

$K^*(892)$

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

 $K^*(892)$ T-Matrix Pole $\sqrt{s}$

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
(890 ± 14) − i (26 ± 6) OUR ESTIMATE			
(890 ± 2) − i (25.6 ± 1.2)	¹ PELAEZ	20	RVUE $\pi K \rightarrow \pi K$
(892 ± 1) − i (29 ± 1)	² PELAEZ	17	RVUE $\pi K \rightarrow \pi K$
(889 ± 13) − i (24 ± 4)	³ PELAEZ	04A	RVUE $\pi K \rightarrow \pi K$

¹ Extracted employing πK partial wave analysis from ESTABROOKS 78 and ASTON 88, Roy-Steiner equations and once subtracted forward dispersion relations.

² Reanalysis of ESTABROOKS 78 and ASTON 88 satisfying Forward Dispersion Relations and using sequences of Pade approximants.

³ Reanalysis of data from ESTABROOKS 78 and ASTON 88 in the unitarized ChPT model.

 $K^*(892)$ MASS**CHARGED ONLY, HADROPRODUCED**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
891.67 ± 0.26 OUR AVERAGE					
892.2 ± 0.5 ± 1.7		ALBRECHT	20	CBAR	0.9 $\bar{p}p \rightarrow K^+ K^- \pi^0$
892.6 ± 0.5	5840	BAUBILLIER	84B	HBC	− 8.25 $K^- p \rightarrow \bar{K}^0 \pi^- p$
888 ± 3		NAPIER	84	SPEC	+ 200 $\pi^- p \rightarrow 2K_S^0 X$
891 ± 1		NAPIER	84	SPEC	− 200 $\pi^- p \rightarrow 2K_S^0 X$
891.7 ± 2.1	3700	BARTH	83	HBC	+ 70 $K^+ p \rightarrow K^0 \pi^+ X$
891 ± 1	4100	TOAFF	81	HBC	− 6.5 $K^- p \rightarrow \bar{K}^0 \pi^- p$
892.8 ± 1.6		AJINENKO	80	HBC	+ 32 $K^+ p \rightarrow K^0 \pi^+ X$
890.7 ± 0.9	1800	AGUILAR-...	78B	HBC	± 0.76 $\bar{p}p \rightarrow K^\mp K_S^0 \pi^\pm$
886.6 ± 2.4	1225	BALAND	78	HBC	± 12 $\bar{p}p \rightarrow (K\pi)^\pm X$
891.7 ± 0.6	6706	COOPER	78	HBC	± 0.76 $\bar{p}p \rightarrow (K\pi)^\pm X$
891.9 ± 0.7	9000	¹ PALER	75	HBC	− 14.3 $K^- p \rightarrow (K\pi)^- X$
892.2 ± 1.5	4404	AGUILAR-...	71B	HBC	− 3.9, 4.6 $K^- p \rightarrow (K\pi)^- p$
891 ± 2	1000	CRENNELL	69D	DBC	− 3.9 $K^- N \rightarrow K^0 \pi^- X$
890 ± 3.0	720	BARLOW	67	HBC	± 1.2 $\bar{p}p \rightarrow (K^0 \pi)^\pm K^\mp$
889 ± 3.0	600	BARLOW	67	HBC	± 1.2 $\bar{p}p \rightarrow (K^0 \pi)^\pm K \pi$
891 ± 2.3	620	² DEBAERE	67B	HBC	+ 3.5 $K^+ p \rightarrow K^0 \pi^+ p$
891.0 ± 1.2	1700	³ WOJCICKI	64	HBC	− 1.7 $K^- p \rightarrow \bar{K}^0 \pi^- p$

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

893.6 ± 0.1 $^{+0.2}_{-0.3}$	183k	ABLIKIM	19AQ	BES	±	$J/\psi \rightarrow K^+ K^- \pi^0$
895.6 ± 0.8	4k	⁴ LEES	17C	BABR		$J/\psi \rightarrow K_S^0 K^\pm \pi^\mp$
893.2 ± 0.1 ± 1.0	190k	⁵ AAIJ	16N	LHCB		$D^0 \rightarrow K_S^0 K^\pm \pi^\mp$
893.5 ± 1.1	27k	⁶ ABELE	99D	CBAR	±	0.0 $\bar{p}p \rightarrow K^+ K^- \pi^0$
890.4 ± 0.2 ± 0.5	80k	⁷ BIRD	89	LASS	−	11 $K^- p \rightarrow \bar{K}^0 \pi^- p$
890.0 ± 2.3	800	^{2,3} CLELAND	82	SPEC	+	30 $K^+ p \rightarrow K_S^0 \pi^+ p$

