$\Lambda_c(2880)^+$

$I(J^P) = 0(?^?)$ Status: ∗∗∗

A narrow peak seen in $\Lambda_c^+ \pi^+ \pi^-$ and in $p D^0$. It is not seen in $p D^+$, and therefore it is probably a Λ_c^+ and not a Σ_c. ARTUSO 01 guesses, based on the narrow width, that it might be a $J^P = 1/2^-$ Λ'^+_{c0}, where the subscript 0 indicates that the two light quarks are in a $J^P = 0^-$ state.

$\Lambda_c(2880)^+$ MASS

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
2881.9±0.5 OUR FIT					
2881.9±0.1±0.5	2.8k±190	AUBERT	07	BABR	in $p D^0$

$\Lambda_c(2880)^+ - \Lambda_c^+$ MASS DIFFERENCE

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
595.5±0.5 OUR FIT					
596 ±1 ±2	350^{+57}_{-55}	ARTUSO	01	CLE2	in $\Lambda_c^+ \pi^+ \pi^-$

$\Lambda_c(2880)^+$ WIDTH

VALUE (MeV)	*CL%*	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
5.8±1.5±1.1		2.8k±190	AUBERT	07	BABR	in $p D^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<8	90		ARTUSO	01	CLEO	in $\Lambda_c^+ \pi^+ \pi^-$

$\Lambda_c(2880)^+$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\Lambda_c^+ \pi^+ \pi^-$	seen
Γ_2	$\Sigma_c(2455)\pi$	seen
Γ_3	$\Sigma_c(2520)\pi$	not seen
Γ_4	$p D^0$	seen

$\Lambda_c(2880)^+$ BRANCHING RATIOS

$\Gamma(\Sigma_c(2455)\pi)/\Gamma(\Lambda_c^+ \pi^+ \pi^-)$ Γ_2/Γ_1

VALUE	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
0.31±0.06±0.03	96	ARTUSO	01	CLE2	$e^+ e^- \approx \Upsilon(4S)$

$\Gamma(\Sigma_c(2520)\pi)/\Gamma(\Lambda_c^+\pi^+\pi^-)$ **Γ_3/Γ_1**

VALUE	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
<0.11	90	ARTUSO	01	CLE2	$e^+e^- \approx \Upsilon(4S)$

$\Lambda_c(2880)^+$ REFERENCES

AUBERT	07	PRL 98 012001	B. Aubert *et al.*	(BABAR Collab.)
ARTUSO	01	PRL 86 4479	M. Artuso *et al.*	(CLEO Collab.)