



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

OMITTED FROM SUMMARY TABLE

This would presumably be an isospin-1/2 particle, a  $ccu \Xi_{cc}^{++}$  and a  $ccd \Xi_{cc}^+$ . However, opposed to the evidence cited below, the BABAR experiment has found no evidence for a  $\Xi_{cc}^+$  in a search in  $\Lambda_c^+ K^- \pi^+$  and  $\Xi_c^0 \pi^+$  modes, and no evidence of a  $\Xi_{cc}^{++}$  in  $\Lambda_c^+ K^- \pi^+ \pi^+$  and  $\Xi_c^0 \pi^+ \pi^+$  modes (AUBERT,B 06D). Nor has the BELLE experiment found any evidence for a  $\Xi_{cc}^+$  in the  $\Lambda_c^+ K^- \pi^+$  mode (CHISTOV 06).

**$\Xi_{cc}^+$  MASS**

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>3518.9 ± 0.9 OUR AVERAGE</b>				
3518 ± 3	6	<sup>1</sup> OCHERASHVI.05	SELX	$\Sigma^-$ nucleus $\approx$ 600 GeV
3519 ± 1	16	<sup>2</sup> MATTSON 02	SELX	$\Sigma^-$ nucleus $\approx$ 600 GeV

<sup>1</sup> OCHERASHVILI 05 claims "an excess of 5.62 events over ...  $1.38 \pm 0.13$  events" for a significance of  $4.8 \sigma$  in  $pD^+ K^-$  events.

<sup>2</sup> MATTSON 02 claims "an excess of 15.9 events over an expected background of  $6.1 \pm 0.5$  events, a statistical significance of  $6.3 \sigma$ " in the  $\Lambda_c^+ K^- \pi^+$  invariant-mass spectrum.

The probability that the peak is a fluctuation increases from  $1.0 \times 10^{-6}$  to  $1.1 \times 10^{-4}$  when the number of bins searched is considered.

**$\Xi_{cc}^+$  MEAN LIFE**

<u>VALUE (<math>10^{-15}</math> s)</u>	<u>CL%</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>&lt;33</b>	90	MATTSON 02	SELX	$\Sigma^-$ nucleus, $\approx$ 600 GeV

**$\Xi_{cc}^+$  DECAY MODES**

Mode	
$\Gamma_1$	$\Lambda_c^+ K^- \pi^+$
$\Gamma_2$	$pD^+ K^-$

$\Gamma(pD^+ K^-)/\Gamma(\Lambda_c^+ K^- \pi^+)$				$\Gamma_2/\Gamma_1$
<u>VALUE</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<b>0.36 ± 0.21</b>	6	OCHERASHVI.05	SELX	$\Sigma^- \approx$ 600 GeV

 REFERENCES

AUBERT,B	06D	PR D74 011103R	B. Aubert <i>et al.</i>	(BABAR Collab.)
CHISTOV	06	PRL 97 162001	R. Chistov <i>et al.</i>	(BELLE Collab.)
OCHERASHVI...	05	PL B628 18	A. Ocherashvili <i>et al.</i>	(FNAL SELEX Collab.)
MATTSON	02	PRL 89 112001	M. Mattson <i>et al.</i>	(FNAL SELEX Collab.)

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