τ –THIS IS PART 4 OF 5

To reduce the size of this section's PostScript file, we have divided it into five PostScript files. We present the following index:

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2	Electric dipole moment
2	Weak dipole moment
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$\Gamma(h^-h^-h^+ \geq 0\text{neut.}\ \nu_\tau(\text{"3-prong"}))/\Gamma_{\text{total}}$ Γ_{42}/Γ

$\Gamma_{42}/\Gamma = (0.3431\Gamma_{30}+0.3431\Gamma_{32}+0.3431\Gamma_{34}+0.3431\Gamma_{35}+0.4508\Gamma_{37}+\Gamma_{47}+\Gamma_{52}+\Gamma_{60}+\Gamma_{61}+0.285\Gamma_{90}+0.9101\Gamma_{97}+0.9101\Gamma_{98})/\Gamma$

Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
14.91± 0.14 OUR FIT Error includes scale factor of 1.3.						
14.01± 0.29 OUR AVERAGE Error includes scale factor of 1.2.						
14.4 ± 0.6 ±0.3	f&a		ADEVA	91F	L3	E_{cm}^{ee}= 88.3–94.3 GeV
13.5 ± 0.3 ±0.3	f&a		ABACHI	89B	HRS	E_{cm}^{ee}= 29 GeV
15.0 ± 0.4 ±0.3	f&a		BEHREND	89B	CELL	E_{cm}^{ee}= 14–47 GeV
15.1 ± 0.8 ±0.6	f&a		AIHARA	87B	TPC	E_{cm}^{ee}= 29 GeV
12.8 ± 0.5 ±0.8	f&a	1420	SCHMIDKE	86	MRK2	E_{cm}^{ee}= 29 GeV
15.3 ± 1.1 $^{+1.3}_{-1.6}$	f&a	367	ALTHOFF	85	TASS	E_{cm}^{ee}= 34.5 GeV
13.6 ± 0.5 ±0.8	f&a		BARTEL	85F	JADE	E_{cm}^{ee}= 34.6 GeV
13.3 ± 0.3 ±0.6	f&a		FERNANDEZ	85	MAC	E_{cm}^{ee}= 29 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
12.8 ± 1.0 ±0.7			[79] BURCHAT	87	MRK2	E_{cm}^{ee}= 29 GeV
12.1 ± 0.5 ±1.2			RUCKSTUHL	86	DLCO	E_{cm}^{ee}= 29 GeV
12.2 ± 1.3 ±3.9			[80] BERGER	85	PLUT	E_{cm}^{ee}= 34.6 GeV
24 ± 6		35	BRANDELIK	80	TASS	E_{cm}^{ee}= 30 GeV
32 ± 5		692	[81] BACINO	78B	DLCO	E_{cm}^{ee}= 3.1–7.4 GeV
35 ±11			[81] BRANDELIK	78	DASP	Assumes $V-A$ decay
18 ± 6.5		33	[81] JAROS	78	MRK1	$E_{\text{cm}}^{ee} > 6$ GeV

[79] BURCHAT 87 value is not independent of SCHMIDKE 86 value.

[80] Not independent of BERGER 85 $\Gamma(\mu^-\overline{\nu}_\mu\nu_\tau)/\Gamma_{\text{total}}$, $\Gamma(e^-\overline{\nu}_e\nu_\tau)/\Gamma_{\text{total}}$, $\Gamma(h^- \geq 1\pi^0\nu_\tau)/\Gamma_{\text{total}}$, and $\Gamma(h^- \geq 0K_L^0\ \nu_\tau)/\Gamma_{\text{total}}$, and therefore not used in the fit.

[81] Low energy experiments are not in average or fit because the systematic errors in background subtraction are judged to be large.

$\Gamma(h^-h^-h^+ \geq 0\ \text{neutrals}\ \nu_\tau(\text{ex.}\ K_S^0 \to \pi^+\pi^-))/\Gamma_{\text{total}}$ Γ_{43}/Γ

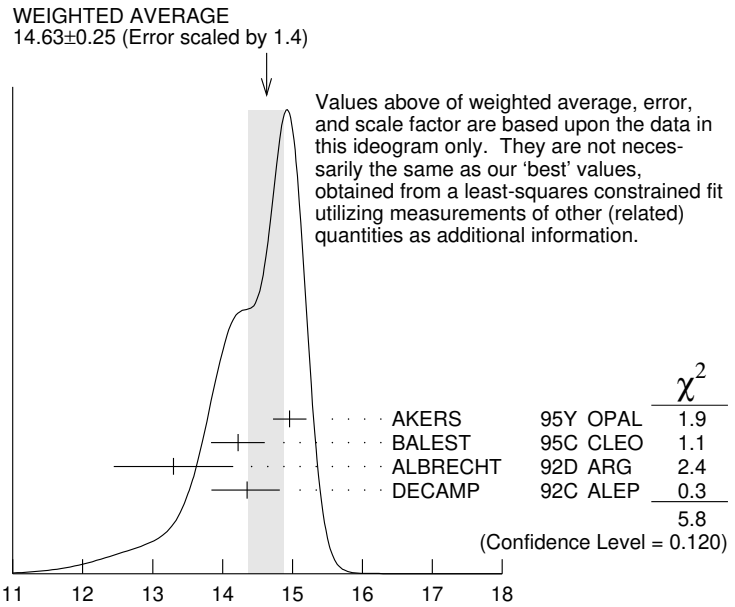
$\Gamma_{43}/\Gamma = (\Gamma_{47}+\Gamma_{52}+\Gamma_{60}+\Gamma_{61}+0.285\Gamma_{90}+0.9101\Gamma_{97}+0.9101\Gamma_{98})/\Gamma$

Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
14.36±0.14 OUR FIT Error includes scale factor of 1.3.						
14.63±0.25 OUR AVERAGE Error includes scale factor of 1.4. See the ideogram below.						
14.96±0.09±0.22	f&a	10.4k	AKERS	95Y	OPAL	1991–1994 LEP runs
14.22±0.10±0.37	avg		[82] BALEST	95C	CLEO	$E_{\text{cm}}^{ee} \approx$ 10.6 GeV
13.3 ±0.3 ±0.8	f&a		[83] ALBRECHT	92D	ARG	E_{cm}^{ee}= 9.4–10.6 GeV
14.35 $^{+0.40}_{-0.45}$ ±0.24	f&a		DECAMP	92C	ALEP	1989–1990 LEP runs
• • • We do not use the following data for averages, fits, limits, etc. • • •						
15.26±0.26±0.22			ACTON	92H	OPAL	Repl. by AKERS 95Y

[82] Not independent of BALEST 95C $B(h^-h^-h^+\nu_\tau)$ and $B(h^-h^-h^+\pi^0\nu_\tau)$ values, and BORTOLETTO 93 $B(h^-h^-h^+2\pi^0\nu_\tau)/B(h^-h^-h^+ \geq 0\ \text{neutrals}\ \nu_\tau)$ value.