896.0 ± 1.1	3200	^{2,3} CLELAND	82	SPEC +	50 $K^+ p \rightarrow K_S^0 \pi^+ p$
893 ± 1	3600	^{2,3} CLELAND	82	SPEC -	50 $K^+ p \rightarrow K_S^0 \pi^- p$
896.0 ± 1.9	380	DELFOSSSE	81	SPEC +	50 $K^\pm p \rightarrow K^\pm \pi^0 p$
886.0 ± 2.3	187	DELFOSSSE	81	SPEC -	50 $K^\pm p \rightarrow K^\pm \pi^0 p$
894.2 ± 2.0	765	² CLARK	73	HBC -	3.13 $K^- p \rightarrow \overline{K}^0 \pi^- p$
894.3 ± 1.5	1150	^{2,3} CLARK	73	HBC -	3.3 $K^- p \rightarrow \overline{K}^0 \pi^- p$
892.0 ± 2.6	341	² SCHWEING...68	HBC -	5.5 $K^- p \rightarrow \overline{K}^0 \pi^- p$	

¹ Inclusive reaction. Complicated background and phase-space effects.

² Mass errors enlarged by us to $\Gamma/\sqrt{N}$. See note.

³ Number of events in peak reevaluated by us.

⁴ From a Dalitz plot analysis in an isobar model with charged and neutral $K^*(892)$ masses and widths floating.

⁵ Average of fit results with different parametrizations for the $K\pi$ S -wave.

⁶ K-matrix pole.

⁷ From a partial wave amplitude analysis.

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VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
895.47 $\pm 0.20 \pm 0.74$	53k	¹ EPIFANOV 07	BELL	$\tau^- \rightarrow K_S^0 \pi^- \nu_\tau$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
892.0 ± 0.5		² BOITO 10	RVUE	$\tau^- \rightarrow K_S^0 \pi^- \nu_\tau$
892.0 ± 0.9		^{3,4} BOITO 09	RVUE	$\tau^- \rightarrow K_S^0 \pi^- \nu_\tau$
895.3 ± 0.2		^{4,5} JAMIN 08	RVUE	$\tau^- \rightarrow K_S^0 \pi^- \nu_\tau$
896.4 ± 0.9	12k	⁶ BONVICINI 02	CLEO	$\tau^- \rightarrow K^- \pi^0 \nu_\tau$
895 ± 2		⁷ BARATE 99R	ALEP	$\tau^- \rightarrow K^- \pi^0 \nu_\tau$

¹ From a fit in the $K_0^*(700) + K^*(892) + K^*(1410)$ model.

² From the pole position of the $K\pi$ vector form factor using EPIFANOV 07 and constraints from K_{J3} decays in ANTONELLI 10.

³ From the pole position of the $K\pi$ vector form factor in the complex s -plane and using EPIFANOV 07 data.

⁴ Systematic uncertainties not estimated.

⁵ Reanalysis of EPIFANOV 07 using resonance chiral theory.

⁶ Calculated by us from the shift by 4.7 ± 0.9 MeV (statistical uncertainty only) reported in BONVICINI 02 with respect to the world average value from PDG 00.

