

$$\Omega_c(3000)^0$$

$$I(J^P) = ?(??) \quad \text{Status: } ***$$

### $\Omega_c(3000)^0$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>3000.46 ± 0.25 OUR AVERAGE</b>				
3000.44 ± 0.07 <sup>+0.07</sup> <sub>-0.13</sub> ± 0.23	8.8k	<sup>1</sup> AAIJ	23AS LHCB	<i>pp</i> at 7, 8, 13 TeV
3000.7 ± 1.0 ± 0.2	38	YELTON	18B BELL	<i>e<sup>+</sup>e<sup>-</sup></i> at $\Upsilon(4S)$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
2999.2 ± 0.9 ± 0.9 <sup>+0.19</sup> <sub>-0.22</sub>	24	<sup>2</sup> AAIJ	21AC LHCB	<i>pp</i> at 7, 8, 13 TeV
3000.4 ± 0.2 ± 0.1	1.3k	<sup>3</sup> AAIJ	17AH LHCB	<i>pp</i> at 7, 8, 13 TeV
<sup>1</sup> The third uncertainty is due to the uncertainty in the $\Xi_c^+$ mass, taken to be the PDG 22 fit result 2467.71 ± 0.23 MeV.				
<sup>2</sup> Measured via $\Omega_b^- \rightarrow \Omega_c^{*0} \pi^- \rightarrow \Xi_c^+ K^- \pi^-$ . The third uncertainty is due to the uncertainty in the $\Xi_c^+$ mass.				
<sup>3</sup> See AAIJ 23AS				

### $\Omega_c(3000)^0$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>3.83 ± 0.23<sup>+1.59</sup><sub>-0.29</sub></b>				
8.8k	8.8k	AAIJ	23AS LHCB	<i>pp</i> at 7, 8, 13 TeV
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
4.8 ± 2.1 ± 2.5	24	AAIJ	21AC LHCB	<i>pp</i> at 7, 8, 13 TeV
4.5 ± 0.6 ± 0.3	1.3k	<sup>1</sup> AAIJ	17AH LHCB	<i>pp</i> at 7, 8, 13 TeV
<sup>1</sup> See AAIJ 23AS.				

### $\Omega_c(3000)^0$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \quad \Xi_c^+ K^-$	seen

### $\Omega_c(3000)^0$ BRANCHING RATIOS

$\Gamma(\Xi_c^+ K^-)/\Gamma_{\text{total}}$	EVTS	DOCUMENT ID	TECN	COMMENT	$\Gamma_1/\Gamma$
<b>seen</b>	8.8k	AAIJ	23AS LHCB	<i>pp</i> at 7, 8, 13 TeV	
seen	24	<sup>1</sup> AAIJ	21AC LHCB	<i>pp</i> at 7, 8, 13 TeV	
seen	38	<sup>2</sup> YELTON	18B BELL	<i>e<sup>+</sup>e<sup>-</sup></i> at $\Upsilon(4S)$	
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
seen	1.3k	<sup>3,4</sup> AAIJ	17AH LHCB	<i>pp</i> at 7, 8, 13 TeV	
<sup>1</sup> AAIJ 21AC report a significance of 6.2 $\sigma$ .					
<sup>2</sup> YELTON 18B report a significance of 3.9 $\sigma$					
<sup>3</sup> AAIJ 17AH report a significance of 20.4 $\sigma$ .					
<sup>4</sup> See 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.)

---