

$Z_0(1865) \ 3/2^-$ $I(J^P) = 0(\frac{3}{2}^-)$ Status: *

OMITTED FROM SUMMARY TABLE

This effect is strongly associated with the NK^* threshold. See also the $Z_0(1780)$.

NODE=B096

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 $Z_0(1865)$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
1907	NAKAJIMA	82B	PWA KN 0.2–1.6 GeV/c
1830	AARON	73	MPWA Isospin-0 KN 0.6–1.6 GeV/c
1840	¹ CARROLL	73B	CNTR KN $I = 0$ total σ (fit 2)
1868±10	COOL	70	CNTR K^+p , K^+d total σ
1860±15	CARTER	67	THEO Dispersion relation

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 $Z_0(1865)$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
291	NAKAJIMA	82B	PWA KN 0.2–1.6 GeV/c
100	AARON	73	MPWA Isospin-0 KN 0.6–1.6 GeV/c
75	¹ CARROLL	73B	CNTR KN $I = 0$ total σ (fit 2)
160±30	COOL	70	CNTR
200±50	CARTER	67	THEO

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 $Z_0(1865)$ DECAY MODES

Mode	
Γ_1	NK
Γ_2	$NK^*(892)$

NODE=B096215;NODE=B096

DESIG=1

DESIG=2

 $Z_0(1865)$ BRANCHING RATIOS

$\Gamma(NK)/\Gamma_{\text{total}}$	Γ_1/Γ			
VALUE	DOCUMENT ID	TECN	COMMENT	
0.35	NAKAJIMA	82B	PWA	$K N$ 0.2–1.6 GeV/c
0.085	¹ CARROLL	73B	CNTR	If $J = 3/2$, fit 2
0.115±0.025	COOL	70	CNTR	If $J = 3/2$
0.155±0.025	CARTER	67	THEO	If $J = 3/2$

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$\Gamma(NK^*(892))/\Gamma_{\text{total}}$				Γ_2/Γ
VALUE	DOCUMENT ID		TECN	
main inelastic decay	HIRATA	68	HBC	

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 $Z_0(1865)$ FOOTNOTES¹ Fit2 = fit of $L = 1$ and $L = 2$ Breit-Wigners to $I = 0$ total cross section from 0.4–1.1 GeV/c. See $Z_0(1780)$ for fit1 and $L = 1$ part of fit2.

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 $Z_0(1865)$ REFERENCES

NAKAJIMA	82B	PL 112B 80	K. Nakajima <i>et al.</i>	(KEK) IJP	REFID=31534
AARON	73	PR D7 1401	R. Aaron <i>et al.</i>	(LASL, NEAS) IJP	REFID=31572
CARROLL	73B	PL 45B 531	A.S. Carroll <i>et al.</i>	(BNL) I	REFID=31532
COOL	70	PR D1 1887	R.L. Cool <i>et al.</i>	(BNL)	REFID=31529
Also		PRL 17 102	R.L. Cool <i>et al.</i>	(BNL) I	REFID=31570
Also		PL 30B 564	R.J. Abrams <i>et al.</i>	(BNL)	REFID=31528
HIRATA	68	PRL 21 1485	A.A. Hirata <i>et al.</i>	(LRL)	REFID=31568
CARTER	67	PRL 18 801	A.A. Carter	(CAVE)	REFID=31567

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OTHER RELATED PAPERS

HASHIMOTO	84	PR C29 1377	K. Hashimoto	(VPI, KYOT)	REFID=31580
GIACOMELLI	72	NP B37 577	G. Giacomelli <i>et al.</i>	(BGNA, GLAS, ROMA+)	REFID=31560
WILSON	72	NP B42 445	B.C. Wilson <i>et al.</i>	(BGNA, GLAS, ROMA+)	REFID=31531
AARON	71	PRL 26 407	R. Aaron, R.D. Amado, R.R. Silbar	(NEAS, PENN+) IJP	REFID=31576
HIRATA	70	Duke Conf. 429	A.A. Hirata <i>et al.</i>	(LRL)	REFID=31575
Hyperon Resonances, 1970					