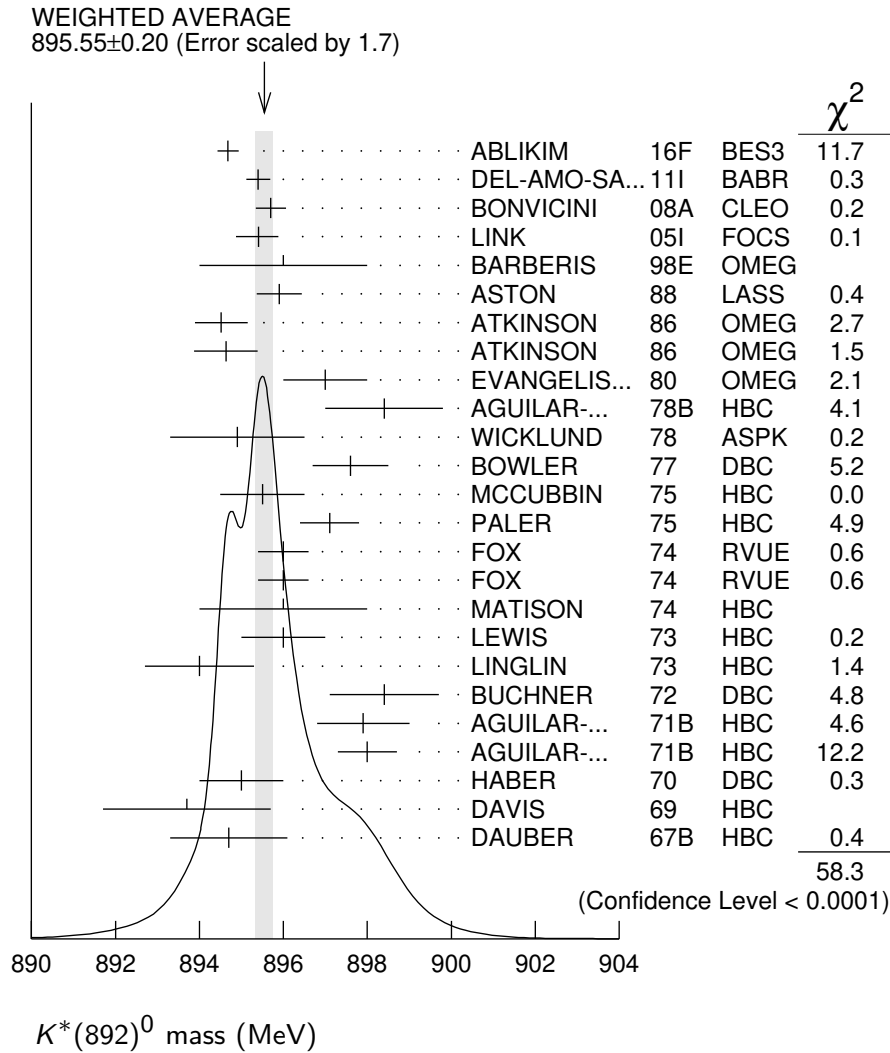
⁷ With mass and width of the $K^*(1410)$ fixed at 1412 MeV and 227 MeV, respectively.

NEUTRAL ONLY

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
895.55 ± 0.20 OUR AVERAGE		Error includes scale factor of 1.7. See the ideogram below.		
894.68 $\pm 0.25 \pm 0.05$		¹ ABLIKIM 16F	BES3	$D^+ \rightarrow K^- \pi^+ e^+ \nu_e$
895.4 $\pm 0.2 \pm 0.2$	243k	² DEL-AMO-SA..11I	BABR	$D^+ \rightarrow K^- \pi^+ e^+ \nu_e$
895.7 $\pm 0.2 \pm 0.3$	141k	³ BONVICINI 08A	CLEO	$D^+ \rightarrow K^- \pi^+ \pi^+$
895.41 $\pm 0.32^{+0.35}_{-0.43}$	18k	⁴ LINK 05I	FOCS	$D^+ \rightarrow K^- \pi^+ \mu^+ \nu_\mu$
896 ± 2		BARBERIS 98E	OMEG	450 $pp \rightarrow p_f p_s K^* \bar{K}^*$
895.9 $\pm 0.5 \pm 0.2$		ASTON 88	LASS	11 $K^- p \rightarrow K^- \pi^+ n$
894.52 ± 0.63	25k	⁵ ATKINSON 86	OMEG	20-70 γp
894.63 ± 0.76	20k	⁵ ATKINSON 86	OMEG	20-70 γp

