

$\Omega_c(3065)^0$

$I(J^P) = ?(?^?)$ Status: ***

AAIJ 21AC rejects $J = 1/2$ hypothesis at $3.6\,\sigma$.

$\Omega_c(3065)^0$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
3065.58±0.21 OUR AVERAGE				
3065.63±0.06±0.06±0.23	15k	¹ AAIJ	23AS LHCB	pp at 7, 8, 13 TeV
3065.9 ±0.4 ±0.4 ^{+0.19} _{-0.22}	51	² AAIJ	21AC LHCB	pp at 7, 8, 13 TeV
3064.9 ±0.6 ±0.2	82	YELTON	18B BELL	e^+e^- at $\Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
3065.6 ±0.1 ±0.3	1.74k	³ AAIJ	17AH LHCB	pp at 7, 8, 13 TeV
¹ The third uncertainty is due to the uncertainty in the Ξ_c^+ mass, taken to be the PDG 22 fit result 2467.71 ± 0.23 MeV.				
² Measured via $\Omega_b^- \rightarrow \Omega_c^{*0} \pi^- \rightarrow \Xi_c^+ K^- \pi^-$. The third uncertainty is due to the uncertainty in the Ξ_c^+ mass.				
³ See AAIJ 23AS.				

$\Omega_c(3065)^0$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
3.4 ^{+0.7}_{-0.8} OUR AVERAGE Error includes scale factor of 1.7.				
3.79±0.20 ^{+0.38} _{-0.47}	15k	AAIJ	23AS LHCB	pp at 7, 8, 13 TeV
1.7 ±1.0 ±0.5	51	AAIJ	21AC LHCB	pp at 7, 8, 13 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
3.5 ±0.4 ±0.2	1.74k	¹ AAIJ	17AH LHCB	pp at 7, 8, 13 TeV
¹ See AAIJ 23AS.				

$\Omega_c(3065)^0$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad \Xi_c^+ K^-$	seen

$\Omega_c(3065)^0$ BRANCHING RATIOS

$\Gamma(\Xi_c^+ K^-)/\Gamma_{\text{total}}$					Γ_1/Γ
VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	
seen	15k	AAIJ	23AS LHCB	pp at 7, 8, 13 TeV	
seen	51	¹ AAIJ	21AC LHCB	pp at 7, 8, 13 TeV	
seen	82	YELTON	18B BELL	e^+e^- at $\Upsilon(4S)$	
• • • We do not use the following data for averages, fits, limits, etc. • • •					
seen	1.74k	^{2,3} AAIJ	17AH LHCB	pp at 7, 8, 13 TeV	

¹ AAIJ 21AC report a significance of 11.9 σ .
² AAIJ 17AH report a significance of 23.9 σ .
³ See AAIJ 23AS.

$\Omega_c(3065)^0$ REFERENCES

AAIJ	23AS	PRL 131 131902	R. Aaij <i>et al.</i>	(LHCb Collab.)
PDG	22	PTEP 2022 083C01	R.L. Workman <i>et al.</i>	(PDG Collab.)
AAIJ	21AC	PR D104 L091102	R. Aaij <i>et al.</i>	(LHCb Collab.)
YELTON	18B	PR D97 051102	J. Yelton <i>et al.</i>	(BELLE Collab.)
AAIJ	17AH	PRL 118 182001	R. Aaij <i>et al.</i>	(LHCb Collab.)
