$\Xi(2120)$

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

J, P need confirmation.

OMITTED FROM SUMMARY TABLE

Ξ(2120) MASS

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

Ξ(2120) WIDTH

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

Ξ(2120) DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\Lambda \overline{K}$	seen

Ξ(2120) BRANCHING RATIOS

$\Gamma(\Lambda \overline{K})/\Gamma_{\text{total}}$ **Γ_1/Γ**

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
seen	[1] CHLIAPNIK...	79	HBC	$K^+ p \to (\overline{\Lambda} K^+)$ X
seen	[2] GAY	76C	HBC	$K^- p$ 4.2 GeV/c

Ξ(2120) FOOTNOTES

[1] CHLIAPNIKOV 79 does not uniquely identify the K^+ in the $(\overline{\Lambda} K^+)$ 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 Ξ(2120) is real.

Ξ(2120) REFERENCES

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