897 ±1	28k	EVANGELIS...	80	OMEG	10 $\pi^- p \rightarrow K^+ \pi^- (\Lambda, \Sigma)$
898.4 ±1.4	1180	AGUILAR-...	78B	HBC	0.76 $\bar{p} p \rightarrow K^\mp K_S^0 \pi^\pm$
894.9 ±1.6		WICKLUND	78	ASPK	3,4,6 $K^\pm N \rightarrow (K\pi)^0 N$
897.6 ±0.9		BOWLER	77	DBC	5.4 $K^+ d \rightarrow K^+ \pi^- p p$
895.5 ±1.0	3600	MCCUBBIN	75	HBC	3.6 $K^- p \rightarrow K^- \pi^+ n$
897.1 ±0.7	22k	⁵ PALER	75	HBC	14.3 $K^- p \rightarrow (K\pi)^0 X$
896.0 ±0.6	10k	FOX	74	RVUE	2 $K^- p \rightarrow K^- \pi^+ n$
896.0 ±0.6		FOX	74	RVUE	2 $K^+ n \rightarrow K^+ \pi^- p$
896 ±2		⁶ MATISON	74	HBC	12 $K^+ p \rightarrow K^+ \pi^- \Delta$
896 ±1	3186	LEWIS	73	HBC	2.1–2.7 $K^+ p \rightarrow K \pi \pi p$
894.0 ±1.3		⁶ LINGLIN	73	HBC	2–13 $K^+ p \rightarrow$ $K^+ \pi^- \pi^+ p$
898.4 ±1.3	1700	⁷ BUCHNER	72	DBC	4.6 $K^+ n \rightarrow K^+ \pi^- p$
897.9 ±1.1	2934	⁷ AGUILAR-...	71B	HBC	3.9,4.6 $K^- p \rightarrow K^- \pi^+ n$
898.0 ±0.7	5362	⁷ AGUILAR-...	71B	HBC	3.9,4.6 $K^- p \rightarrow$ $K^- \pi^+ \pi^- p$
895 ±1	4300	⁸ HABER	70	DBC	3 $K^- N \rightarrow K^- \pi^+ X$
893.7 ±2.0	10k	DAVIS	69	HBC	12 $K^+ p \rightarrow K^+ \pi^- \pi^+ p$
894.7 ±1.4	1040	⁷ DAUBER	67B	HBC	2.0 $K^- p \rightarrow K^- \pi^+ \pi^- p$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
895.50±0.92±2.6		⁹ ADUSZKIEW...	20A	NA61	158 pp
898.1 ±1.0	4k	¹⁰ LEES	17C	BABR	$J/\psi \rightarrow K_S^0 K^\pm \pi^\mp$
895.53±0.17		LEES	13F	BABR	$D^+ \rightarrow K^+ K^- \pi^+$
894.9 ±0.5 ±0.7	14.4k	¹¹ MITCHELL	09A	CLEO	$D_s^+ \rightarrow K^+ K^- \pi^+$
896.2 ±0.3	20k	¹² AUBERT	07AK	BABR	10.6 $e^+ e^- \rightarrow$ $K^{*0} K^\pm \pi^\mp \gamma$
900.7 ±1.1	5900	BARTH	83	HBC	70 $K^+ p \rightarrow K^+ \pi^- X$

¹ Taking also into account the $K_0^*(1430)^0$ and $K_2^*(1430)^0$.² Taking into account the $K^*(892)^0$, S -wave and P -wave ($K^*(1410)^0$).³ From the isobar model with a complex pole for the κ .⁴ Fit to $K\pi$ mass spectrum includes a non-resonant scalar component.⁵ Inclusive reaction. Complicated background and phase-space effects.⁶ From pole extrapolation.⁷ Mass errors enlarged by us to $\Gamma/\sqrt{N}$. See note.⁸ Number of events in peak reevaluated by us.⁹ For transverse momenta between 0.6 and 0.8 GeV/c and rapidity $0 < y < 0.5$.¹⁰ From a Dalitz plot analysis in an isobar model with charged and neutral $K^*(892)$ masses and widths floating.¹¹ This value comes from a fit with χ^2 of 178/117.¹² Systematic uncertainties not estimated.



$K^*(892)$ MASSES AND MASS DIFFERENCES

Unrealistically small errors have been reported by some experiments. We use simple “realistic” tests for the minimum errors on the determination of a mass and width from a sample of N events:

$$\delta_{\min}(m) = \frac{\Gamma}{\sqrt{N}}, \quad \delta_{\min}(\Gamma) = 4 \frac{\Gamma}{\sqrt{N}} . \tag{1}$$

We consistently increase unrealistic errors before averaging. For a detailed discussion, see the 1971 edition of this Note.

$m_{K^*(892)^0} - m_{K^*(892)^\pm}$

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
6.7±1.2 OUR AVERAGE					
7.7±1.7	2980	AGUILAR-...	78B	HBC	±0 0.76 $\bar{p}p \rightarrow K^\mp K_S^0 \pi^\pm$
5.7±1.7	7338	AGUILAR-...	71B	HBC	-0 3.9,4.6 $K^- p$
6.3±4.1	283	¹ BARASH	67B	HBC	0.0 $\bar{p}p$

¹ Number of events in peak reevaluated by us. $K^*(892)$ RANGE PARAMETER

All from partial wave amplitude analyses.

