

$\Xi(2250)$

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

**OMITTED FROM SUMMARY TABLE**

The evidence for this state is mixed. BARTSCH 69 sees a bump of not much statistical significance in  $\Lambda\bar{K}\pi$ ,  $\Sigma\bar{K}\pi$ , and  $\Xi\pi\pi$  mass spectra. GOLDWASSER 70 sees a narrower bump in  $\Xi\pi\pi$  at a higher mass. Not seen by HASSALL 81 with 45 events/ $\mu\text{b}$  at 6.5 GeV/c. Seen by JENKINS 83. Perhaps seen by BIAGI 87.

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 **$\Xi(2250)$  MASS**

| <u>VALUE (MeV)</u>                            | <u>EVTS</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>CHG</u> | <u>COMMENT</u>   |
|---|-------------|--------------------|-------------|------------|--|
| <b><math>\approx 2250</math> OUR ESTIMATE</b> |             |                    |             |            |  |
| $2189 \pm 7$                                  | 66          | BIAGI              | 87          | SPEC       | - $\Xi^- \text{Be} \rightarrow (\Xi^- \pi^+ \pi^-)$<br>X |
| $2214 \pm 5$                                  |             | JENKINS            | 83          | MPS        | - $K^- p \rightarrow K^+$<br>MM                          |
| $2295 \pm 15$                                 | 18          | GOLDWASSER 70      | HBC         | -          | $K^- p$ 5.5 GeV/c  |
| $2244 \pm 52$                                 | 35          | BARTSCH            | 69          | HBC        | $K^- p$ 10 GeV/c   |

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 **$\Xi(2250)$  WIDTH**

| <u>VALUE (MeV)</u> | <u>EVTS</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>CHG</u> | <u>COMMENT</u>   |
|--------------------|-------------|--------------------|-------------|------------|--|
| $46 \pm 27$        | 66          | BIAGI              | 87          | SPEC       | - $\Xi^- \text{Be} \rightarrow (\Xi^- \pi^+ \pi^-)$<br>X |
| < 30               |             | GOLDWASSER 70      | HBC         | -          | $K^- p$ 5.5 GeV/c  |
| $130 \pm 80$       |             | BARTSCH            | 69          | HBC        |  |

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 **$\Xi(2250)$  DECAY MODES**

| Mode       |                     |
|------------|---------------------|
| $\Gamma_1$ | $\Xi\pi\pi$         |
| $\Gamma_2$ | $\Lambda\bar{K}\pi$ |
| $\Gamma_3$ | $\Sigma\bar{K}\pi$  |

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 **$\Xi(2250)$  REFERENCES**

|            |    |             |   |   |
|------------|----|-------------|---|---|
| BIAGI      | 87 | ZPHY C34 15 | + | (BRIS, CERN, GEVA, HEIDP, LAUS, LOQM, RAL)      |
| JENKINS    | 83 | PRL 51 951  | + | Albright, Diamond+ (FSU, BRAN, LBL, CINC, MASD) |
| HASSALL    | 81 | NP B189 397 | + | Ansorge, Carter, Neale+ (CAVE, MSU)             |
| GOLDWASSER | 70 | PR D1 1960  | + | Schultz (ILL)                                   |
| BARTSCH    | 69 | PL 28B 439  | + | (AACH, BERL, CERN, LOIC, VIEN)                  |

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