



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

The $\Xi_c'^+$ and $\Xi_c'^0$ 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.

$\Xi_c'^+$ MASS

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

VALUE (MeV)	DOCUMENT ID
2578.2±0.5 OUR FIT	Error includes scale factor of 1.1.

$\Xi_c'^+ - \Xi_c^+$ MASS DIFFERENCE

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
110.5±0.4 OUR FIT				
110.5±0.1±0.4	7k	YELTON	16	BELL e^+e^- , Υ regions
• • • We do not use the following data for averages, fits, limits, etc. • • •				
107.8±1.7±2.5	25	JESSOP	99	CLE2 $e^+e^- \approx \Upsilon(4S)$

$\Xi_c'^+ - \Xi_c'^0$ MASS DIFFERENCE

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
−0.5±0.6 OUR FIT			
• • • We do not use the following data for averages, fits, limits, etc. • • •			
−0.8±0.1±0.5	YELTON	16	BELL 7055 and 11,560 evts

$\Xi_c'^+$ DECAY MODES

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

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

$\Xi_c'^+$ 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.)