VALUE (GeV ⁻¹)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
2.1 ±0.5 ±0.5	243k	¹ DEL-AMO-SA.11i	BABR	0	$D^+ \rightarrow K^- \pi^+ e^+ \nu_e$
3.96±0.54 ^{+1.31} _{-0.90}	18k	² LINK	05i	FOCS	0 $D^+ \rightarrow K^- \pi^+ \mu^+ \nu_\mu$
3.4 ±0.7		ASTON	88	LASS	0 11 $K^- p \rightarrow K^- \pi^+ n$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
12.1 ±3.2 ±3.0		BIRD	89	LASS	- 11 $K^- p \rightarrow \bar{K}^0 \pi^- p$

¹ Taking into account the $K^*(892)^0$, S -wave and P -wave ($K^*(1410)^0$).² Fit to $K\pi$ mass spectrum includes a non-resonant scalar component. $K^*(892)$ WIDTH

CHARGED ONLY, HADROPRODUCED

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
51.4±0.8 OUR FIT					
51.4±0.8 OUR AVERAGE					
54.4±0.9±1.7		ALBRECHT	20	CBAR	0.9 $\bar{p}p \rightarrow K^+ K^- \pi^0$
49 ±2	5840	BAUBILLIER	84B	HBC	- 8.25 $K^- p \rightarrow \bar{K}^0 \pi^- p$
56 ±4		NAPIER	84	SPEC	- 200 $\pi^- p \rightarrow 2K_S^0 X$
51 ±2	4100	TOAFF	81	HBC	- 6.5 $K^- p \rightarrow \bar{K}^0 \pi^- p$
50.5±5.6		AJINENKO	80	HBC	+ 32 $K^+ p \rightarrow K^0 \pi^+ X$
45.8±3.6	1800	AGUILAR-...	78B	HBC	± 0.76 $\bar{p}p \rightarrow K^\mp K_S^0 \pi^\pm$
52.0±2.5	6706	¹ COOPER	78	HBC	± 0.76 $\bar{p}p \rightarrow (K\pi)^\pm X$
52.1±2.2	9000	² PALER	75	HBC	- 14.3 $K^- p \rightarrow (K\pi)^- X$
46.3±6.7	765	¹ CLARK	73	HBC	- 3.13 $K^- p \rightarrow \bar{K}^0 \pi^- p$
48.2±5.7	1150	^{1,3} CLARK	73	HBC	- 3.3 $K^- p \rightarrow \bar{K}^0 \pi^- p$
54.3±3.3	4404	¹ AGUILAR-...	71B	HBC	- 3.9,4.6 $K^- p \rightarrow$ $(K\pi)^- p$
46 ±5	1700	^{1,3} WOJCICKI	64	HBC	- 1.7 $K^- p \rightarrow \bar{K}^0 \pi^- p$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
46.7±0.2 ^{+0.1} _{-0.2}	183k	ABLIKIM	19AQ	BES	± $J/\psi \rightarrow K^+ K^- \pi^0$
43.6±1.3	4k	⁴ LEES	17C	BABR	$J/\psi \rightarrow K_S^0 K^\pm \pi^\mp$
47.2±0.3±2.3	190k	⁵ AAIJ	16N	LHCB	$D^0 \rightarrow K_S^0 K^\pm \pi^\mp$
54.8±1.7	27k	⁶ ABELE	99D	CBAR	± 0.0 $\bar{p}p \rightarrow K^+ K^- \pi^0$
45.2±1 ±2	80k	⁷ BIRD	89	LASS	- 11 $K^- p \rightarrow \bar{K}^0 \pi^- p$

42.8±7.1	3700	BARTH	83	HBC	+	70	$K^+ p \rightarrow K^0 \pi^+ X$
64.0±9.2	800	^{1,3} CLELAND	82	SPEC	+	30	$K^+ p \rightarrow K_S^0 \pi^+ p$
62.0±4.4	3200	^{1,3} CLELAND	82	SPEC	+	50	$K^+ p \rightarrow K_S^0 \pi^+ p$
55 ±4	3600	^{1,3} CLELAND	82	SPEC	−	50	$K^+ p \rightarrow K_S^0 \pi^- p$
62.6±3.8	380	DELFOSE	81	SPEC	+	50	$K^\pm p \rightarrow K^\pm \pi^0 p$
50.5±3.9	187	DELFOSE	81	SPEC	−	50	$K^\pm p \rightarrow K^\pm \pi^0 p$

¹ Width errors enlarged by us to $4 \times \Gamma/\sqrt{N}$; see note.² Inclusive reaction. Complicated background and phase-space effects.³ Number of events in peak reevaluated by us.⁴ From a Dalitz plot analysis in an isobar model with charged and neutral $K^*(892)$ masses and widths floating.⁵ Average of fit results with different parametrizations for the $K\pi$ S -wave.⁶ K -matrix pole.⁷ From a partial wave amplitude analysis.**CHARGED ONLY, PRODUCED IN τ LEPTON DECAYS**

