

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

OMITTED FROM SUMMARY TABLE

 $\Xi(2120)$  MASS

| VALUE (MeV)                                   | EVTS | DOCUMENT ID               | TECN    | COMMENT           |
|---|------|---------------------------|---------|-------------------|
| <b><math>\approx 2120</math> OUR ESTIMATE</b> |      |                           |         |                   |
| $2137 \pm 4$                                  | 18   | <sup>1</sup> CHLIAPNIK... | 79 HBC  | $K^+ p$ 32 GeV/c  |
| $2123 \pm 7$                                  |      | <sup>2</sup> GAY          | 76C HBC | $K^- p$ 4.2 GeV/c |

 $\Xi(2120)$  WIDTH

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

 $\Xi(2120)$  DECAY MODES

| Mode                       | Fraction ( $\Gamma_j/\Gamma$ ) |
|----------------------------|--------------------------------|
| $\Gamma_1 \Lambda \bar{K}$ | seen                           |

 $\Xi(2120)$  BRANCHING RATIOS

| $\Gamma(\Lambda \bar{K})/\Gamma_{\text{total}}$ | $\Gamma_1/\Gamma$  |
|---|--|
| VALUE   |  |
| seen  | <sup>1</sup> CHLIAPNIK... 79 HBC $K^+ p \rightarrow (\bar{\Lambda} K^+) X$ |
| seen  | <sup>2</sup> GAY 76C HBC $K^- p$ 4.2 GeV/c                                 |

 $\Xi(2120)$  FOOTNOTES

<sup>1</sup> 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.

<sup>2</sup> 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)  |