

# $\Xi_c(3080)$

$$I(J^P) = \frac{1}{2}(??) \quad \text{Status: } ***$$

A narrow peak seen in the  $\Lambda_c^+ K^- \pi^+$  and  $\Lambda_c^+ K_S^0 \pi^-$  mass spectra.

## $\Xi_c(3080)$ MASSES

### $\Xi_c(3080)^+$ MASS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>3077.0±0.4 OUR AVERAGE</b>				
3077.0±0.4±0.2	403 ± 60	AUBERT	08J BABR	$e^+ e^- \approx 10.58 \text{ GeV}$
3076.7±0.9±0.5	326 ± 40	CHISTOV	06 BELL	$e^+ e^- \approx \Upsilon(4S)$

### $\Xi_c(3080)^0$ MASS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>3079.9±1.4 OUR AVERAGE</b> Error includes scale factor of 1.3.				
3079.3±1.1±0.2	90 ± 27	AUBERT	08J BABR	$e^+ e^- \approx 10.58 \text{ GeV}$
3082.8±1.8±1.5	67 ± 20	CHISTOV	06 BELL	$e^+ e^- \approx \Upsilon(4S)$

## $\Xi_c(3080)$ WIDTHS

### $\Xi_c(3080)^+$ WIDTH

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>5.8±1.0 OUR AVERAGE</b>				
5.5±1.3±0.6	403 ± 60	AUBERT	08J BABR	$e^+ e^- \approx 10.58 \text{ GeV}$
6.2±1.2±0.8	326 ± 40	CHISTOV	06 BELL	$e^+ e^- \approx \Upsilon(4S)$

### $\Xi_c(3080)^0$ WIDTH

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>5.6±2.2 OUR AVERAGE</b>				
5.9±2.3±1.5	90 ± 27	AUBERT	08J BABR	$e^+ e^- \approx 10.58 \text{ GeV}$
5.2±3.1±1.8	67 ± 20	CHISTOV	06 BELL	$e^+ e^- \approx \Upsilon(4S)$

## $\Xi_c(3080)$ DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \quad \Lambda_c^+ \bar{K} \pi$	seen
$\Gamma_2 \quad \Sigma_c(2455) \bar{K}$	seen
$\Gamma_3 \quad \Sigma_c(2455) \bar{K} + \Sigma_c(2520) \bar{K}$	seen
$\Gamma_4 \quad \Lambda_c^+ \bar{K}$	not seen
$\Gamma_5 \quad \Lambda_c^+ \bar{K} \pi^+ \pi^-$	not seen

### $\Xi_c(3080)$ BRANCHING RATIOS

$$\Gamma(\Sigma_c(2455)\bar{K})/\Gamma(\Lambda_c^+\bar{K}\pi) \qquad \Gamma_2/\Gamma_1$$

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>0.45±0.06 OUR AVERAGE</b>			
0.45±0.05±0.05	AUBERT	08J	BABR in $\Lambda_c^+ K^- \pi^+$
0.44±0.12±0.07	AUBERT	08J	BABR in $\Lambda_c^+ K_S^0 \pi^-$

$$[\Gamma(\Sigma_c(2455)\bar{K}) + \Gamma(\Sigma_c(2520)\bar{K})]/\Gamma(\Lambda_c^+\bar{K}\pi) \qquad \Gamma_3/\Gamma_1$$

<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>0.89±0.12 OUR AVERAGE</b>			
0.95±0.14±0.06	AUBERT	08J	BABR in $\Lambda_c^+ K^- \pi^+$
0.78±0.21±0.05	AUBERT	08J	BABR in $\Lambda_c^+ K_S^0 \pi^-$

### $\Xi_c(3080)$ REFERENCES

AUBERT	08J	PR D77 012002	B. Aubert <i>et al.</i>	(BABAR Collab.)
CHISTOV	06	PRL 97 162001	R. Chistov <i>et al.</i>	(BELLE Collab.)