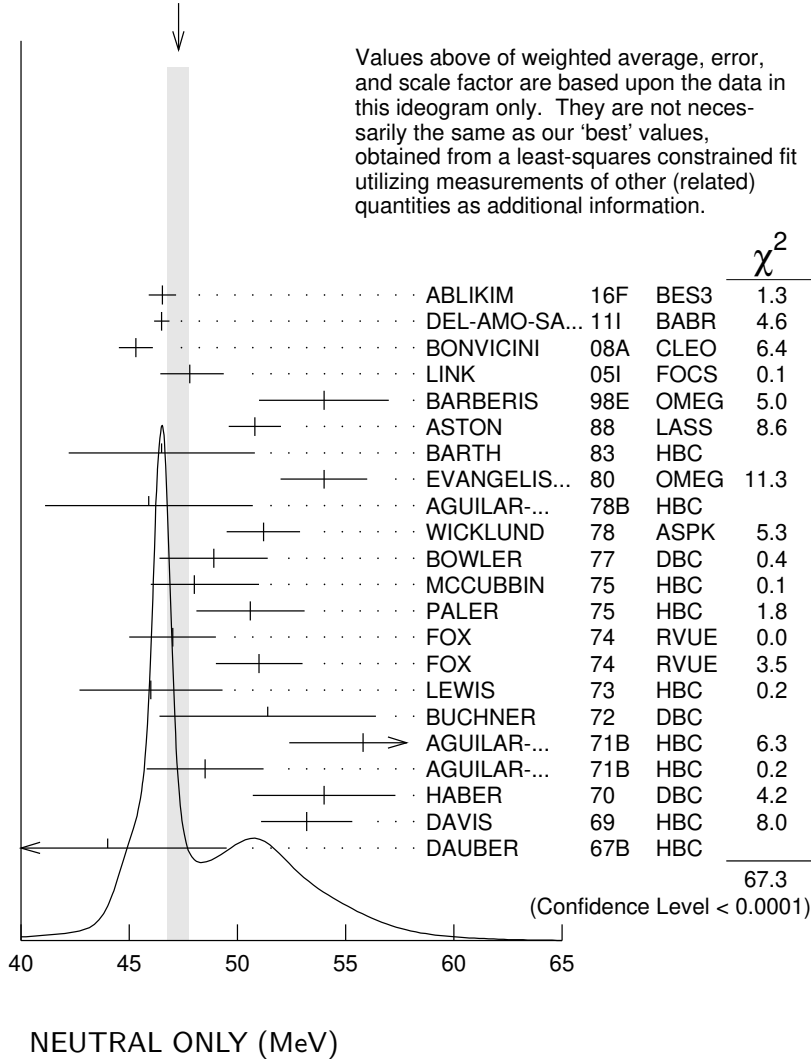
VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
46.2±0.6±1.2	53k	¹ EPIFANOV	07	BELL $\tau^- \rightarrow K_S^0 \pi^- \nu_\tau$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
46.5±1.1		² BOITO	10	RVUE $\tau^- \rightarrow K_S^0 \pi^- \nu_\tau$
46.2±0.4		^{3,4} BOITO	09	RVUE $\tau^- \rightarrow K_S^0 \pi^- \nu_\tau$
47.5±0.4		^{4,5} JAMIN	08	RVUE $\tau^- \rightarrow K_S^0 \pi^- \nu_\tau$
55 ±8		⁶ BARATE	99R	ALEP $\tau^- \rightarrow K^- \pi^0 \nu_\tau$

