



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

The Ξ_c^0 and Ξ_c^{0+} presumably complete the SU(3) sextet whose other members are the Σ_c^{++} , Σ_c^+ , Σ_c^0 , and Ω_c^0 : see Fig. 5 in the “Quark Model” review. The quantum numbers given above come from this presumption but have not been measured.

Ξ_c^0 MASS

The mass is obtained from the mass-difference measurement that follows.

VALUE (MeV)	DOCUMENT ID
2578.7±0.5 OUR FIT	

Ξ_c^0 – Ξ_c^0 MASS DIFFERENCE

VALUE (MeV)	EVTs	DOCUMENT ID	TECN	COMMENT
108.3±0.4 OUR FIT				
108.3±0.1±0.4	11.5k	YELTON	16	BELL e ⁺ e [−] , γ regions
• • • We do not use the following data for averages, fits, limits, etc. • • •				
107.0±1.4±2.5	28	JESSOP	99	CLE2 e ⁺ e [−] ≈ γ(4S)

Ξ_c^0 DECAY MODES

The $\Xi_c^0 - \Xi_c^0$ mass difference is too small for any strong decay to occur.

Mode	Fraction (Γ _i /Γ)
Γ ₁ Ξ_c^0 γ	seen

Ξ_c^0 REFERENCES

YELTON	16	PR D94 052011	J. Yelton <i>et al.</i>	(BELLE Collab.)
JESSOP	99	PRL 82 492	C.P. Jessop <i>et al.</i>	(CLEO Collab.)