

$\Xi(2120)$

$I(J^P) = \frac{1}{2}(??)$ Status: *
J, P need confirmation.

OMITTED FROM SUMMARY TABLE

$\Xi(2120)$ MASS

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
≈ 2120 OUR ESTIMATE				
2137±4	18	¹ CHLIAPNIK...	79 HBC	$K^+ p$ 32 GeV/ <i>c</i>
2123±7		² GAY	76C HBC	$K^- p$ 4.2 GeV/ <i>c</i>

$\Xi(2120)$ WIDTH

<u>VALUE (MeV)</u>	<u>EVTS</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
<20	18	¹ CHLIAPNIK...	79 HBC	$K^+ p$ 32 GeV/ <i>c</i>
25±12		² GAY	76C HBC	$K^- p$ 4.2 GeV/ <i>c</i>

$\Xi(2120)$ DECAY MODES

Mode	Fraction (Γ_j/Γ)
$\Gamma_1 \quad \Lambda \bar{K}$	seen

$\Xi(2120)$ BRANCHING RATIOS

$\Gamma(\Lambda \bar{K})/\Gamma_{\text{total}}$	Γ_1/Γ		
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	¹ CHLIAPNIK...	79 HBC	$K^+ p \rightarrow (\bar{\Lambda} K^+) X$
seen	² GAY	76C HBC	$K^- p$ 4.2 GeV/ <i>c</i>

$\Xi(2120)$ FOOTNOTES

- ¹ CHLIAPNIKOV 79 does not uniquely identify the K^+ in the $(\bar{\Lambda} K^+) X$ final state. It also reports bumps with fewer events at 2240, 2540, and 2830 MeV.
- ² GAY 76C sees a 4-standard deviation signal. However, HEMINGWAY 77, with more events from the same experiment points out that the signal is greatly reduced if a cut is made on the 4-momentum u . This suggests an anomalous production mechanism if the $\Xi(2120)$ is real.

$\Xi(2120)$ REFERENCES

CHLIAPNIK... 79	NP B158 253	P.V. Chliapnikov <i>et al.</i>	(CERN, BELG, MONS)
HEMINGWAY 77	PL 68B 197	R.J. Hemingway <i>et al.</i>	(AMST, CERN, NIJM+)
GAY 76C	PL 62B 477	J.B. Gay <i>et al.</i>	(AMST, CERN, NIJM)