[83] This ALBRECHT 92D value is not independent of their $\Gamma(\mu^-\overline{\nu}_\mu\nu_\tau)\Gamma(e^-\overline{\nu}_e\nu_\tau)/\Gamma_{\text{total}}^2$ value.



$\Gamma\left(h^- h^- h^+ \geq 0 \text{ neutrals } \nu_\tau (\text{ex. } K^0_S \rightarrow \pi^+ \pi^-)\right)/\Gamma_{\text{total}}$ (%)

$\Gamma(\pi^-\pi^+\pi^- \geq 0 \text{ neutrals } \nu_\tau)/\Gamma(h^- h^- h^+ \geq 0 \text{neut. } \nu_\tau(\text{"3-prong"}))$ Γ_{44}/Γ_{42}

$\Gamma_{44}/\Gamma_{42} = \Gamma_{44}/(0.3431\Gamma_{30}+0.3431\Gamma_{32}+0.3431\Gamma_{34}+0.3431\Gamma_{35}+0.4508\Gamma_{37}+\Gamma_{47}+\Gamma_{52}+\Gamma_{60}+\Gamma_{61}+0.285\Gamma_{90}+0.9101\Gamma_{97}+0.9101\Gamma_{98})$

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.945±0.019	490	[84] BAUER	94	TPC	E^{ee}_{cm}= 29 GeV

[84] BAUER 94 quote $B(\pi^-\pi^+\pi^- \geq 0 \text{ neutrals } \nu_\tau) = 0.1329 \pm 0.0027$. We divide by 0.1406, their assumed value for B("3prong").

$\Gamma(h^- h^- h^+ \nu_\tau)/\Gamma_{\text{total}}$ Γ_{45}/Γ

$\Gamma_{45}/\Gamma = (0.3431\Gamma_{30}+0.3431\Gamma_{32}+\Gamma_{47}+0.0221\Gamma_{97})/\Gamma$

Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
9.80±0.10 OUR FIT Error includes scale factor of 1.1.						
9.80±0.18 OUR AVERAGE Error includes scale factor of 1.4. See the ideogram below.						
9.92±0.10±0.09	f&a	11.2k	[85] BUSKULIC	96	ALEP	LEP 1991–1993 data
9.49±0.36±0.63	f&a		DECAMP	92C	ALEP	1989–1990 LEP runs
8.7 ±0.7 ±0.3	f&a	694	[86] BEHREND	90	CELL	E^{ee}_{cm}= 35 GeV
7.8 ±0.5 ±0.8	f&a	890	SCHMIDKE	86	MRK2	E^{ee}_{cm}= 29 GeV
8.4 ±0.4 ±0.7	avg	1255	[87] FERNANDEZ	85	MAC	E^{ee}_{cm}= 29 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
7.0 ±0.3 ±0.7		1566	[88] BAND	87	MAC	E^{ee}_{cm}= 29 GeV
6.7 ±0.8 ±0.9			[89] BURCHAT	87	MRK2	E^{ee}_{cm}= 29 GeV
6.4 ±0.4 ±0.9			[87] RUCKSTUHL	86	DLCO	E^{ee}_{cm}= 29 GeV
9.7 ±2.0 ±1.3			BEHREND	84	CELL	E^{ee}_{cm}= 14,22 GeV

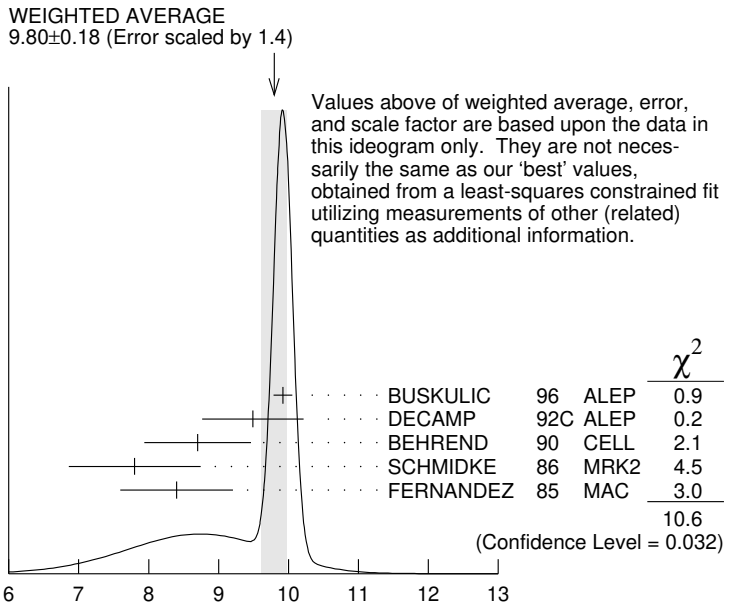
[85] BUSKULIC 96 quote $B(h^- h^- h^+ \nu_\tau (\text{ex. } K^0)) = 9.50 \pm 0.10 \pm 0.11$. We add 0.42 to remove their K^0 correction and reduce the systematic error accordingly.

[86] BEHREND 90 subtract 0.3% to account for the $\tau^- \rightarrow K^*(892)^- \nu_\tau$ contribution to measured events.

[87] Value obtained by multiplying paper's $R = B(h^- h^- h^+ \nu_\tau)/B(\text{3-prong})$ by B(3-prong) = 0.143 and subtracting 0.3% for $K^*(892)$ background.

[88] BAND 87 subtract for charged kaon modes; not independent of FERNANDEZ 85 value.

[89] BURCHAT 87 value is not independent of SCHMIDKE 86 value.



$\Gamma(h^- h^- h^+ \nu_\tau)/\Gamma(h^- h^- h^+ \geq 0\text{neut. } \nu_\tau(\text{"3-prong"}))$ Γ_{45}/Γ_{42}

$\Gamma_{45}/\Gamma_{42} = (0.3431\Gamma_{30}+0.3431\Gamma_{32}+\Gamma_{47}+0.0221\Gamma_{97})/(0.3431\Gamma_{30}+0.3431\Gamma_{32}+0.3431\Gamma_{34}+0.3431\Gamma_{35}+0.4508\Gamma_{37}+\Gamma_{47}+\Gamma_{52}+\Gamma_{60}+\Gamma_{61}+0.285\Gamma_{90}+0.9101\Gamma_{98})$

This branching fractions is not independent of values for $\Gamma(h^- h^- h^+ \nu_\tau)/\Gamma_{\text{total}}$ and $\Gamma(h^- h^- h^+ \geq 0\text{neut. } \nu_\tau(\text{"3-prong"}))/\Gamma_{\text{total}}$.

