



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

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

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> |
|---------------------------|-------------------------------------|
| 2578.2±0.5 OUR FIT | Error includes scale factor of 1.1. |

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

| <u>VALUE (MeV)</u> | <u>EVTS</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|---|-------------|--------------------|-------------|------------------------------------|
| 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 $e^+e^- \approx \Upsilon(4S)$ |

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

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|---|--------------------|-------------|---------------------------|
| -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.

| <u>Mode</u> | <u>Fraction (Γ_j/Γ)</u> |
|---------------------------------|--|
| $\Gamma_1 \quad \Xi_c^+ \gamma$ | 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.) |