

# $\Lambda_c(2940)^+$

$$I(J^P) = 0(?^?) \quad \text{Status: } ***$$

A fairly narrow peak of good statistical significance first seen in the  $\rho D^0$  mass spectrum. It is not seen in  $\rho D^+$ , and thus it is probably a  $\Lambda_c^+$  and not a  $\Sigma_c$ . It is also seen in  $\Sigma_c(2455)^{0,++} \pi^\pm$ .

## $\Lambda_c(2940)^+$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>2939.3<sup>+1.4</sup><sub>-1.5</sub> OUR AVERAGE</b>				
2939.8 ± 1.3 ± 1.0	2280 ± 310	AUBERT	07 BABR	in $\rho D^0$
2938.0 ± 1.3 <sup>+2.0</sup> <sub>-4.0</sub>	220 <sup>+80</sup> <sub>-60</sub>	MIZUK	07 BELL	in $\Sigma_c(2455)^{0,++} \pi^\pm$

## $\Lambda_c(2940)^+$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
<b>17<sup>+8</sup><sub>-6</sub> OUR AVERAGE</b>				
17.5 ± 5.2 ± 5.9	2280 ± 310	AUBERT	07 BABR	in $\rho D^0$
13 <sup>+8</sup> <sub>-5</sub> <sup>+27</sup> <sub>-7</sub>	220 <sup>+80</sup> <sub>-60</sub>	MIZUK	07 BELL	in $\Sigma_c(2455)^{0,++} \pi^\pm$

## $\Lambda_c(2940)^+$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1$ $\rho D^0$	seen
$\Gamma_2$ $\Sigma_c(2455)^{0,++} \pi^\pm$	seen

## $\Lambda_c(2940)^+$ REFERENCES

AUBERT	07	PRL 98 012001	B. Aubert <i>et al.</i>	(BABAR Collab.)
MIZUK	07	PRL 98 262001	R. Mizuk <i>et al.</i>	(BELLE Collab.)