$K^*(892)$

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

$K^*(892)$ MASS

CHARGED ONLY, HADROPRODUCED

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	COMMENT
891.66±0.26 OUR AVERAGE						
892.6 ±0.5	5840	BAUBILLIER	84B	HBC	−	8.25 $K^- p \to \overline{K}^0 \pi^- p$
888 ±3		NAPIER	84	SPEC	+	200 $\pi^- p \to 2K^0_S X$
891 ±1		NAPIER	84	SPEC	−	200 $\pi^- p \to 2K^0_S X$
891.7 ±2.1	3700	BARTH	83	HBC	+	70 $K^+ p \to K^0 \pi^+ X$
891 ±1	4100	TOAFF	81	HBC	−	6.5 $K^- p \to \overline{K}^0 \pi^- p$
892.8 ±1.6		AJINENKO	80	HBC	+	32 $K^+ p \to K^0 \pi^+ X$
890.7 ±0.9	1800	AGUILAR-...	78B	HBC	±	0.76 $\overline{p} p \to K^\mp K^0_S \pi^\pm$
886.6 ±2.4	1225	BALAND	78	HBC	±	12 $\overline{p} p \to (K\pi)^\pm X$
891.7 ±0.6	6706	COOPER	78	HBC	±	0.76 $\overline{p} p \to (K\pi)^\pm X$
891.9 ±0.7	9000	[1] PALER	75	HBC	−	14.3 $K^- p \to (K\pi)^- X$
892.2 ±1.5	4404	AGUILAR-...	71B	HBC	−	3.9,4.6 $K^- p \to (K\pi)^- p$
891 ±2	1000	CRENNELL	69D	DBC	−	3.9 $K^- N \to K^0 \pi^- X$
890 ±3.0	720	BARLOW	67	HBC	±	1.2 $\overline{p} p \to (K^0 \pi)^\pm K^\mp$
889 ±3.0	600	BARLOW	67	HBC	±	1.2 $\overline{p} p \to (K^0 \pi)^\pm K \pi$
891 ±2.3	620	[2] DEBAERE	67B	HBC	+	3.5 $K^+ p \to K^0 \pi^+ p$
891.0 ±1.2	1700	[3] WOJCICKI	64	HBC	−	1.7 $K^- p \to \overline{K}^0 \pi^- p$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
895.6 ±0.8	4K	[4] LEES	17C	BABR		$J/\psi \to K^0_S K^\pm \pi^\mp$
893.2 ±0.1 ±1.0	190k	[5] AAIJ	16N	LHCB		$D^0 \to K^0_S K^\pm \pi^\mp$
893.5 ±1.1	27k	[6] ABELE	99D	CBAR	±	0.0 $\overline{p} p \to K^+ K^- \pi^0$
890.4 ±0.2 ±0.5	80k	[7] BIRD	89	LASS	−	11 $K^- p \to \overline{K}^0 \pi^- p$
890.0 ±2.3	800	[2,3] CLELAND	82	SPEC	+	30 $K^+ p \to K^0_S \pi^+ p$
896.0 ±1.1	3200	[2,3] CLELAND	82	SPEC	+	50 $K^+ p \to K^0_S \pi^+ p$
893 ±1	3600	[2,3] CLELAND	82	SPEC	−	50 $K^+ p \to K^0_S \pi^- p$
896.0 ±1.9	380	DELFOSSE	81	SPEC	+	50 $K^\pm p \to K^\pm \pi^0 p$
886.0 ±2.3	187	DELFOSSE	81	SPEC	−	50 $K^\pm p \to K^\pm \pi^0 p$
894.2 ±2.0	765	[2] CLARK	73	HBC	−	3.13 $K^- p \to \overline{K}^0 \pi^- p$
894.3 ±1.5	1150	[2,3] CLARK	73	HBC	−	3.3 $K^- p \to \overline{K}^0 \pi^- p$
892.0 ±2.6	341	[2] SCHWEING...	68	HBC	−	5.5 $K^- p \to \overline{K}^0 \pi^- p$

[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.

