

$\Omega_c(3000)^0$ $I(J^P) = ?(??)$ Status: *** $\Omega_c(3000)^0$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
3000.46 ± 0.25 OUR AVERAGE				
$3000.44 \pm 0.07^{+0.07}_{-0.13} \pm 0.23$	8.8k	¹ AAIJ	23AS LHCB	pp at 7, 8, 13 TeV
$3000.7 \pm 1.0 \pm 0.2$	38	YELTON	18B BELL	e^+e^- at $\Upsilon(4S)$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
$2999.2 \pm 0.9 \pm 0.9^{+0.19}_{-0.22}$	24	² AAIJ	21AC LHCB	pp at 7, 8, 13 TeV
$3000.4 \pm 0.2 \pm 0.1$	1.3k	³ AAIJ	17AH LHCB	pp at 7, 8, 13 TeV

¹The 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.

²Measured 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.

³See AAIJ 23AS

 $\Omega_c(3000)^0$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
$3.83 \pm 0.23^{+1.59}_{-0.29}$	8.8k	AAIJ	23AS LHCB	pp at 7, 8, 13 TeV
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
$4.8 \pm 2.1 \pm 2.5$	24	AAIJ	21AC LHCB	pp at 7, 8, 13 TeV
$4.5 \pm 0.6 \pm 0.3$	1.3k	¹ AAIJ	17AH LHCB	pp at 7, 8, 13 TeV

¹See AAIJ 23AS.

 $\Omega_c(3000)^0$ DECAY MODES

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

 $\Omega_c(3000)^0$ BRANCHING RATIOS

$\Gamma(\Xi_c^+ K^-)/\Gamma_{\text{total}}$	VALUE	EVTS	DOCUMENT ID	TECN	COMMENT	Γ_1/Γ
seen		8.8k	AAIJ	23AS LHCB	pp at 7, 8, 13 TeV	
seen		24	¹ AAIJ	21AC LHCB	pp at 7, 8, 13 TeV	
seen		38	² YELTON	18B BELL	e^+e^- at $\Upsilon(4S)$	
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●						
seen		1.3k	^{3,4} AAIJ	17AH LHCB	pp at 7, 8, 13 TeV	

¹AAIJ 21AC report a significance of 6.2σ .

²YELTON 18B report a significance of 3.9σ

³AAIJ 17AH report a significance of 20.4σ .

⁴See AAIJ 23AS.

$\Omega_c(3000)^0$ 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.)
