$ structure at $4337^{+7}_{-4} \pm 2$ MeV.

$\Gamma(\Lambda_c^+ \bar{D}^0)/\Gamma_{\text{total}}$				Γ_2/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
not seen	AAIJ	24Z LHCb	pp , 5.7 fb ⁻¹ at 13 TeV	

$\Gamma(\Lambda_c^+ \pi^+ D^-)/\Gamma_{\text{total}}$				Γ_3/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
not seen	AAIJ	24Z	LHCB	$p p$, 5.7 fb^{-1} at 13 TeV
$\Gamma(\bar{\Lambda}_c^- \pi^+ D^+)/\Gamma_{\text{total}}$				Γ_4/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
not seen	AAIJ	24Z	LHCB	$\bar{P}_{c\bar{c}}^- \rightarrow \Lambda_c^+ \pi^- D^-$

$P_{c\bar{c}}(4312)^+$ REFERENCES

AAIJ	24Z	PR D110 032001	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	22H	PRL 128 062001	R. Aaij <i>et al.</i>	(LHCb Collab.)
AAIJ	19W	PRL 122 222001	R. Aaij <i>et al.</i>	(LHCb Collab.)