CHARGED ONLY, PRODUCED IN τ LEPTON DECAYS

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

[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_{l3} 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.

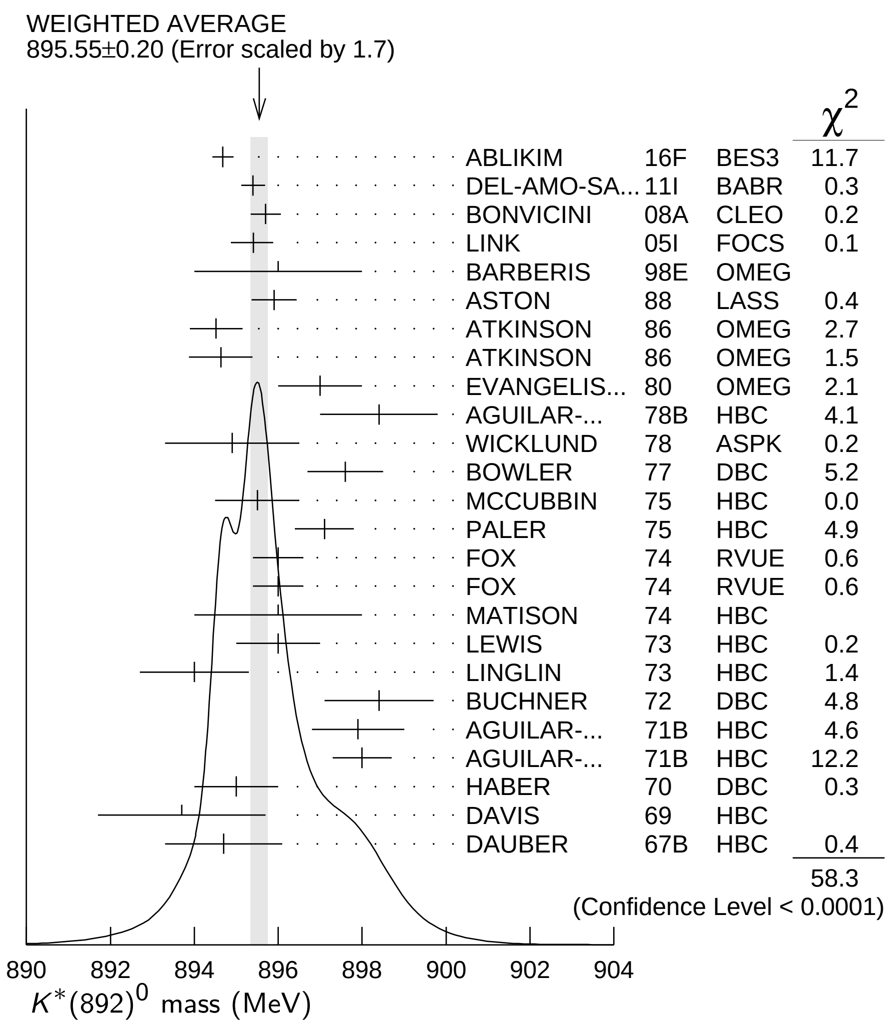
NEUTRAL ONLY

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±0.25±0.05		[1] ABLIKIM	16F	BES3	$D^+ \to K^- \pi^+ e^+ \nu_e$
895.4 ±0.2 ±0.2	243k	[2] DEL-AMO-SA...	11I	BABR	$D^+ \to K^- \pi^+ e^+ \nu_e$
895.7 ±0.2 ±0.3	141k	[3] BONVICINI	08A	CLEO	$D^+ \to K^- \pi^+ \pi^+$
895.41±0.32$^{+0.35}_{-0.43}$	18k	[4] LINK	05I	FOCS	$D^+ \to K^- \pi^+ \mu^+ \nu_\mu$
896 ±2		BARBERIS	98E	OMEG	450 $p p \to p_f p_s K^* \overline{K}^*$
895.9 ±0.5 ±0.2		ASTON	88	LASS	11 $K^- p \to K^- \pi^+ n$
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 $\pi^- p \to K^+ \pi^- (\Lambda, \Sigma)$
898.4 ±1.4	1180	AGUILAR-...	78B	HBC	0.76 $\overline{p} p \to K^\mp K^0_S \pi^\pm$
894.9 ±1.6		WICKLUND	78	ASPK	3,4,6 $K^\pm N \to (K\pi)^0 N$
897.6 ±0.9		BOWLER	77	DBC	5.4 $K^+ d \to K^+ \pi^- p p$
895.5 ±1.0	3600	MCCUBBIN	75	HBC	3.6 $K^- p \to K^- \pi^+ n$
897.1 ±0.7	22k	[5] PALER	75	HBC	14.3 $K^- p \to (K\pi)^0 X$
896.0 ±0.6	10k	FOX	74	RVUE	2 $K^- p \to K^- \pi^+ n$
896.0 ±0.6		FOX	74	RVUE	2 $K^+ n \to K^+ \pi^- p$
896 ±2		[6] MATISON	74	HBC	12 $K^+ p \to K^+ \pi^- \Delta$
896 ±1	3186	LEWIS	73	HBC	2.1–2.7 $K^+ p \to K \pi \pi p$
894.0 ±1.3		[6] LINGLIN	73	HBC	2–13 $K^+ p \to K^+ \pi^- \pi^+ p$
898.4 ±1.3	1700	[7] BUCHNER	72	DBC	4.6 $K^+ n \to K^+ \pi^- p$
897.9 ±1.1	2934	[7] AGUILAR-...	71B	HBC	3.9,4.6 $K^- p \to K^- \pi^+ n$
898.0 ±0.7	5362	[7] AGUILAR-...	71B	HBC	3.9,4.6 $K^- p \to K^- \pi^+ \pi^- p$
