# $\Lambda_c(2940)^+$

$I(J^P) = 0(?^?)$ Status: ***

A fairly narrow peak of good statistical significance first seen in the $pD^0$ mass spectrum. It is not seen in $pD^+$, 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* |
|---|---|---|---|---|---|
| **$2939.3^{+1.4}_{-1.5}$ OUR AVERAGE** | | | | | |
| $2939.8 \pm 1.3 \pm 1.0$ | $2280 \pm 310$ | AUBERT | 07 | BABR | in $pD^0$ |
| $2938.0 \pm 1.3^{+2.0}_{-4.0}$ | $220^{+80}_{-60}$ | MIZUK | 07 | BELL | in $\Sigma_c(2455)^{0,++}\,\pi^\pm$ |

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

| *VALUE* (MeV) | *EVTS* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|---|
| **$17\ ^{+8}_{-6}$ OUR AVERAGE** | | | | | |
| $17.5 \pm 5.2 \pm 5.9$ | $2280 \pm 310$ | AUBERT | 07 | BABR | in $pD^0$ |
| $13\ ^{+8}_{-5}\ ^{+27}_{-7}$ | $220^{+80}_{-60}$ | MIZUK | 07 | BELL | in $\Sigma_c(2455)^{0,++}\,\pi^\pm$ |

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

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

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


| | | | | |
|---|---|---|---|---|
| AUBERT | 07 | PRL 98 012001 | B. Aubert *et al.* | (BABAR Collab.) |
| MIZUK | 07 | PRL 98 262001 | R. Mizuk *et al.* | (BELLE Collab.) |