VALUE	DOCUMENT ID		TECN	COMMENT
0.744±0.007 OUR FIT				
0.61 ±0.03 ±0.05	FERNANDEZ	85	MAC	E^{ee}_{cm}= 29 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.47 ±0.03 ±0.06	RUCKSTUHL	86	DLCO	E^{ee}_{cm}= 29 GeV

$\Gamma(h^- h^- h^+ \nu_\tau(\text{ex. } K^0))/\Gamma_{\text{total}}$ Γ_{46}/Γ

$\Gamma_{46}/\Gamma = (\Gamma_{47}+0.0221\Gamma_{97})/\Gamma$

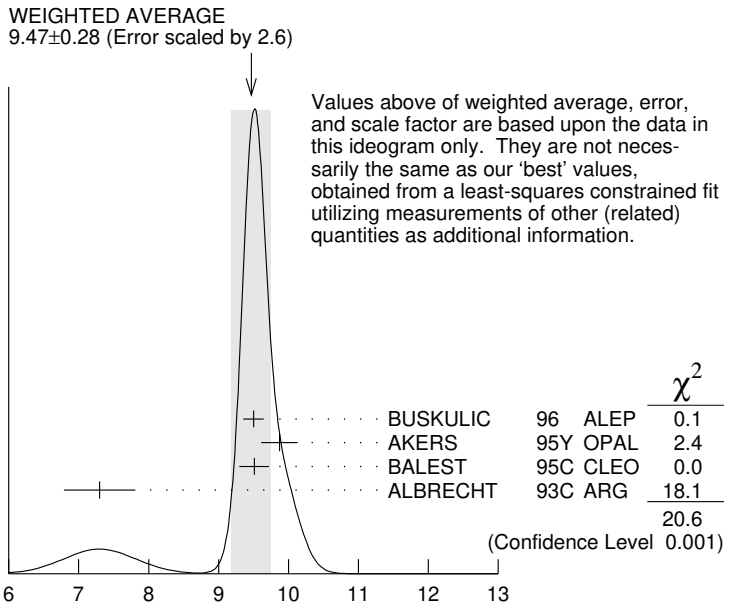
Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
9.48±0.10 OUR FIT Error includes scale factor of 1.1.						
9.47±0.28 OUR AVERAGE Error includes scale factor of 2.6. See the ideogram below.						
9.50±0.10±0.11	avg	11.2k	[90] BUSKULIC	96	ALEP	LEP 1991–1993 data
9.87±0.10±0.24	avg		[91] AKERS	95Y	OPAL	1991–1994 LEP runs
9.51±0.07±0.20	f&a	37.7k	BALEST	95C	CLEO	$E^{ee}_{\text{cm}} \approx$ 10.6 GeV
7.3 ±0.1 ±0.5	avg		[92] ALBRECHT	93C	ARG	E^{ee}_{cm}= 9.4–10.6 GeV

[90] Not independent of BUSKULIC 96 $B(h^- h^- h^+ \nu_\tau)$ value.

[91] Not independent of AKERS 95Y $B(h^- h^- h^+ \geq 0\text{ neutrals } \nu_\tau(\text{ex. } K^0_S \to \pi^+\pi^-))$ and $B(h^- h^- h^+ \nu_\tau(\text{ex. } K^0))/B(h^- h^- h^+ \geq 0\text{ neutrals } \nu_\tau(\text{ex. } K^0_S \to \pi^+\pi^-))$ values.

[92] ALBRECHT 93C value with 0.5 ± 0.3% added to remove their corrections for charged-kaon backgrounds.



$\Gamma(h^- h^- h^+ \nu_\tau(\text{ex.}K^0)) \times \Gamma(\text{particle}^- \geq 0\,\text{neutrals} \geq 0 K^0_L \nu_\tau(\text{"1-prong"}))/\Gamma^2_{\text{total}}$ $\Gamma_{46}\Gamma_1/\Gamma^2$

$\Gamma_{46}\Gamma_1/\Gamma^2 = (\Gamma_{47}+0.0221\Gamma_{97})(\Gamma_3+\Gamma_5+\Gamma_9+\Gamma_{10}+\Gamma_{13}+\Gamma_{15}+\Gamma_{19}+\Gamma_{20}+\Gamma_{23}+\Gamma_{24}+\Gamma_{26}+0.6569\Gamma_{30}+0.6569\Gamma_{32}+0.6569\Gamma_{34}+0.6569\Gamma_{35}+0.4316\Gamma_{37}+0.708\Gamma_{90}+0.085\Gamma_{97})/\Gamma^2$

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.0805±0.0008 OUR FIT Error includes scale factor of 1.1.				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.063 ±0.001 ±0.004	7.5k	[93] ALBRECHT	93C ARG	E^{ee}_{cm}= 9.4–10.6 GeV

[93] ALBRECHT 93C quote $B(\pi^-\pi^-\pi^+\nu_\tau) = 6.8 \pm 0.1 \pm 0.5\%$. We add 0.5 ± 0.3% to remove their correction for charged kaon backgrounds, then multiply by 0.8613, their assumed value for B("1-prong").

$\Gamma(h^- h^- h^+ \nu_\tau(\text{ex.}K^0))/\Gamma(h^- h^- h^+ \geq 0\,\text{neutrals}\,\nu_\tau(\text{ex.}\,K^0_S \to \pi^+\pi^-))$ Γ_{46}/Γ_{43}

$\Gamma_{46}/\Gamma_{43} = (\Gamma_{47}+0.0221\Gamma_{97})/(\Gamma_{47}+\Gamma_{52}+\Gamma_{60}+\Gamma_{61}+0.285\Gamma_{90}+0.9101\Gamma_{97}+0.9101\Gamma_{98})$

VALUE	DOCUMENT ID	TECN	COMMENT
0.660±0.006 OUR FIT Error includes scale factor of 1.1.			
0.660±0.004±0.014	AKERS	95Y OPAL	1991–1994 LEP runs

$\Gamma(h^- h^- h^+ \nu_\tau(\text{ex.}K^0,\omega))/\Gamma_{\text{total}}$ Γ_{47}/Γ

VALUE (%)	DOCUMENT ID
9.44±0.10 OUR FIT Error includes scale factor of 1.1.	

