

$\Lambda(2325) D_{03}$

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

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 $K^- p \rightarrow \bar{K}N$ 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

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|---|--------------------|-------------|-----------------------------------|
| ≈ 2325 OUR ESTIMATE | | | |
| 2342 \pm 30 | DEBELLEFON 78 | DPWA | $\bar{K}N \rightarrow \bar{K}N$ |
| 2327 \pm 20 | BACCARI 77 | DPWA | $K^- p \rightarrow \Lambda\omega$ |

$\Lambda(2325)$ WIDTH

| <u>VALUE (MeV)</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
|--------------------|--------------------|-------------|-----------------------------------|
| 177 \pm 40 | DEBELLEFON 78 | DPWA | $\bar{K}N \rightarrow \bar{K}N$ |
| 160 \pm 40 | BACCARI 77 | IPWA | $K^- p \rightarrow \Lambda\omega$ |

$\Lambda(2325)$ DECAY MODES

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

$\Lambda(2325)$ BRANCHING RATIOS

| $\Gamma(N\bar{K})/\Gamma_{\text{total}}$ | Γ_1/Γ | | |
|--|-----------------------------------|-------------|---------------------------------|
| <u>VALUE</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
| 0.19 \pm 0.06 | DEBELLEFON 78 | DPWA | $\bar{K}N \rightarrow \bar{K}N$ |
| | | | |
| $(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\bar{K} \rightarrow \Lambda(2325) \rightarrow \Lambda\omega$ | $(\Gamma_1\Gamma_2)^{1/2}/\Gamma$ | | |
| <u>VALUE</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>COMMENT</u> |
| 0.06 \pm 0.02 | ¹ BACCARI 77 | IPWA | DS_{33} wave |
| 0.05 \pm 0.02 | ¹ BACCARI 77 | DPWA | DD_{13} wave |
| 0.08 \pm 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.

$\Lambda(2325)$ REFERENCES

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