¹ From a fit in the $K_0^*(700) + K^*(892) + K^*(1410)$ model.² From the pole position of the $K\pi$ vector form factor using EPIFANOV 07 and constraints from K_{J3} decays in ANTONELLI 10.³ From the pole position of the $K\pi$ vector form factor in the complex s -plane and using EPIFANOV 07 data.⁴ Systematic uncertainties not estimated.⁵ Reanalysis of EPIFANOV 07 using resonance chiral theory.⁶ With mass and width of the $K^*(1410)$ fixed at 1412 MeV and 227 MeV, respectively.**NEUTRAL ONLY**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
47.3 ±0.5 OUR FIT	Error includes scale factor of 2.0.			
47.3 ±0.5 OUR AVERAGE	Error includes scale factor of 2.0. See the ideogram below.			
46.53±0.56±0.31		¹ ABLIKIM	16F	BES3 $D^+ \rightarrow K^- \pi^+ e^+ \nu_e$
46.5 ±0.3 ±0.2	243k	² DEL-AMO-SA..11I	BABR	$D^+ \rightarrow K^- \pi^+ e^+ \nu_e$
45.3 ±0.5 ±0.6	141k	³ BONVICINI	08A	CLEO $D^+ \rightarrow K^- \pi^+ \pi^+$
47.79±0.86 ^{+1.32} _{−1.06}	18k	⁴ LINK	05I	FOCS $D^+ \rightarrow K^- \pi^+ \mu^+ \nu_\mu$
54 ±3		BARBERIS	98E	OMEG 450 $pp \rightarrow p_f p_s K^* \bar{K}^*$
50.8 ±0.8 ±0.9		ASTON	88	LASS 11 $K^- p \rightarrow K^- \pi^+ n$
46.5 ±4.3	5900	BARTH	83	HBC 70 $K^+ p \rightarrow K^+ \pi^- X$
54 ±2	28k	EVANGELIS...	80	OMEG 10 $\pi^- p \rightarrow K^+ \pi^- (\Lambda, \Sigma)$
45.9 ±4.8	1180	AGUILAR...	78B	HBC 0.76 $\bar{p} p \rightarrow K^\mp K_S^0 \pi^\pm$
51.2 ±1.7		WICKLUND	78	ASPK 3,4,6 $K^\pm N \rightarrow (K\pi)^0 N$
48.9 ±2.5		BOWLER	77	DBC 5.4 $K^+ d \rightarrow K^+ \pi^- pp$
48 ⁺³ _{−2}	3600	MCCUBBIN	75	HBC 3.6 $K^- p \rightarrow K^- \pi^+ n$
50.6 ±2.5	22k	⁵ PALER	75	HBC 14.3 $K^- p \rightarrow (K\pi)^0 X$

47	± 2	10k	FOX	74	RVUE	$2 K^- p \rightarrow K^- \pi^+ n$
51	± 2		FOX	74	RVUE	$2 K^+ n \rightarrow K^+ \pi^- p$
46.0	± 3.3	3186	⁶ LEWIS	73	HBC	$2.1\text{--}2.7 K^+ p \rightarrow K \pi \pi p$
51.4	± 5.0	1700	⁶ BUCHNER	72	DBC	$4.6 K^+ n \rightarrow K^+ \pi^- p$
55.8	$+4.2$ -3.4	2934	⁶ AGUILAR-...	71B	HBC	$3.9, 4.6 K^- p \rightarrow K^- \pi^+ n$
48.5	± 2.7	5362	AGUILAR-...	71B	HBC	$3.9, 4.6 K^- p \rightarrow$ $K^- \pi^+ \pi^- p$
54.0	± 3.3	4300	^{6,7} HABER	70	DBC	$3 K^- N \rightarrow K^- \pi^+ X$
53.2	± 2.1	10k	⁶ DAVIS	69	HBC	$12 K^+ p \rightarrow K^+ \pi^- \pi^+ p$
44	± 5.5	1040	⁶ DAUBER	67B	HBC	$2.0 K^- p \rightarrow K^- \pi^+ \pi^- p$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●						
48.8	± 1.8	± 2.0	⁸ ADUSZKIEW...	20A	NA61	158 pp
52.6	± 1.7	4k	⁹ LEES	17C	BABR	$J/\psi \rightarrow K_S^0 K^\pm \pi^\mp$
44.90	± 0.30		LEES	13F	BABR	$D^+ \rightarrow K^+ K^- \pi^+$
45.7	± 1.1	± 0.5	14.4k ¹⁰ MITCHELL	09A	CLEO	$D_s^+ \rightarrow K^+ K^- \pi^+$
50.6	± 0.9	20k	¹¹ AUBERT	07AK	BABR	$10.6 e^+ e^- \rightarrow$ $K^{*0} K^\pm \pi^\mp \gamma$

WEIGHTED AVERAGE
47.3 $\pm$ 0.5 (Error scaled by 2.0)



¹ Taking also into account the $K_0^*(1430)^0$ and $K_2^*(1430)^0$.
² Taking into account the $K^*(892)^0$, S -wave and P -wave ($K^*(1410)^0$).
³ From the isobar model with a complex pole for the κ .
⁴ Fit to $K\pi$ mass spectrum includes a non-resonant scalar component.
⁵ Inclusive reaction. Complicated background and phase-space effects.
⁶ Width errors enlarged by us to $4 \times \Gamma/\sqrt{N}$; see note.
⁷ Number of events in peak reevaluated by us.
⁸ For transverse momenta between 0.6 and 0.8 GeV/c and rapidity $0 < y < 0.5$.
⁹ From a Dalitz plot analysis in an isobar model with charged and neutral $K^*(892)$ masses and widths floating.
¹⁰ This value comes from a fit with χ^2 of 178/117.
¹¹ Systematic uncertainties not estimated.