$\Gamma(h^- h^- h^+ \geq 1\,\text{neutrals}\,\nu_\tau)/\Gamma_{\text{total}}$ Γ_{48}/Γ

$\Gamma_{48}/\Gamma = (0.3431\Gamma_{34}+0.3431\Gamma_{35}+0.1077\Gamma_{37}+\Gamma_{52}+\Gamma_{60}+\Gamma_{61}+0.285\Gamma_{90}+0.888\Gamma_{97}+0.9101\Gamma_{98})/\Gamma$

Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
5.08±0.11 OUR FIT Error includes scale factor of 1.2.						
5.2 ±0.4 OUR AVERAGE						
5.6 ±0.7 ±0.3	avg	352	[94] BEHREND	90	CELL	E^{ee}_{cm}= 35 GeV
4.2 ±0.5 ±0.9	f&a	203	[95] ALBRECHT	87L	ARG	E^{ee}_{cm}= 10 GeV
4.7 ±0.5 ±0.8	avg	530	[96] SCHMIDKE	86	MRK2	E^{ee}_{cm}= 29 GeV
5.6 ±0.4 ±0.7	avg		[97] FERNANDEZ	85	MAC	E^{ee}_{cm}= 29 GeV
6.2 ±2.3 ±1.7	f&a		BEHREND	84	CELL	E^{ee}_{cm}= 14.22 GeV

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

6.1 ±0.8 ±0.9	[98] BURCHAT	87	MRK2	E_{cm}^{ee} = 29 GeV	
7.6 ±0.4 ±0.9	[97,99] RUCKSTUHL	86	DLCO	E_{cm}^{ee} = 29 GeV	

[94] BEHREND 90 value is not independent of BEHREND 90 B($3h\nu_\tau \geq 1$ neutrals) + B(5-prong).

[95] ALBRECHT 87L measure the product of branching ratios B($3\pi^\pm\pi^0\nu_\tau$) B(($e\overline{\nu}$ or $\mu\overline{\nu}$ or π or K or ρ)ν_τ) = 0.029 and use the PDG 86 values for the second branching ratio which sum to 0.69 ± 0.03 to get the quoted value.

[96] Not independent of SCHMIDKE 86 $h^-h^-h^+\nu_\tau$ and $h^-h^-h^+(\geq 0\pi^0)\nu_\tau$ values.

[97] Value obtained using paper's R = B($h^-h^-h^+\nu_\tau$)/B(3-prong) and current B(3-prong) = 0.143.

[98] BURCHAT 87 value is not independent of SCHMIDKE 86 value.

[99] Contributions from kaons and from $>1\pi^0$ are subtracted. Not independent of (3-prong + $0\pi^0$) and (3-prong + $\geq 0\pi^0$) values.

$\Gamma(h^-h^-h^+ \geq 1$ neutrals ν_τ(ex. $K_S^0 \to \pi^+\pi^-))/\Gamma_{total}$ Γ_{49}/Γ

$\Gamma_{49}/\Gamma = (\Gamma_{52}+\Gamma_{60}+\Gamma_{61}+0.285\Gamma_{90}+0.888\Gamma_{97}+0.9101\Gamma_{98})/\Gamma$

Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
4.88±0.11 OUR FIT	Error includes scale factor of 1.2.					
5.07±0.24 OUR AVERAGE						
5.09±0.10±0.23	avg		[100] AKERS	95Y	OPAL	1991–1994 LEP runs
4.95±0.29±0.65	f&a	570	DECAMP	92C	ALEP	1989–1990 LEP runs

[100] Not independent of AKERS 95Y B($h^-h^-h^+ \geq 0$ neutralsν_τ(ex. $K_S^0 \to \pi^+\pi^-$)) and B($h^-h^-h^+ \geq 0$ neutralsν_τ(ex. K^0))/B($h^-h^-h^+ \geq 0$ neutralsν_τ(ex. $K_S^0 \to \pi^+\pi^-$)) values.

$\Gamma(h^-h^-h^+\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{50}/Γ

$\Gamma_{50}/\Gamma = (0.3431\Gamma_{34}+0.3431\Gamma_{35}+\Gamma_{52}+0.888\Gamma_{97}+0.0221\Gamma_{98})/\Gamma$

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
4.44±0.09 OUR FIT	Error includes scale factor of 1.1.				
4.45±0.09±0.07	6.1k	[101] BUSKULIC	96	ALEP	LEP 1991–1993 data

[101] BUSKULIC 96 quote B($h^-h^-h^+\pi^0\nu_\tau$(ex. K^0)) = 4.30 ± 0.09 ± 0.09. We add 0.15 to remove their K^0 correction and reduce the systematic error accordingly.

$\Gamma(h^-h^-h^+\pi^0\nu_\tau$(ex. K^0))$/\Gamma_{total}$ Γ_{51}/Γ

$\Gamma_{51}/\Gamma = (\Gamma_{52}+0.888\Gamma_{97}+0.0221\Gamma_{98})/\Gamma$

VALUE (%)	EVTS	DOCUMENT ID	TECN	COMMENT
4.25±0.09 OUR FIT	Error includes scale factor of 1.1.			
4.23±0.06±0.22	7.2k	BALEST	95C CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV

$\Gamma(h^-h^-h^+\pi^0\nu_\tau$(ex. K^0, ω))$/\Gamma_{total}$ Γ_{52}/Γ

VALUE (%)	DOCUMENT ID
2.55±0.09 OUR FIT	

$\Gamma(h^-(\rho\pi)^0\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ Γ_{53}/Γ_{50}

$\Gamma_{53}/\Gamma_{50} = (\Gamma_{55}+\Gamma_{56}+\Gamma_{57})/\Gamma_{50}$

VALUE	DOCUMENT ID		TECN	COMMENT
0.64±0.07±0.03	[102] ALBRECHT	91D	ARG	E_{cm}^{ee} = 9.4–10.6 GeV

[102] ALBRECHT 91D not independent of their $\Gamma(h^-\rho^+h^-\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$, $\Gamma(h^-\rho^-h^+\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$, and $\Gamma(h^-\rho\pi^0\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ values.

$\Gamma((a_1(1260)h)^-\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ Γ_{54}/Γ_{50}

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.44	95	[103] ALBRECHT	91D	ARG	E_{cm}^{ee} = 9.4–10.6 GeV

[103] ALBRECHT 91D not independent of their $\Gamma(h^-\omega\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau$(ex.$K^0$)), $\Gamma(h^-\rho\pi^0\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$, $\Gamma(h^-\rho^+h^-\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$, and $\Gamma(h^-\rho^-h^+\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ values.

$\Gamma(h^-\rho\pi^0\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ Γ_{55}/Γ_{50}

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.30±0.04±0.02	393	ALBRECHT	91D ARG	E_{cm}^{ee} = 9.4–10.6 GeV

$\Gamma(h^-\rho^+h^-\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ Γ_{56}/Γ_{50}

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.10±0.03±0.04	142	ALBRECHT	91D	ARG	E_{cm}^{ee}= 9.4–10.6 GeV

$\Gamma(h^-\rho^-h^+\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ Γ_{57}/Γ_{50}

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.26±0.05±0.01	370	ALBRECHT	91D	ARG	E_{cm}^{ee}= 9.4–10.6 GeV

$[\Gamma(h^-\rho^+h^-\nu_\tau)+\Gamma(h^-\rho^-h^+\nu_\tau)]/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ $(\Gamma_{56}+\Gamma_{57})/\Gamma_{50}$

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.33±0.06±0.01	475	[104] ALBRECHT	91D	ARG	E_{cm}^{ee}= 9.4–10.6 GeV

[104] ALBRECHT 91D not independent of their $\Gamma(h^-\rho^+h^-\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ and $\Gamma(h^-\rho^-h^+\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ values.

