NODE=B174

$\Omega_c(3050)^0$

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

AAIJ 21AC rejects $J = 1/2$ hypothesis at 2.2 σ.

NODE=B174

NODE=B174M

$\Omega_c(3050)^0$ MASS

NODE=B174M

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
3050.17±0.19 OUR AVERAGE					
$3050.18 \pm 0.04 \,^{+0.06}_{-0.07} \pm 0.23$	8.5k	[1] AAIJ	23AS	LHCB	pp at 7, 8, 13 TeV
$3050.1 \pm 0.3 \pm 0.2 \,^{+0.19}_{-0.22}$	33	[2] AAIJ	21AC	LHCB	pp at 7, 8, 13 TeV
$3050.2 \pm 0.4 \pm 0.2$	28	YELTON	18B	BELL	e^+e^- at $\Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$3050.2 \pm 0.1 \pm 0.1$	970	[3] AAIJ	17AH	LHCB	pp at 7, 8, 13 TeV

NODE=B174M;LINKAGE=D

[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.

NODE=B174M;LINKAGE=C

[2] Measured via $\Omega_b^- \to \Omega_c^{**0}\pi^- \to \Xi_c^+ K^-\pi^-$. The third uncertainty is due to the uncertainty in the Ξ_c^+ mass.

NODE=B174M;LINKAGE=E

[3] See AAIJ 23AS.

$\Omega_c(3050)^0$ WIDTH

NODE=B174W

VALUE (MeV)	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<1.8	95	8.5k	[1] AAIJ	23AS	LHCB	pp at 7, 8, 13 TeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<1.6	95	33	AAIJ	21AC	LHCB	pp at 7, 8, 13 TeV
<1.2	95	970	[2] AAIJ	17AH	LHCB	pp at 7, 8, 13 TeV

NODE=B174W

[1] AAIJ 23AS also report a central value of $0.67 \pm 0.17^{+0.64}_{-0.72}$ MeV.

NODE=B174W;LINKAGE=B

[2] See AAIJ 23AS.

NODE=B174W;LINKAGE=A

$\Omega_c(3050)^0$ DECAY MODES

NODE=B174215;NODE=B174

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\Xi_c^+ K^-$	seen

DESIG=1

$\Omega_c(3050)^0$ BRANCHING RATIOS

NODE=B174225

$\Gamma(\Xi_c^+ K^-)/\Gamma_{total}$ Γ_1/Γ

NODE=B174R01

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
seen	8.5k	AAIJ	23AS	LHCB	pp at 7, 8, 13 TeV
seen	33	[1] AAIJ	21AC	LHCB	pp at 7, 8, 13 TeV
seen	28	[2] YELTON	18B	BELL	e^+e^- at $\Upsilon(4S)$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
seen	970	[3,4] AAIJ	17AH	LHCB	pp at 7, 8, 13 TeV

NODE=B174R01

[1] AAIJ 21AC report a significance of 9.9 σ.

NODE=B174R01;LINKAGE=B

[2] YELTON 18B report a significance of 4.6 σ

NODE=B174R01;LINKAGE=A

[3] AAIJ 17AH report a significance of 20.4 σ.

NODE=B174R01;LINKAGE=C

[4] See AAIJ 23AS.

NODE=B174R01;LINKAGE=D

$\Omega_c(3050)^0$ REFERENCES

NODE=B174

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

REFID=62449
REFID=61634
REFID=61439
REFID=58894
REFID=57925