# $\Xi_c'^+$

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

The $\Xi_c'^+$ and $\Xi_c'^0$ presumably complete the SU(3) sextet whose other members are the $\Sigma_c^{++}$, $\Sigma_c^+$, $\Sigma_c^0$, and $\Omega_c^0$: see Fig. 3 in the Note on Charmed Baryons just before the the $\Lambda_c^+$ Listings. 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* |
|---|---|
| **2574.1±3.3 OUR FIT** | |

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

| *VALUE* (MeV) | *EVTS* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| **107.8±3.0 OUR FIT** | | | | | |
| **107.8±1.7±2.5** | 25 | JESSOP | 99 | CLE2 | $e^+e^- \approx \Upsilon(4S)$ |

## $\Xi_c'^+$ DECAY MODES

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

| | Mode | Fraction ($\Gamma_i/\Gamma$) |
|---|---|---|
| $\Gamma_1$ | $\Xi_c^+\gamma$ | seen |

## $\Xi_c'^+$ REFERENCES

JESSOP 99 PRL 82 492 C.P. Jessop *et al.* (CLEO Collab.)