$\Gamma(h^-h^-h^+2\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{58}/Γ

$\Gamma_{58}/\Gamma = (0.1077\Gamma_{37}+\Gamma_{60}+0.236\Gamma_{90}+0.888\Gamma_{98})/\Gamma$

VALUE (%)	DOCUMENT ID
0.52±0.05 OUR FIT	

$\Gamma(h^-h^-h^+2\pi^0\nu_\tau(\text{ex.}K^0))/\Gamma_{total}$ Γ_{59}/Γ

$\Gamma_{59}/\Gamma = (\Gamma_{60}+0.236\Gamma_{90}+0.888\Gamma_{98})/\Gamma$

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
0.51±0.05 OUR FIT					
0.50±0.07±0.07	1.8k	BUSKULIC	96	ALEP	LEP 1991–1993 data

$\Gamma(h^-h^-h^+2\pi^0\nu_\tau(\text{ex.}K^0))/\Gamma(h^-h^-h^+ \geq 0\text{neut.}\ \nu_\tau(\text{"3-prong"}))$ Γ_{59}/Γ_{42}

$\Gamma_{59}/\Gamma_{42} = (\Gamma_{60}+0.236\Gamma_{90}+0.888\Gamma_{98})/(0.3431\Gamma_{30}+0.3431\Gamma_{32}+0.3431\Gamma_{34}+0.3431\Gamma_{35}+0.4508\Gamma_{37}+\Gamma_{47}+\Gamma_{52}+\Gamma_{60}+\Gamma_{61}+0.285\Gamma_{90}+0.9101\Gamma_{97}+0.9101\Gamma_{98})$

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.0341±0.0031 OUR FIT					
0.034 ±0.002 ±0.003	668	BORTOLETTO93		CLEO	$E_{cm}^{ee}\approx$ 10.6 GeV

$\Gamma(h^-h^-h^+2\pi^0\nu_\tau(\text{ex.}K^0,\omega,\eta))/\Gamma_{total}$ Γ_{60}/Γ

VALUE (%)	DOCUMENT ID
0.10±0.04 OUR FIT	

$\Gamma(h^-h^-h^+ \geq 3\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{61}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
0.11±0.06 OUR FIT					
0.11±0.04±0.05	440	BUSKULIC	96	ALEP	LEP 1991–1993 data

$\Gamma(K^-h^+h^- \geq 0\text{ neutrals }\nu_\tau)/\Gamma_{total}$ Γ_{62}/Γ

VALUE (%)	CL%	DOCUMENT ID		TECN	COMMENT
<0.6	90	AIHARA	84C	TPC	E_{cm}^{ee}= 29 GeV

$\Gamma(K^-\pi^+\pi^- \geq 0\text{ neut. }\nu_\tau)/\Gamma_{total}$ Γ_{63}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
$\mathbf{0.39^{+0.19}_{-0.16}}$ **OUR AVERAGE** Error includes scale factor of 1.5.					
$0.58^{+0.15}_{-0.13}\pm0.12$	20	[105] BAUER	94	TPC	E_{cm}^{ee}= 29 GeV
$0.22^{+0.16}_{-0.13}\pm0.05$	9	[106] MILLS	85	DLCO	E_{cm}^{ee}= 29 GeV

[105] We multiply 0.58% by 0.20, the relative systematic error quoted by BAUER 94, to obtain the systematic error.

[106] Error correlated with MILLS 85 ($KK\pi\nu$) value. We multiply 0.22% by 0.23, the relative systematic error quoted by MILLS 85, to obtain obtain the systematic error.

$\Gamma(K^-\pi^+K^- \geq 0\text{ neut. }\nu_\tau)/\Gamma_{total}$ Γ_{64}/Γ

VALUE (%)	CL%	DOCUMENT ID		TECN	COMMENT
<0.09	95	BAUER	94	TPC	E_{cm}^{ee}= 29 GeV

$\Gamma(K^- K^+ \pi^- \geq 0 \text{ neut. } \nu_\tau)/\Gamma_{\text{total}}$ Γ_{65}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
$0.15^{+0.09}_{-0.07} \pm 0.03$	4	[107] BAUER	94	TPC	$E_{\text{cm}}^{ee} = 29$ GeV

[107] We multiply 0.15% by 0.20, the relative systematic error quoted by BAUER 94, to obtain the systematic error.

$\Gamma(K^- K^+ \pi^- \nu_\tau)/\Gamma_{\text{total}}$ Γ_{66}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
$0.22^{+0.17}_{-0.11} \pm 0.05$	9	[108] MILLS	85	DLCO	$E_{\text{cm}}^{ee} = 29$ GeV

[108] Error correlated with MILLS 85 ($K \pi \pi \pi^0 \nu$) value. We multiply 0.22% by 0.23, the relative systematic error quoted by MILLS 85, to obtain obtain the systematic error.

$\Gamma(\phi \pi^- \nu_\tau)/\Gamma_{\text{total}}$ Γ_{67}/Γ

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$< 3.5 \times 10^{-4}$	90	ALBRECHT	95H	ARG	$E_{\text{cm}}^{ee} = 9.4$–10.6 GeV

$\Gamma(K^- K^+ K^- \geq 0 \text{ neut. } \nu_\tau)/\Gamma_{\text{total}}$ Γ_{68}/Γ

VALUE (%)	CL%	DOCUMENT ID		TECN	COMMENT
< 0.21	95	BAUER	94	TPC	$E_{\text{cm}}^{ee} = 29$ GeV

$\Gamma(\pi^- K^+ \pi^- \geq 0 \text{ neut. } \nu_\tau)/\Gamma_{\text{total}}$ Γ_{69}/Γ

VALUE (%)	CL%	DOCUMENT ID		TECN	COMMENT
< 0.25	95	BAUER	94	TPC	$E_{\text{cm}}^{ee} = 29$ GeV

$\Gamma(e^- e^- e^+ \overline{\nu}_e \nu_\tau)/\Gamma_{\text{total}}$ Γ_{70}/Γ

VALUE (units 10^{-5})	EVTS	DOCUMENT ID		TECN	COMMENT
$2.8 \pm 1.4 \pm 0.4$	5	ALAM	96	CLEO	$E_{\text{cm}}^{ee} = 10.6$ GeV

$\Gamma(\mu^- e^- e^+ \overline{\nu}_\mu \nu_\tau)/\Gamma_{\text{total}}$ Γ_{71}/Γ

