

$\Lambda(2325) D_{03}$

$I(J^P) = 0(\frac{3}{2}^-)$  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  $K^- p \rightarrow \bar{K}N$  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**

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

**$\Lambda(2325)$  WIDTH**

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
177 ± 40	DEBELLEFON 78	DPWA	$\bar{K}N \rightarrow \bar{K}N$
160 ± 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**

$\Gamma(N\bar{K})/\Gamma_{\text{total}}$	DOCUMENT ID	TECN	COMMENT	$\Gamma_1/\Gamma$
0.19 ± 0.06	DEBELLEFON 78	DPWA	$\bar{K}N \rightarrow \bar{K}N$	

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\bar{K} \rightarrow \Lambda(2325) \rightarrow \Lambda\omega$	DOCUMENT ID	TECN	COMMENT	$(\Gamma_1\Gamma_2)^{1/2}/\Gamma$
0.06 ± 0.02	<sup>1</sup> BACCARI 77	IPWA	$DS_{33}$ wave	
0.05 ± 0.02	<sup>1</sup> BACCARI 77	DPWA	$DD_{13}$ wave	
0.08 ± 0.03	<sup>1</sup> BACCARI 77	DPWA	$DD_{33}$ wave	

**$\Lambda(2325)$  FOOTNOTES**

<sup>1</sup> 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

---