$\Xi(2120)$

$I(J^P) = \frac{1}{2}(?^?)$ Status: ✳

J, P need confirmation.

OMITTED FROM SUMMARY TABLE

$\Xi(2120)$ MASS

VALUE (MeV)	EVTS		DOCUMENT ID		TECN	COMMENT
$\approx$ **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

$\Xi(2120)$ 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

$\Xi(2120)$ DECAY MODES

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

$\Xi(2120)$ BRANCHING RATIOS

$\Gamma(\Lambda\overline{K})/\Gamma_{total}$ 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

$\Xi(2120)$ 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 $\Xi(2120)$ is real.

$\Xi(2120)$ 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)