VALUE (units 10^{-5})	CL%	DOCUMENT ID		TECN	COMMENT
< 3.6	90	ALAM	96	CLEO	$E_{\text{cm}}^{ee} = 10.6$ GeV

$\Gamma(3h^- 2h^+ \geq 0 \text{ neutrals } \nu_\tau (\text{ex. } K_S^0 \to \pi^- \pi^+)(\text{"5-prong"}))/\Gamma_{\text{total}}$ Γ_{72}/Γ

$\Gamma_{72}/\Gamma = (\Gamma_{73}+\Gamma_{74})/\Gamma$

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
0.097 ± 0.007 OUR FIT					
0.102 ± 0.011 OUR AVERAGE					
$0.097 \pm 0.005 \pm 0.011$	419	GIBAUT	94B	CLEO	$E_{\text{cm}}^{ee} = 10.6$ GeV
$0.26 \pm 0.06 \pm 0.05$		ACTON	92H	OPAL	$E_{\text{cm}}^{ee} = 88.2$–$94.2$ GeV
$0.10\ ^{+0.05}_{-0.04} \pm 0.03$		DECAMP	92C	ALEP	1989–1990 LEP runs
0.102 ± 0.029	13	BYLSMA	87	HRS	$E_{\text{cm}}^{ee} = 29$ GeV
$0.16 \pm 0.08 \pm 0.04$	4	BURCHAT	85	MRK2	$E_{\text{cm}}^{ee} = 29$ GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$0.16 \pm 0.13 \pm 0.04$		BEHREND	89B	CELL	$E_{\text{cm}}^{ee} = 14$–47 GeV
$0.3 \pm 0.1 \pm 0.2$		BARTEL	85F	JADE	$E_{\text{cm}}^{ee} = 34.6$ GeV
0.13 ± 0.04	10	BELTRAMI	85	HRS	Repl. by BYLSMA 87
1.0 ± 0.4	10	BEHREND	82	CELL	Repl. by BEHREND 89B

$[\Gamma(h^- h^- h^+ \geq 1 \text{ neutrals } \nu_\tau) + \Gamma(3h^- 2h^+ \geq 0 \text{ neutrals } \nu_\tau$ (ex. $K_S^0 \to \pi^- \pi^+)(\text{"5-prong"}))]/\Gamma_{\text{total}}$ $(\Gamma_{48}+\Gamma_{72})/\Gamma$

$(\Gamma_{48}+\Gamma_{72})/\Gamma = (0.3431\Gamma_{34}+0.3431\Gamma_{35}+0.4507\Gamma_{37}+0.1177\Gamma_{37}+\Gamma_{52}+\Gamma_{60}+\Gamma_{61}+\Gamma_{73}+\Gamma_{74}+0.29\Gamma_{90}+0.888\Gamma_{97}+0.9101\Gamma_{98})/\Gamma$

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
5.21 ± 0.11 OUR FIT Error includes scale factor of 1.2.					
5.4 ± 0.5 OUR AVERAGE					
$5.05 \pm 0.29 \pm 0.65$	570	DECAMP	92C	ALEP	1989–1990 LEP runs
$5.8 \pm 0.7 \pm 0.2$	352	[109] BEHREND	90	CELL	$E_{\text{cm}}^{ee} = 35$ GeV

[109] BEHREND 90 not independent of their $\Gamma(h^- h^- h^+ \geq 1 \text{ neutrals} \nu_\tau)/\Gamma_{\text{total}}$ measurement.

$\Gamma(3h^-2h^+\nu_\tau(\text{ex.}K^0))/\Gamma_{\text{total}}$ Γ_{73}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
0.075±0.007 OUR FIT					
0.073±0.008 OUR AVERAGE					
0.080±0.011±0.013	58	BUSKULIC	96	ALEP	LEP 1991–1993 data
0.077±0.005±0.009	295	GIBAUT	94B	CLEO	E_{cm}^{ee}= 10.6 GeV
0.064±0.023±0.01	12	ALBRECHT	88B	ARG	E_{cm}^{ee}= 10 GeV
0.051±0.020	7	BYLSMA	87	HRS	E_{cm}^{ee}= 29 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.067±0.030	5	[110] BELTRAMI	85	HRS	Repl. by BYLSMA 87

[110] The error quoted is statistical only.

$\Gamma(3h^-2h^+\pi^0\nu_\tau(\text{ex.}K^0))/\Gamma_{\text{total}}$ Γ_{74}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
0.022±0.005 OUR FIT					
0.021±0.005 OUR AVERAGE					
0.018±0.007±0.012	18	BUSKULIC	96	ALEP	LEP 1991–1993 data
0.019±0.004±0.004	31	GIBAUT	94B	CLEO	E_{cm}^{ee}= 10.6 GeV
0.051±0.022	6	BYLSMA	87	HRS	E_{cm}^{ee}= 29 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.067±0.030	5	[111] BELTRAMI	85	HRS	Repl. by BYLSMA 87

[111] The error quoted is statistical only.

$\Gamma(3h^-2h^+2\pi^0\nu_\tau)/\Gamma_{\text{total}}$ Γ_{75}/Γ

VALUE (%)	CL%	DOCUMENT ID		TECN	COMMENT
<0.011	90	GIBAUT	94B	CLEO	E_{cm}^{ee}= 10.6 GeV

$\Gamma((5\pi)^-\nu_\tau)/\Gamma_{\text{total}}$ Γ_{76}/Γ

$\Gamma_{76}/\Gamma = (\Gamma_{26}+\frac{1}{4}\Gamma_{37}+\Gamma_{60}+\Gamma_{73})/\Gamma$

Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE (%)		DOCUMENT ID		TECN	COMMENT
0.33±0.07 OUR FIT					
0.61±0.06±0.08	**avg**	[112] GIBAUT	94B	CLEO	E_{cm}^{ee}= 10.6 GeV

[112] Not independent of GIBAUT 94B B($3h^-2h^+\nu_\tau$), PROCARIO 93 B($h^-4\pi^0\nu_\tau$), and BORTOLETTO 93 B($2h^-h^+2\pi^0\nu_\tau$)/B("3prong") measurements. Result is corrected for η contributions.

