$\Lambda_c(2940)^+$

$I(J^P) = 0(\frac{3}{2}^-)$ Status: ***

A narrow peak seen in pD^0 and in $\Lambda_c^+\pi^+\pi^-$. It is not seen in pD^+, and therefore it is a Λ_c^+ and not a Σ_c. $J^P = 3/2^-$ is favored, but not certain.

$\Lambda_c(2940)^+$ MASS

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$2939.6^{+1.3}_{-1.5}$ OUR AVERAGE					
$2944.8^{+3.5}_{-2.5}\pm0.4^{+0.1}_{-4.6}$		[1] AAIJ	17S	LHCB	in $\Lambda_b^0 \to D^0 p\pi^-$
$2939.8\pm1.3\pm1.0$	2.2k	AUBERT	07	BABR	in pD^0
$2938.0\pm1.3^{+2.0}_{-4.0}$	220	MIZUK	07	BELL	in $\Sigma_c(2455)^{0,++}\pi^\pm$

[1] The third AAIJ 17S uncertainty comes from modeling the resonant shape of the nearby $\Lambda_c(2880)^+$ and the background (non-resonant) amplitudes.

$\Lambda_c(2940)^+$ WIDTH

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
$20\ ^{+6}_{-5}$ OUR AVERAGE					
$27.7^{+8.2}_{-6.0}\pm\ 0.9^{+\ 5.2}_{-10.4}$		[2] AAIJ	17S	LHCB	in $\Lambda_b^0 \to D^0 p\pi^-$
$17.5\pm5.2\pm\ 5.9$	2.2k	AUBERT	07	BABR	in pD^0
$13\ ^{+8}_{-5}\ ^{+27}_{-\ 7}$	220	MIZUK	07	BELL	in $\Sigma_c(2455)^{0,++}\pi^\pm$

[2] The third AAIJ 17S uncertainty comes from modeling the resonant shape of the nearby $\Lambda_c(2880)^+$ and the background (non-resonant) amplitudes.

$\Lambda_c(2940)^+$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	pD^0	seen
Γ_2	$\Sigma_c(2455)^{0,++}\pi^\pm$	seen

$\Lambda_c(2940)^+$ REFERENCES

AAIJ	17S	JHEP 1705 030	R. Aaij *et al.*	(LHCb Collab.) JP
AUBERT	07	PRL 98 012001	B. Aubert *et al.*	(BABAR Collab.)
MIZUK	07	PRL 98 262001	R. Mizuk *et al.*	(BELLE Collab.)