895 ±1	4300	[8] HABER	70	DBC	3 $K^- N \to K^- \pi^+ X$
893.7 ±2.0	10k	DAVIS	69	HBC	12 $K^+ p \to K^+ \pi^- \pi^+ p$
894.7 ±1.4	1040	[7] DAUBER	67B	HBC	2.0 $K^- p \to K^- \pi^+ \pi^- p$

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

898.1 ±1.0		4K	[9] LEES	17C	BABR	$J/\psi \to K^0_S K^\pm \pi^\mp$
895.53±0.17			LEES	13F	BABR	$D^+ \to K^+ K^- \pi^+$
894.9 ±0.5	±0.7	14.4k	[10] MITCHELL	09A	CLEO	$D_s^+ \to K^+ K^- \pi^+$
896.2 ±0.3		20k	[11] AUBERT	07AK	BABR	10.6 $e^+ e^- \to K^{*0} K^\pm \pi^\mp \gamma$
900.7 ±1.1		5900	BARTH	83	HBC	70 $K^+ p \to K^+ \pi^- X$

[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] 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.



$K^*(892)$ 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:

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

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 $\overline{p}p \rightarrow K^\mp K^0_S \pi^\pm$
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 $\overline{p}p$

[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	$D^+ \rightarrow K^- \pi^+ e^+ \nu_e$
$3.96 \pm 0.54 ^{+1.31}_{-0.90}$	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 $K^- p \rightarrow \overline{K}^0 \pi^- p$

[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
50.8±0.9 OUR FIT						
50.8±0.9 OUR AVERAGE						
49 ±2	5840	BAUBILLIER	84B	HBC	−	8.25 $K^- p \rightarrow \overline{K}^0 \pi^- p$
56 ±4		NAPIER	84	SPEC	−	200 $\pi^- p \rightarrow 2K^0_S X$
51 ±2	4100	TOAFF	81	HBC	−	6.5 $K^- p \rightarrow \overline{K}^0 \pi^- p$
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 $\overline{p}p \rightarrow K^\mp K^0_S \pi^\pm$

