

$\Xi(2120)$
 $I(J^P) = \frac{1}{2}(?)^?$ Status: *
 J, P need confirmation.

OMITTED FROM SUMMARY TABLE

 $\Xi(2120)$ MASS

| VALUE (MeV) | EVTS | DOCUMENT ID | TECN | COMMENT |
|---|------|---------------------------|---------|-------------------|
| ≈ 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_j/Γ) |
|----------------------------|--------------------------------|
| $\Gamma_1 \Lambda \bar{K}$ | seen |

 $\Xi(2120)$ BRANCHING RATIOS

| $\Gamma(\Lambda \bar{K})/\Gamma_{\text{total}}$ | Γ_1/Γ |
|---|--|
| VALUE | |
| seen | ¹ CHLIAPNIK... 79 HBC $K^+ p \rightarrow (\bar{\Lambda} K^+) X$ |
| 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 $(\bar{\Lambda} K^+) X$ 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) |