

$\Lambda(2325) \ 3/2^-$ $I(J^P) = 0(\frac{3}{2}^-)$ Status: *

NODE=B112

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.

NODE=B112

 $\Lambda(2325)$ MASS

NODE=B112M

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

NODE=B112M
→ UNCHECKED ←

 $\Lambda(2325)$ WIDTH

NODE=B112W

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

NODE=B112W

 $\Lambda(2325)$ DECAY MODES

NODE=B112215;NODE=B112

Mode	
Γ_1	$N \bar{K}$
Γ_2	$\Lambda \omega$

DESIG=1
DESIG=2

 $\Lambda(2325)$ BRANCHING RATIOS

NODE=B112220

$\Gamma(N\bar{K})/\Gamma_{\text{total}}$				Γ_1/Γ
VALUE	DOCUMENT ID	TECN	COMMENT	
0.19 ± 0.06	DEBELLEFON 78	DPWA	$\bar{K} N \rightarrow \bar{K} N$	

NODE=B112R2
NODE=B112R2

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

NODE=B112R1
NODE=B112R1

OCCUR=2
OCCUR=3

 $\Lambda(2325)$ FOOTNOTES

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

NODE=B112
NODE=B112;LINKAGE=A

 $\Lambda(2325)$ REFERENCES

NODE=B112

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

REFID=31968
REFID=31932