52.0±2.5	6706	[1] COOPER	78	HBC	±	0.76 $\overline{p}p \to (K\pi)^{\pm} X$
52.1±2.2	9000	[2] PALER	75	HBC	−	14.3 $K^- p \to (K\pi)^- X$
46.3±6.7	765	[1] CLARK	73	HBC	−	3.13 $K^- p \to \overline{K}^0 \pi^- p$
48.2±5.7	1150	[1,3] CLARK	73	HBC	−	3.3 $K^- p \to \overline{K}^0 \pi^- p$
54.3±3.3	4404	[1] AGUILAR-...	71B	HBC	−	3.9,4.6 $K^- p \to (K\pi)^- p$
46 ±5	1700	[1,3] WOJCICKI	64	HBC	−	1.7 $K^- p \to \overline{K}^0 \pi^- p$

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

43.6±1.3	4K	[4] LEES	17C	BABR		$J/\psi \to K^0_S K^{\pm} \pi^{\mp}$
47.2±0.3±2.3	190k	[5] AAIJ	16N	LHCB		$D^0 \to K^0_S K^{\pm} \pi^{\mp}$
54.8±1.7	27k	[6] ABELE	99D	CBAR	±	0.0 $\overline{p}p \to K^+ K^- \pi^0$
45.2±1 ±2	80k	[7] BIRD	89	LASS	−	11 $K^- p \to \overline{K}^0 \pi^- p$
42.8±7.1	3700	BARTH	83	HBC	+	70 $K^+ p \to K^0 \pi^+ X$
64.0±9.2	800	[1,3] CLELAND	82	SPEC	+	30 $K^+ p \to K^0_S \pi^+ p$
62.0±4.4	3200	[1,3] CLELAND	82	SPEC	+	50 $K^+ p \to K^0_S \pi^+ p$
55 ±4	3600	[1,3] CLELAND	82	SPEC	−	50 $K^+ p \to K^0_S \pi^- p$
62.6±3.8	380	DELFOSSE	81	SPEC	+	50 $K^{\pm} p \to K^{\pm} \pi^0 p$
50.5±3.9	187	DELFOSSE	81	SPEC	−	50 $K^{\pm} p \to K^{\pm} \pi^0 p$

[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	$\tau^- \to K^0_S \pi^- \nu_\tau$

