

$K_0^*(1950)$

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

OMITTED FROM SUMMARY TABLE

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

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>
1945 ± 10 ± 20	¹ ASTON	88	LASS	0 11 $K^- p \rightarrow K^- \pi^+ n$
• • •	We do not use the following data for averages, fits, limits, etc. • • •			
1917 ± 12	² ZHOU	06	RVUE	$K p \rightarrow K^- \pi^+ n$
1820 ± 40	³ ANISOVICH	97C	RVUE	11 $K^- p \rightarrow K^- \pi^+ n$

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

<u>VALUE (MeV)</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>CHG</u>	<u>COMMENT</u>
201 ± 34 ± 79	⁴ ASTON	88	LASS	0 11 $K^- p \rightarrow K^- \pi^+ n$
• • •	We do not use the following data for averages, fits, limits, etc. • • •			
145 ± 38	⁵ ZHOU	06	RVUE	$K p \rightarrow K^- \pi^+ n$
250 ± 100	⁶ ANISOVICH	97C	RVUE	11 $K^- p \rightarrow K^- \pi^+ n$

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

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

 $K_0^*(1950)$ BRANCHING RATIOS

$\Gamma(K\pi)/\Gamma_{\text{total}}$	Γ_1/Γ	
0.52 ± 0.08 ± 0.12	⁷ ASTON	
• • •	We do not use the following data for averages, fits, limits, etc. • • •	
~ 0.60	⁸ ZHOU	
⁷ We take the central value of the two solutions and the larger error given.		
⁸ S-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)