$\Gamma(4h^-3h^+\geq 0\text{ neutrals }\nu_\tau(\text{"7-prong"}))/\Gamma_{\text{total}}$ Γ_{77}/Γ

VALUE (%)	CL%	DOCUMENT ID		TECN	COMMENT
<0.019	90	BYLSMA	87	HRS	E_{cm}^{ee}= 29 GeV

$\Gamma(K^*(892)^-\geq 0(h^0\neq K_S^0)\nu_\tau)/\Gamma_{\text{total}}$ Γ_{78}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
1.94±0.27±0.15	74	AKERS	94G	OPAL	E_{cm}^{ee}= 88–94 GeV

$\Gamma(K^*(892)^-\geq 0\text{ neutrals }\nu_\tau)/\Gamma_{\text{total}}$ Γ_{79}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
1.33±0.13 OUR AVERAGE					
$1.19\pm0.15^{+0.13}_{-0.18}$	104	ALBRECHT	95H	ARG	E_{cm}^{ee}= 9.4–10.6 GeV
1.43±0.11±0.13	475	[113] GOLDBERG	90	CLEO	E_{cm}^{ee}= 9.4–10.9 GeV

[113] GOLDBERG 90 estimates that 10% of observed $K^*(892)$ are accompanied by a π^0.

$\Gamma(K^*(892)^-\nu_\tau)/\Gamma_{\text{total}}$ Γ_{80}/Γ

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
1.28±0.08 OUR AVERAGE						
1.39±0.09±0.10			[114] BUSKULIC	96	ALEP	LEP 1991–1993 data
1.11±0.12			[115] COAN	96	CLEO	$E_{\text{cm}}^{ee}\approx$ 10.6 GeV

$1.42 \pm 0.22 \pm 0.09$		[116] ACCIARRI	95F	L3	1991–1993 LEP runs
$1.23 \pm 0.21^{+0.11}_{-0.21}$	54	[117] ALBRECHT	88L	ARG	$E^{ee}_{cm} = 10$ GeV
$1.9 \pm 0.3 \pm 0.4$	44	[118] TSCHIRHART	88	HRS	$E^{ee}_{cm} = 29$ GeV
$1.5 \pm 0.4 \pm 0.4$	15	[119] AIHARA	87C	TPC	$E^{ee}_{cm} = 29$ GeV
$1.3 \pm 0.3 \pm 0.3$	31	YELTON	86	MRK2	$E^{ee}_{cm} = 29$ GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$1.45 \pm 0.13 \pm 0.11$	273	[120] BUSKULIC	94F	ALEP	Repl. by BUSKULIC 96
1.7 ± 0.7	11	DORFAN	81	MRK2	$E^{ee}_{cm} = 4.2$–6.7 GeV

[114] Not independent of BUSKULIC 96 $B(\pi^- \overline{K}^0 \nu_\tau)$ and $B(K^- \pi^0 \nu_\tau)$ measurements.

[115] Not independent of COAN 96 $B(\pi^- \overline{K}^0 \nu_\tau)$ and BATTLE 94 $B(K^- \pi^0 \nu_\tau)$ measurements. $K\pi$ final states are consistent with and assumed to originate from $K^*(892)^-$ production.

[116] This result is obtained from their $B(\pi^- \overline{K}^0 \nu_\tau)$ assuming all those decays originate in $K^*(892)^-$ decays.

[117] The authors divide by $\Gamma_1/\Gamma = 0.865$ to obtain this result.

[118] Not independent of TSCHIRHART 88 $\Gamma(\tau^- \to h^- \overline{K}^0 \geq 0$ neutrals $\geq 0 K^0_L \nu_\tau)/\Gamma$(total).

[119] Decay π^- identified in this experiment, is assumed in the others.

[120] BUSKULIC 94F obtain this result from BUSKULIC 94F $B(\overline{K}^0 \pi^- \nu_\tau)$ and BUSKULIC 94E $B(K^- \pi^0 \nu_\tau)$ assuming all of those decays originate in $K^*(892)^-$ decays.

$\Gamma(K^*(892)^- \nu_\tau)/\Gamma(\pi^- \pi^0 \nu_\tau)$ Γ_{80}/Γ_{13}

VALUE	DOCUMENT ID		TECN	COMMENT
0.075 ± 0.027	[121] ABREU	94K	DLPH	LEP 1992 Z data

[121] ABREU 94K quote $B(\tau^- \to K^*(892)^- \nu_\tau) B(K^*(892)^- \to K^- \pi^0)/B(\tau^- \to \rho^- \nu_\tau) = 0.025 \pm 0.009$. We divide by $B(K^*(892)^- \to K^- \pi^0) = 0.333$ to obtain this result.

$\Gamma(K^*(892)^0 K^- \geq 0$ neutrals $\nu_\tau)/\Gamma_{total}$ Γ_{81}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
$0.32 \pm 0.08 \pm 0.12$	119	GOLDBERG	90	CLEO	$E^{ee}_{cm} = 9.4$–10.9 GeV

$\Gamma(K^*(892)^0 K^- \nu_\tau)/\Gamma_{total}$ Γ_{82}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
$0.20 \pm 0.05 \pm 0.04$	47	ALBRECHT	95H	ARG	$E^{ee}_{cm} = 9.4$–10.6 GeV

$\Gamma(\overline{K}^*(892)^0 \pi^- \geq 0$ neutrals $\nu_\tau)/\Gamma_{total}$ Γ_{83}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
$0.38 \pm 0.11 \pm 0.13$	105	GOLDBERG	90	CLEO	$E^{ee}_{cm} = 9.4$–10.9 GeV

$\Gamma(\overline{K}^*(892)^0 \pi^- \nu_\tau)/\Gamma_{total}$ Γ_{84}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
$0.25 \pm 0.10 \pm 0.05$	27	ALBRECHT	95H	ARG	$E^{ee}_{cm} = 9.4$–10.6 GeV

$\Gamma(K_1(1270)^- \nu_\tau)/\Gamma_{total}$ Γ_{85}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
$0.41^{+0.41}_{-0.35} \pm 0.10$	5	[122] BAUER	94	TPC	$E^{ee}_{cm} = 29$ GeV

[122] We multiply 0.41% by 0.25, the relative systematic error quoted by BAUER 94, to obtain the systematic error.

$\Gamma(K_1(1400)^- \nu_\tau)/\Gamma_{total}$ Γ_{86}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
$0.76^{+0.40}_{-0.33} \pm 0.20$	11	[123] BAUER	94	TPC	$E^{ee}_{cm} = 29$ GeV

[123] We multiply 0.76% by 0.25, the relative systematic error quoted by BAUER 94, to obtain the systematic error.

$[\Gamma(K_1(1270)^- \nu_\tau) + \Gamma(K_1(1400)^- \nu_\tau)]/\Gamma_{total}$ $(\Gamma_{85}+\Gamma_{86})/\Gamma$

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
$1.17^{+0.41}_{-0.37} \pm 0.29$	16	[124] BAUER	94	TPC	$E^{ee}_{cm} = 29$ GeV

[124] We multiply 1.17% by 0.25, the relative systematic error quoted by BAUER 94, to obtain the systematic error. Not independent of BAUER 94 $B(K_1(1270)^- \nu_\tau)$ and BAUER 94 $B(K_1(1400)^- \nu_\tau)$ measurements.