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

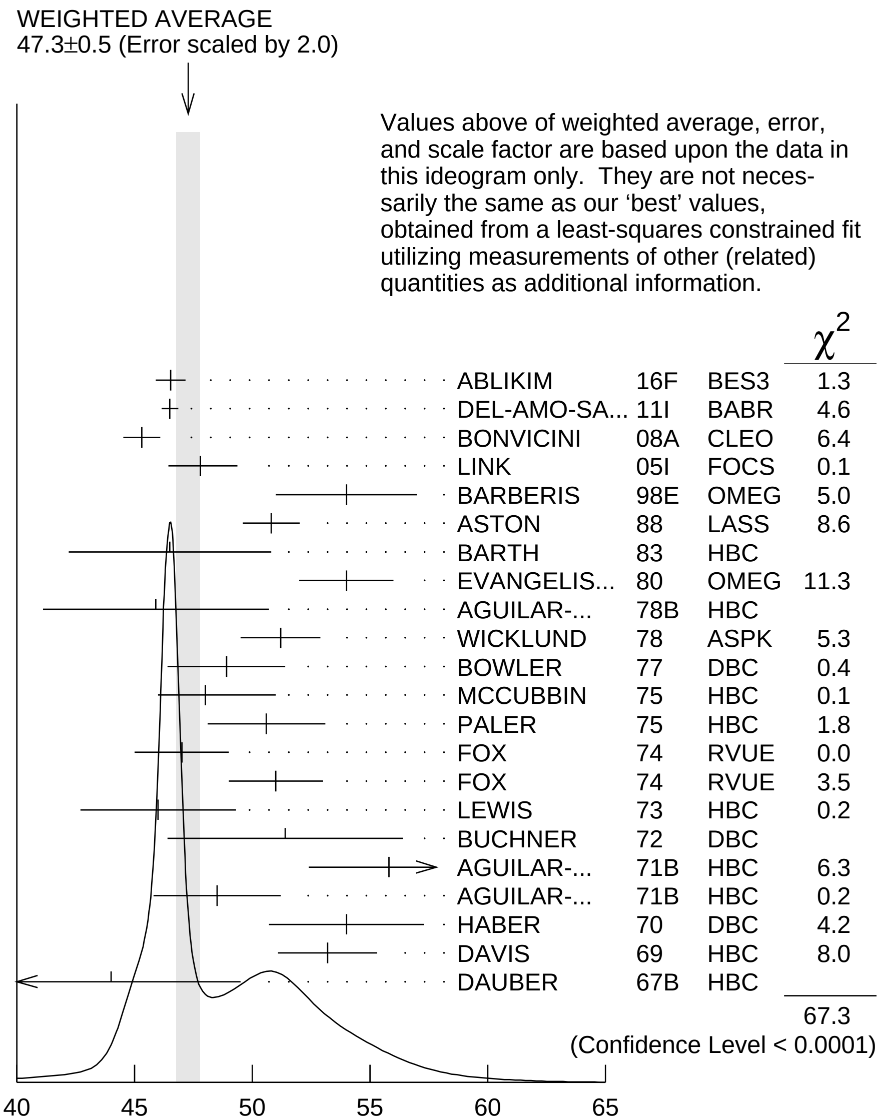
46.5±1.1	[2] BOITO	10	RVUE	$\tau^- \to K^0_S \pi^- \nu_\tau$
46.2±0.4	[3,4] BOITO	09	RVUE	$\tau^- \to K^0_S \pi^- \nu_\tau$
47.5±0.4	[4,5] JAMIN	08	RVUE	$\tau^- \to K^0_S \pi^- \nu_\tau$
55 ±8	[6] BARATE	99R	ALEP	$\tau^- \to K^- \pi^0 \nu_\tau$

[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_{l3} 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 1.9.			
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 $p p \rightarrow p_f p_s K^* \overline{K}^*$
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 $\overline{p} p \rightarrow K^\mp K^0_S \pi^\pm$
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 $K^+ d \rightarrow K^+ \pi^- p p$
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	2.1–2.7 $K^+ p \rightarrow K \pi \pi p$
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. • • •					
52.6 ±1.7	4K	[8] LEES	17C	BABR	$J/\psi \rightarrow K^0_S K^\pm \pi^\mp$
44.90±0.30		LEES	13F	BABR	$D^+ \rightarrow K^+ K^- \pi^+$
45.7 ±1.1 ±0.5	14.4k	[9] MITCHELL	09A	CLEO	$D^+_s \rightarrow K^+ K^- \pi^+$
50.6 ±0.9	20k	[10] AUBERT	07AK	BABR	10.6 $e^+ e^- \rightarrow K^{*0} K^\pm \pi^\mp \gamma$

[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] From a Dalitz plot analysis in an isobar model with charged and neutral $K^*(892)$ masses and widths floating.
[9] This value comes from a fit with χ^2 of 178/117.
[10] Systematic uncertainties not estimated.



NEUTRAL ONLY (MeV)

$K^*(892)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)	Confidence level
Γ_1	$K\pi$	$\sim$ 100 %	
Γ_2	$(K\pi)^{\pm}$	(99.901 ± 0.009) %	
Γ_3	$(K\pi)^0$	(99.754 ± 0.021) %	
Γ_4	$K^0\gamma$	(2.46 ± 0.21) $\times 10^{-3}$	
Γ_5	$K^{\pm}\gamma$	(9.9 ± 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 13 measurements and one constraint to determine 3 parameters. The overall fit has a $\chi^2 = 7.8$ for 11 degrees of freedom.

