# $\Lambda(2325)\ 3/2^-$

$I(J^P) = 0(\frac{3}{2}^-)$ Status: *

OMITTED FROM SUMMARY TABLE

BACCARI 77 finds this state with either $J^P = 3/2^-$ or $3/2^+$ in a energy-dependent partial-wave analyses of $K^- p \rightarrow \Lambda\omega$ from 2070 to 2436 MeV. A subsequent semi-energy-independent analysis from threshold to 2436 MeV selects $3/2^-$. DEBELLEFON 78 (same group) also sees this state in an energy-dependent partial-wave analysis of $K^- p \rightarrow \overline{K} N$ data, and finds $J^P = 3/2^-$ or $3/2^+$. They again prefer $J^P = 3/2^-$, but only on the basis of model-dependent considerations.

## $\Lambda(2325)$ MASS

| *VALUE* (MeV) | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|
| **≈ 2325 OUR ESTIMATE** | | | | |
| 2342±30 | DEBELLEFON | 78 | DPWA | $\overline{K} N \rightarrow \overline{K} N$ |
| 2327±20 | BACCARI | 77 | DPWA | $K^- p \rightarrow \Lambda\omega$ |

## $\Lambda(2325)$ WIDTH

| *VALUE* (MeV) | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|
| 177±40 | DEBELLEFON | 78 | DPWA | $\overline{K} N \rightarrow \overline{K} N$ |
| 160±40 | BACCARI | 77 | IPWA | $K^- p \rightarrow \Lambda\omega$ |

## $\Lambda(2325)$ DECAY MODES

| | Mode |
|---|---|
| $\Gamma_1$ | $N\overline{K}$ |
| $\Gamma_2$ | $\Lambda\omega$ |

## $\Lambda(2325)$ BRANCHING RATIOS

**$\Gamma(N\overline{K})/\Gamma_{\text{total}}$** **$\Gamma_1/\Gamma$**

| *VALUE* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|
| 0.19±0.06 | DEBELLEFON | 78 | DPWA | $\overline{K} N \rightarrow \overline{K} N$ |

**$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\overline{K} \rightarrow \Lambda(2325) \rightarrow \Lambda\omega$** **$(\Gamma_1\Gamma_2)^{1/2}/\Gamma$**

| *VALUE* | *DOCUMENT ID* | | *TECN* | *COMMENT* |
|---|---|---|---|---|
| 0.06±0.02 | [1] BACCARI | 77 | IPWA | $DS_{33}$ wave |
| 0.05±0.02 | [1] BACCARI | 77 | DPWA | $DD_{13}$ wave |
| 0.08±0.03 | [1] BACCARI | 77 | DPWA | $DD_{33}$ wave |

## $\Lambda(2325)$ FOOTNOTES

[1] Note that the three BACCARI 77 entries are for three different waves.

## Λ(2325) REFERENCES


| | | | | |
|---|---|---|---|---|
| DEBELLEFON | 78 | NC 42A 403 | A. de Bellefon *et al.* | (CDEF, SACL) IJP |
| BACCARI | 77 | NC 41A 96 | B. Baccari *et al.* | (SACL, CDEF) IJP |