$\Xi_c(2815)$

$I(J^P) = \frac{1}{2}(\frac{3}{2}^-)$ Status: ∗∗∗

A narrow peak seen in the $\Xi_c \pi\pi$ mass spectrum. The simplest assignment is that this belongs to the same SU(4) multiplet as the $\Lambda(1520)$ and the $\Lambda_c(2625)$, but the spin and parity have not been measured.

$\Xi_c(2815)$ MASSES

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

$\Xi_c(2815)^+$ MASS

VALUE (MeV)	*DOCUMENT ID*
2816.5±1.2 OUR FIT	

$\Xi_c(2815)^0$ MASS

VALUE (MeV)	*DOCUMENT ID*
2818.2±2.1 OUR FIT	

$\Xi_c(2815) - \Xi_c$ MASS DIFFERENCES

$m_{\Xi_c(2815)^+} - m_{\Xi_c^+}$

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
348.6±1.2 OUR FIT					
348.6±0.6±1.0	20	ALEXANDER	99B	CLE2	$e^+ e^- \approx \Upsilon(4S)$

$m_{\Xi_c(2815)^0} - m_{\Xi_c^0}$

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
347.2±2.1 OUR FIT					
347.2±0.7±2.0	9	ALEXANDER	99B	CLE2	$e^+ e^- \approx \Upsilon(4S)$

$\Xi_c(2815)$ WIDTHS

$\Xi_c(2815)^+$ WIDTH

VALUE (MeV)	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
<3.5	90	ALEXANDER	99B	CLE2	$e^+ e^- \approx \Upsilon(4S)$

$\Xi_c(2815)^0$ WIDTH

VALUE (MeV)	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
<6.5	90	ALEXANDER	99B	CLE2	$e^+ e^- \approx \Upsilon(4S)$

$\Xi_c(2815)$ DECAY MODES

The $\Xi_c \pi\pi$ modes are consistent with being entirely via $\Xi_c(2645)\pi$.

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\Xi_c^+ \pi^+ \pi^-$	seen
Γ_2	$\Xi_c^0 \pi^+ \pi^-$	seen

$\Xi_c(2815)$ REFERENCES

ALEXANDER 99B PRL 83 3390 J.P. Alexander *et al.* (CLEO Collab.)