

$K_0^*(1950)$

$$I(J^P) = \frac{1}{2}(0^+)$$

OMITTED FROM SUMMARY TABLE

Seen in partial-wave analysis of the $K^- \pi^+$ system. Needs confirmation. **$K_0^*(1950)$ MASS**

VALUE (MeV)	DOCUMENT ID	TECN	CHG	COMMENT
$1945 \pm 10 \pm 20$	¹ ASTON	88	LASS	0 11 $K^- p \rightarrow K^- \pi^+ n$
1917 ± 12	² ZHOU	06	RVUE	$K p \rightarrow K^- \pi^+ n$
1820 ± 40	³ ANISOVICH	97C	RVUE	11 $K^- p \rightarrow K^- \pi^+ n$

• • • We do not use the following data for averages, fits, limits, etc. • • •

¹We take the central value of the two solutions and the larger error given.²S-matrix pole. Using ASTON 88 and assuming $K_0^*(800)$, $K_0^*(1430)$.³T-matrix pole. Reanalysis of ASTON 88 data. **$K_0^*(1950)$ WIDTH**

VALUE (MeV)	DOCUMENT ID	TECN	CHG	COMMENT
$201 \pm 34 \pm 79$	⁴ ASTON	88	LASS	0 11 $K^- p \rightarrow K^- \pi^+ n$
145 ± 38	⁵ ZHOU	06	RVUE	$K p \rightarrow K^- \pi^+ n$
250 ± 100	⁶ ANISOVICH	97C	RVUE	11 $K^- p \rightarrow K^- \pi^+ n$

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⁴We take the central value of the two solutions and the larger error given.⁵S-matrix pole. Using ASTON 88 and assuming $K_0^*(800)$, $K_0^*(1430)$.⁶T-matrix pole. Reanalysis of ASTON 88 data. **$K_0^*(1950)$ DECAY MODES**

Mode	Fraction (Γ_i/Γ)
Γ_1 $K \pi$	$(52 \pm 14) \%$

 $K_0^*(1950)$ BRANCHING RATIOS

$\Gamma(K\pi)/\Gamma_{\text{total}}$	Γ_1/Γ			
VALUE	DOCUMENT ID	TECN	CHG	COMMENT
$0.52 \pm 0.08 \pm 0.12$	⁷ ASTON	88	LASS	0 11 $K^- p \rightarrow K^- \pi^+ n$
~ 0.60	⁸ ZHOU	06	RVUE	$K p \rightarrow K^- \pi^+ n$

• • • We do not use the following data for averages, fits, limits, etc. • • •

⁷We take the central value of the two solutions and the larger error given.⁸S-matrix pole. Using ASTON 88 and assuming $K_0^*(800)$, $K_0^*(1430)$.

$K_0^*(1950)$ REFERENCES

ZHOU	06	NP A775 212	Z.Y. Zhou, H.Q. Zheng
ANISOVICH	97C	PL B413 137	A.V. Anisovich, A.V. Sarantsev
ASTON	88	NP B296 493	D. Aston <i>et al.</i> (SLAC, NAGO, CINC, INUS)
