

$\Sigma_c(2800)$  $I(J^P) = 1(?^?)$  Status: \*\*\*Seen in the  $\Lambda_c^+ \pi^+$ ,  $\Lambda_c^+ \pi^0$ , and  $\Lambda_c^+ \pi^-$  mass spectra. **$\Sigma_c(2800)$  MASSES**

The charged ++ and + masses are obtained from the mass-difference measurements that follow. The neutral mass is dominated by the mass-difference measurement, but is pulled up somewhat by the less well-determined but considerably higher direct-mass measurement. It is possible, in fact, that AUBERT 08BN is seeing a different  $\Sigma_c$ .

 **$\Sigma_c(2800)^{++}$  MASS**

VALUE (MeV)	DOCUMENT ID
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2801<sup>+4</sup><sub>-6</sub> OUR FIT **$\Sigma_c(2800)^+$  MASS**

VALUE (MeV)	DOCUMENT ID
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2792<sup>+14</sup><sub>-5</sub> OUR FIT **$\Sigma_c(2800)^0$  MASS**

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
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2806<sup>+5</sup><sub>-7</sub> OUR FIT Error includes scale factor of 1.3.2846 $\pm$ 8 $\pm$ 10 AUBERT 08BN BABR  $B^- \rightarrow \bar{p} \Lambda_c^+ \pi^-$  **$\Sigma_c(2800)$  MASS DIFFERENCES** **$m_{\Sigma_c(2800)^{++}} - m_{\Lambda_c^+}$** 

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
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514<sup>+4</sup><sub>-6</sub> OUR FIT514.5<sup>+3.4+2.8</sup><sub>-3.1-4.9</sub> 2810<sup>+1090</sup><sub>-775</sub> MIZUK 05 BELL  $e^+ e^- \approx \gamma(4S)$  **$m_{\Sigma_c(2800)^+} - m_{\Lambda_c^+}$** 

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
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505<sup>+14</sup><sub>-5</sub> OUR FIT505.4<sup>+5.8+12.4</sup><sub>-4.6-2.0</sub> 1540<sup>+1750</sup><sub>-1050</sub> MIZUK 05 BELL  $e^+ e^- \approx \gamma(4S)$  **$m_{\Sigma_c(2800)^0} - m_{\Lambda_c^+}$** 

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
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519<sup>+5</sup><sub>-7</sub> OUR FIT Error includes scale factor of 1.3.515.4<sup>+3.2+2.1</sup><sub>-3.1-6.0</sub> 2240<sup>+1300</sup><sub>-740</sub> MIZUK 05 BELL  $e^+ e^- \approx \gamma(4S)$

$\Sigma_c(2800)$  WIDTHS $\Sigma_c(2800)^{++}$  WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
$75^{+18}_{-13} +^{12}_{-11}$	$2810^{+1090}_{-775}$	MIZUK	05	BELL $e^+e^- \approx \gamma(4S)$

 $\Sigma_c(2800)^+$  WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
$62^{+37}_{-23} +^{52}_{-38}$	$1540^{+1750}_{-1050}$	MIZUK	05	BELL $e^+e^- \approx \gamma(4S)$

 $\Sigma_c(2800)^0$  WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
$72^{+22}_{-15}$ OUR AVERAGE				
$86^{+33}_{-22} \pm 12$		AUBERT	08BN BABR	$B^- \rightarrow \bar{p}\Lambda_c^+\pi^-$
$61^{+18}_{-13} +^{22}_{-13}$	$2240^{+1300}_{-740}$	MIZUK	05	BELL $e^+e^- \approx \gamma(4S)$

 $\Sigma_c(2800)$  DECAY MODES

Mode	Fraction ( $\Gamma_i/\Gamma$ )
$\Gamma_1 \Lambda_c^+\pi$	seen

 $\Sigma_c(2800)$  REFERENCES

AUBERT	08BN PR D78 112003	B. Aubert <i>et al.</i>	(BABAR Collab.)
MIZUK	05 PRL 94 122002	R. Mizuk <i>et al.</i>	(BELLE Collab.)