$K^*(892)$ DECAY MODES

Mode		Fraction (Γ_i/Γ)	Confidence level	
Γ_1	$K\pi$	~ 100	%	
Γ_2	$(K\pi)^\pm$	(99.902 ± 0.009)	%	
Γ_3	$(K\pi)^0$	(99.754 ± 0.021)	%	
Γ_4	$K^0\gamma$	$(2.46 \pm 0.21) \times 10^{-3}$		
Γ_5	$K^\pm\gamma$	$(9.8 \pm 0.9) \times 10^{-4}$		
Γ_6	$K\pi\pi$	< 7	$\times 10^{-4}$	95%

CONSTRAINED FIT INFORMATION

An overall fit to the total width and a partial width uses 14 measurements and one constraint to determine 3 parameters. The overall fit has a $\chi^2 = 10.7$ for 12 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\langle \delta p_i \delta p_j \rangle / (\delta p_i \cdot \delta p_j)$, in percent, from the fit to parameters p_i , including the branching fractions, $x_i \equiv \Gamma_i/\Gamma_{\text{total}}$. The fit constrains the x_i whose labels appear in this array to sum to one.

x_5

Γ

-100

17

-17

x_2

x_5

Mode		Rate (MeV)
Γ_2	$(K\pi)^\pm$	51.4 ± 0.8
Γ_5	$K^\pm\gamma$	0.050 ± 0.005

CONSTRAINED FIT INFORMATION

An overall fit to the total width and a partial width uses 23 measurements and one constraint to determine 3 parameters. The overall fit has a $\chi^2 = 68.4$ for 21 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\langle \delta p_i \delta p_j \rangle / (\delta p_i \delta p_j)$, in percent, from the fit to parameters p_i , including the branching fractions, $x_i \equiv \Gamma_i / \Gamma_{\text{total}}$. The fit constrains the x_i whose labels appear in this array to sum to one.

x_4

Γ

-100

13

-13

x_3

x_4

Mode	Rate (MeV)	Scale factor
$\Gamma_3 \quad (K\pi)^0$	47.2 ± 0.5	2.0
$\Gamma_4 \quad K^0\gamma$	0.117 ± 0.010	

K*(892) PARTIAL WIDTHS

$\Gamma(K^0\gamma)$

Γ_4

VALUE (keV)	EVTS	DOCUMENT ID	TECN	CHG	COMMENT
116 ± 10 OUR FIT					
116.5 ± 9.9	584	CARLSMITH	86	SPEC	0 $K_L^0 A \rightarrow K_S^0 \pi^0 A$

$\Gamma(K^\pm\gamma)$

Γ_5

VALUE (keV)	DOCUMENT ID	TECN	CHG	COMMENT
50 ± 5 OUR FIT				
50 ± 5 OUR AVERAGE				
48 ± 11	BERG	83	SPEC	− 156 $K^- A \rightarrow \overline{K} \pi A$
51 ± 5	CHANDLEE	83	SPEC	+ 200 $K^+ A \rightarrow K \pi A$

K*(892) BRANCHING RATIOS

$\Gamma(K^0\gamma)/\Gamma_{\text{total}}$

Γ_4/Γ

VALUE (units 10^{-3})	DOCUMENT ID	TECN	CHG	COMMENT
2.46 ± 0.21 OUR FIT				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1.5 ± 0.7	CARITHERS	75B	CNTR	0 8–16 $\overline{K}^0 A$

$\Gamma(K^\pm\gamma)/\Gamma_{\text{total}}$

Γ_5/Γ

VALUE (units 10^{-3})	CL%	DOCUMENT ID	TECN	CHG	COMMENT
0.98 ± 0.09 OUR FIT					
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<1.6	95	BEMPORAD	73	CNTR	+ 10–16 $K^+ A$

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$\Gamma(K\pi\pi)/\Gamma((K\pi)^\pm)$					Γ_6/Γ_2
VALUE	CL%	DOCUMENT ID	TECN	CHG	COMMENT
$< 7 \times 10^{-4}$	95	JONGEJANS	78	HBC	$4 K^- p \rightarrow p \bar{K}^0 2\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$< 20 \times 10^{-4}$		WOJCICKI	64	HBC	$1.7 K^- p \rightarrow \bar{K}^0 \pi^- p$

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