

**$\Xi_c(2790)$** 

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

Seen in  $\Xi_c' \pi$  decays. The simplest assignment, based on the mass, width, and decay mode, is that this belongs in the same SU(4) multiplet as the  $\Lambda(1405)$  and the  $\Lambda_c(2595)^+$ , but the spin and parity have not been measured.

 **$\Xi_c(2790)$  MASSES**

The masses are obtained from the mass-difference measurements that follow.

 **$\Xi_c(2790)^+$  MASS**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>
<b>2792.4 ± 0.5 OUR FIT</b>	

 **$\Xi_c(2790)^0$  MASS**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>
<b>2794.1 ± 0.5 OUR FIT</b>	

 **$\Xi_c(2790) - \Xi_c'$  MASS DIFFERENCES** **$m_{\Xi_c(2790)^+} - m_{\Xi_c^0}$** 

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>213.20 ± 0.22 OUR FIT</b>				
<b>213.2 ± 0.2 ± 0.1</b>		YELTON	16	BELL 2231 and 11,560 evts
• • • We do not use the following data for averages, fits, limits, etc. • • •				
211.2 ± 1.3 ± 1.0	18	CSORNA	01	CLEO $e^+e^- \approx \Upsilon(4S)$

 **$m_{\Xi_c(2790)^0} - m_{\Xi_c^{'+}}$** 

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>215.70 ± 0.22 OUR FIT</b>				
<b>215.7 ± 0.2 ± 0.1</b>		YELTON	16	BELL 1241 and 7055 evts
• • • We do not use the following data for averages, fits, limits, etc. • • •				
216.2 ± 1.3 ± 1.0	14	CSORNA	01	CLEO $e^+e^- \approx \Upsilon(4S)$

 **$\Xi_c(2790)^+ - \Xi_c(2790)^0$  MASS DIFFERENCE**

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>-1.7 ± 0.7 OUR FIT</b>			
• • • We do not use the following data for averages, fits, limits, etc. • • •			
-3.3 ± 0.4 ± 0.5	YELTON	16	BELL 2231 and 1241 evts

 **$\Xi_c(2790)$  WIDTHS**

### $\Xi_c(2790)^+$ WIDTH

VALUE (MeV)	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<b><math>8.9 \pm 0.6 \pm 0.8</math></b>		2231	YELTON	16	BELL $e^+e^-$ , $\Upsilon$ regions
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
<15	90		CSORNA	01	CLEO $e^+e^- \approx \Upsilon(4S)$

### $\Xi_c(2790)^0$ WIDTH

VALUE (MeV)	CL%	EVTS	DOCUMENT ID	TECN	COMMENT
<b><math>10.0 \pm 0.7 \pm 0.8</math></b>		1241	YELTON	16	BELL $e^+e^-$ , $\Upsilon$ regions
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●					
<12	90		CSORNA	01	CLEO $e^+e^- \approx \Upsilon(4S)$

### $\Xi_c(2790)$ DECAY MODES

Mode	Fraction ( $\Gamma_j/\Gamma$ )
$\Gamma_1 \quad \Xi'_c \pi$	seen

### $\Xi_c(2790)$ BRANCHING RATIOS

$\Gamma(\Xi'_c \pi)/\Gamma_{\text{total}}$				$\Gamma_1/\Gamma$
VALUE	DOCUMENT ID	TECN	COMMENT	
seen	YELTON	16	BELL $e^+e^-$ , $\Upsilon$ regions	
<b>seen</b>	CSORNA	01	CLEO $e^+e^- \approx \Upsilon(4S)$	

### $\Xi_c(2790)$ REFERENCES

YELTON	16	PR D94 052011	J. Yelton <i>et al.</i>	(BELLE Collab.)
CSORNA	01	PRL 86 4243	S.E. Csorna <i>et al.</i>	(CLEO Collab.)