The following *off-diagonal* array elements are the correlation coefficients $\left\langle\delta p_i \delta p_j\right\rangle/(\delta p_i \cdot \delta p_j)$, 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	-100	
Γ	19	-19
	x_2	x_5

	Mode	Rate (MeV)
Γ_2	$(K\pi)^\pm$	50.7 $\pm$0.9
Γ_5	$K^\pm\gamma$	0.050$\pm$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 $\left\langle\delta p_i \delta p_j\right\rangle/(\delta p_i \cdot \delta p_j)$, 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_4	-100	
Γ	12	-12
	x_3	x_4

	Mode	Rate (MeV)	Scale factor
Γ_3	$(K\pi)^0$	47.2 $\pm$0.5	1.9
Γ_4	$K^0\gamma$	0.117$\pm$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
0.99±0.09 OUR FIT						
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<1.6	95	BEMPORAD	73	CNTR	+	10–16 $K^+ A$

$\Gamma(K\pi\pi)/\Gamma((K\pi)^{\pm})$ — Γ_6/Γ_2

VALUE	CL%	DOCUMENT ID		TECN	CHG	COMMENT
< 7 × 10^{-4}	95	JONGEJANS	78	HBC		4 $K^- p \rightarrow p\overline{K}^0 2\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<20 × 10^{-4}		WOJCICKI	64	HBC	−	1.7 $K^- p \rightarrow \overline{K}^0 \pi^- p$

$K^*(892)$ REFERENCES

LEES	17C	PR D95 072007	J.P. Lees *et al.*	(BABAR Collab)
AAIJ	16N	PR D93 052018	R. Aaij *et al.*	(LHCb Collab.)
ABLIKIM	16F	PR D94 032001	M. Ablikim *et al.*	(BES III Collab.)
LEES	13F	PR D87 052010	J.P. Lees *et al.*	(BABAR Collab.)
DEL-AMO-SA...	11I	PR D83 072001	P. del Amo Sanchez *et al.*	(BABAR Collab.)
ANTONELLI	10	EPJ C69 399	M. Antonelli *et al.*	(FlaviaNet Working Group)
BOITO	10	JHEP 1009 031	D.R. Boito, R. Escribano, M. Jamin	(BARC)
BOITO	09	EPJ C59 821	D.R. Boito, R. Escribano, M. Jamin	
MITCHELL	09A	PR D79 072008	R.E. Mitchell *et al.*	(CLEO Collab.)
BONVICINI	08A	PR D78 052001	G. Bonvicini *et al.*	(CLEO Collab.)
JAMIN	08	PL B664 78	M. Jamin, A. Pich, J. Portoles	
AUBERT	07AK	PR D76 012008	B. Aubert *et al.*	(BABAR Collab.)
EPIFANOV	07	PL B654 65	D. Epifanov *et al.*	(BELLE Collab.)
LINK	05I	PL B621 72	J.M. Link *et al.*	(FNAL FOCUS Collab.)
BONVICINI	02	PRL 88 111803	G. Bonvicini *et al.*	(CLEO Collab.)
PDG	00	EPJ C15 1	D.E. Groom *et al.*	(PDG Collab.)
ABELE	99D	PL B468 178	A. Abele *et al.*	(Crystal Barrel Collab.)
BARATE	99R	EPJ C11 599	R. Barate *et al.*	(ALEPH Collab.)
BARBERIS	98E	PL B436 204	D. Barberis *et al.*	(Omega Expt.)
BIRD	89	SLAC-332	P.F. Bird	(SLAC)
ASTON	88	NP B296 493	D. Aston *et al.*	(SLAC, NAGO, CINC, INUS)
ATKINSON	86	ZPHY C30 521	M. Atkinson *et al.*	(BONN, CERN, GLAS+)
CARLSMITH	86	PRL 56 18	D. Carlsmith *et al.*	(EFI, SACL)
BAUBILLIER	84B	ZPHY C26 37	M. Baubillier *et al.*	(BIRM, CERN, GLAS+)
NAPIER	84	PL 149B 514	A. Napier *et al.*	(TUFTS, ARIZ, FNAL, FLOR+)
BARTH	83	NP B223 296	M. Barth *et al.*	(BRUX, CERN, GENO, MONS+)
BERG	83	Thesis UMI 83-21652	D.M. Berg	(ROCH)

