$\Xi_c(2645)$

$I(J^P) = ?(?^?)$ Status: ***

A narrow peak seen in the $\Xi_c\,\pi$ mass spectrum. The natural assignment is that this is the $J^P = 3/2^+$ excitation of the Ξ_c in the same SU(4) multiplet as the $\Delta(1232)$.

$\Xi_c(2645)$ MASSES

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

$\Xi_c(2645)^+$ MASS

VALUE (MeV)	DOCUMENT ID	
2644.6±2.1 OUR FIT	Error includes scale factor of 1.2.	

$\Xi_c(2645)^0$ MASS

VALUE (MeV)	DOCUMENT ID	
2643.8±1.8 OUR FIT		

$m_{\Xi_c(2645)} - m_{\Xi_c}$

$m_{\Xi_c(2645)^+} - m_{\Xi_c^0}$

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
174.3±1.1 OUR FIT					
174.3±0.5±1.0	34	GIBBONS	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

$m_{\Xi_c(2645)^0} - m_{\Xi_c^+}$

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
178.2±1.1 OUR FIT					
178.2±0.5±1.0	55	AVERY	95	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Xi_c(2645)$ WIDTHS

$\Xi_c(2645)^+$ WIDTH

VALUE (MeV)	CL%	DOCUMENT ID		TECN	COMMENT
<3.1	90	GIBBONS	96	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Xi_c(2645)^0$ WIDTH

VALUE (MeV)	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<5.5	90	55	AVERY	95	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Xi_c(2645)$ DECAY MODES

$\Xi_c\,\pi$ is the only strong decay allowed to a Ξ_c resonance having this mass.

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

$\Xi_c(2645)$ REFERENCES

GIBBONS	96	PRL 77 810	+Johnson, Kwon+	(CLEO Collab.)
AVERY	95	PRL 75 4364	+Freyberger, Lingel+	(CLEO Collab.)