NODE=S059

$\Xi_c^{\prime 0}$

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

NODE=S059

The $\Xi_c^{\prime 0}$ and $\Xi_c^{\prime +}$ 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.

$\Xi_c^{\prime 0}$ MASS

NODE=S059M

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

NODE=S059M

VALUE (MeV)	*DOCUMENT ID*
2578.8±0.5 OUR FIT	
[2578.7 ± 0.5 MeV OUR 2025 FIT]	

NODE=S059M
NEW

$\Xi_c^{\prime 0} - \Xi_c^{0}$ MASS DIFFERENCE

NODE=S059D

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^-, Υ regions
• • • We do not use the following data for averages, fits, limits, etc. • • •					
107.0±1.4±2.5	28	JESSOP	99	CLE2	$e^+e^- \approx \Upsilon(4S)$

NODE=S059D

$\Xi_c^{\prime 0}$ DECAY MODES

NODE=S059215;NODE=S059

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

NODE=S059

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\Xi_c^0\gamma$	seen

DESIG=1;OUR EST;→ UNCHECKED ←

$\Xi_c^{\prime 0}$ REFERENCES

NODE=S059

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

REFID=57432
REFID=46550