CHANDLEE	83	PRL 51 168	C. Chandlee *et al.*	(ROCH, FNAL, MINN)
CLELAND	82	NP B208 189	W.E. Cleland *et al.*	(DURH, GEVA, LAUS+)
DELFOSSE	81	NP B183 349	A. Delfosse *et al.*	(GEVA, LAUS)
TOAFF	81	PR D23 1500	S. Toaff *et al.*	(ANL, KANS)
AJINENKO	80	ZPHY C5 177	I.V. Ajinenko *et al.*	(SERP, BRUX, MONS+)
EVANGELIS...	80	NP B165 383	C. Evangelista *et al.*	(BARI, BONN, CERN+)
AGUILAR-...	78B	NP B141 101	M. Aguilar-Benitez *et al.*	(MADR, TATA+)
BALAND	78	NP B140 220	J.F. Baland *et al.*	(MONS, BELG, CERN+)
COOPER	78	NP B136 365	A.M. Cooper *et al.*	(TATA, CERN, CDEF+)
JONGEJANS	78	NP B139 383	B. Jongejans *et al.*	(ZEEM, CERN, NIJM+)
WICKLUND	78	PR D17 1197	A.B. Wicklund *et al.*	(ANL)
BOWLER	77	NP B126 31	M.G. Bowler *et al.*	(OXF)
CARITHERS	75B	PRL 35 349	W.C.J. Carithers *et al.*	(ROCH, MCGI)
MCCUBBIN	75	NP B86 13	N.A. McCubbin, L. Lyons	(OXF)
PALER	75	NP B96 1	K. Paler *et al.*	(RHEL, SACL, EPOL)
FOX	74	NP B80 403	G.C. Fox, M.L. Griss	(CIT)
MATISON	74	PR D9 1872	M.J. Matison *et al.*	(LBL)
BEMPORAD	73	NP B51 1	C. Bemporad *et al.*	(CERN, ETH, LOIC)
CLARK	73	NP B54 432	A.G. Clark, L. Lyons, D. Radojicic	(OXF)
LEWIS	73	NP B60 283	P.H. Lewis *et al.*	(LOWC, LOIC, CDEF)
LINGLIN	73	NP B55 408	D. Linglin	(CERN)
BUCHNER	72	NP B45 333	K. Buchner *et al.*	(MPIM, CERN, BRUX)
AGUILAR-...	71B	PR D4 2583	M. Aguilar-Benitez, R.L. Eisner, J.B. Kinson	(BNL)
HABER	70	NP B17 289	B. Haber *et al.*	(REHO, SACL, BGNA, EPOL)
CRENNELL	69D	PRL 22 487	D.J. Crennell *et al.*	(BNL)
DAVIS	69	PRL 23 1071	P.J. Davis *et al.*	(LRL)
SCHWEING...	68	PR 166 1317	F. Schweingruber *et al.*	(ANL, NWES)
BARASH	67B	PR 156 1399	N. Barash *et al.*	(COLU)
BARLOW	67	NC 50A 701	J. Barlow *et al.*	(CERN, CDEF, IRAD, LIVP)
DAUBER	67B	PR 153 1403	P.M. Dauber *et al.*	(UCLA)
DEBAERE	67B	NC 51A 401	W. de Baere *et al.*	(BRUX, CERN)
WOJCICKI	64	PR 135 B484	S.G. Wojcicki	(LRL)