$\Gamma(K_2^*(1430)^-\nu_\tau)/\Gamma_{total}$ Γ_{87}/Γ

VALUE (%)	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
<0.3	95		TSCHIRHART	88	HRS	E_{cm}^{ee}= 29 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<0.33	95		[125] ACCIARRI	95F	L3	1991–1993 LEP runs
<0.9	95	0	DORFAN	81	MRK2	E_{cm}^{ee}= 4.2–6.7 GeV

[125] ACCIARRI 95F quote $B(\tau^- \to K^*(1430)^- \to \pi^- \overline{K}^0 \nu_\tau) < 0.11\%$. We divide by $B(K^*(1430)^- \to \pi^- \overline{K}^0) = 0.33$ to obtain the limit shown.

$\Gamma(a_0(980)^- \geq 0 \text{ neutrals } \nu_\tau)/\Gamma_{total} \times B(a_0(980) \to K^0 K^-)$ $\Gamma_{88}/\Gamma \times B$

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
$<2.8 \times 10^{-4}$	90	GOLDBERG	90	CLEO	E_{cm}^{ee}= 9.4–10.9 GeV

$\Gamma(\eta\pi^-\nu_\tau)/\Gamma_{total}$ Γ_{89}/Γ

VALUE (units 10^{-4})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
< 1.4	95	0	BARTELT	96	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
< 3.4	95		ARTUSO	92	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
< 90	95		ALBRECHT	88M	ARG	$E_{cm}^{ee} \approx$ 10 GeV
<140	90		BEHREND	88	CELL	E_{cm}^{ee}= 14–46.8 GeV
<180	95		BARINGER	87	CLEO	E_{cm}^{ee}= 10.5 GeV
<250	90	0	COFFMAN	87	MRK3	E_{cm}^{ee}= 3.77 GeV
510 ±100±120		65	DERRICK	87	HRS	E_{cm}^{ee}= 29 GeV
<100	95		GAN	87B	MRK2	E_{cm}^{ee}= 29 GeV

$\Gamma(\eta\pi^-\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{90}/Γ

VALUE (%)	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
0.171±0.028 OUR FIT						
0.17 ±0.02 ±0.02		125	ARTUSO	92	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<1.10	95		ALBRECHT	88M	ARG	$E_{cm}^{ee} \approx$ 10 GeV
<2.10	95		BARINGER	87	CLEO	E_{cm}^{ee}= 10.5 GeV
$4.20\ ^{+0.70}_{-1.20}$ ±1.60			[126] GAN	87	MRK2	E_{cm}^{ee}= 29 GeV

[126] Highly correlated with GAN 87 $\Gamma(\pi^- 3\pi^0 \nu_\tau)/\Gamma(\text{total})$ value.

$\Gamma(\eta\pi^-\pi^0\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{91}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 4.3	95	ARTUSO	92	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<120	95	ALBRECHT	88M	ARG	$E_{cm}^{ee} \approx$ 10 GeV

$\Gamma(\eta K^-\nu_\tau)/\Gamma_{total}$ Γ_{92}/Γ

VALUE (units 10^{-4})	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
2.6±0.5±0.5		85	BARTELT	96	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
<4.7	95		ARTUSO	92	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV

$\Gamma(\eta\pi^+\pi^-\pi^- \geq 0 \text{ neutrals } \nu_\tau)/\Gamma_{total}$ Γ_{93}/Γ

VALUE (%)	CL%	DOCUMENT ID		TECN	COMMENT
<0.3	90	ABACHI	87B	HRS	E_{cm}^{ee}= 29 GeV

$\Gamma(\eta\eta\pi^-\nu_\tau)/\Gamma_{total}$ Γ_{94}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 1.1	95	ARTUSO	92	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<83	95	ALBRECHT	88M	ARG	$E_{cm}^{ee} \approx$ 10 GeV

$\Gamma(\eta\eta\pi^-\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{95}/Γ

VALUE (units 10^{-4})	CL%	DOCUMENT ID		TECN	COMMENT
< 2.0	95	ARTUSO	92	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<90	95	ALBRECHT	88M	ARG	$E_{cm}^{ee} \approx$ 10 GeV

$\Gamma(h^-\omega \geq 0 \text{ neutrals } \nu_\tau)/\Gamma_{total}$ Γ_{96}/Γ

$\Gamma_{96}/\Gamma = (\Gamma_{97}+\Gamma_{98})/\Gamma$

Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
2.32±0.11 OUR FIT						
1.65±0.3 ±0.2	**avg**	1513	ALBRECHT	88M	ARG	$E_{cm}^{ee} \approx$ 10 GeV

$\Gamma(h^-\omega\nu_\tau)/\Gamma_{total}$ Γ_{97}/Γ

Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
1.91±0.09 OUR FIT						
1.93±0.13 OUR AVERAGE						
1.95±0.07±0.11	avg	2223	[127] BALEST	95C	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
1.60±0.27±0.41	f&a	139	BARINGER	87	CLEO	E_{cm}^{ee}= 10.5 GeV

[127] Not independent of BALEST 95C $B(\tau^- \to h^-\omega\nu_\tau)/B(\tau^- \to h^-h^-h^+\pi^0\nu_\tau)$ value.

$[\Gamma(h^-\rho\pi^0\nu_\tau)+\Gamma(h^-\rho^+h^-\nu_\tau)+\Gamma(h^-\rho^-h^+\nu_\tau)+\Gamma(h^-\omega\nu_\tau)]/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ $(\Gamma_{55}+\Gamma_{56}+\Gamma_{57}+\Gamma_{97})/\Gamma_{50}$

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
>0.81	95	[128] ALBRECHT	91D	ARG	E_{cm}^{ee}= 9.4–10.6 GeV

[128] ALBRECHT 91D not independent of their $\Gamma(h^-\omega\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau(\text{ex.}K^0))$, $\Gamma(h^-\rho\pi^0\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$, $\Gamma(h^-\rho^+h^-\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$, and $\Gamma(h^-\rho^-h^+\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau)$ values.

$\Gamma(h^-\omega\nu_\tau)/\Gamma(h^-h^-h^+\pi^0\nu_\tau(\text{ex.}K^0))$ Γ_{97}/Γ_{51}

$\Gamma_{97}/\Gamma_{51} = \Gamma_{97}/(\Gamma_{52}+0.888\Gamma_{97}+0.0221\Gamma_{98})$

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.448±0.019 OUR FIT					
0.453±0.019 OUR AVERAGE					
0.431±0.033	2350	[129] BUSKULIC	96	ALEP	LEP 1991–1993 data
0.464±0.016±0.017	2223	[130] BALEST	95C	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.37 ±0.05 ±0.02	458	[131] ALBRECHT	91D	ARG	E_{cm}^{ee}= 9.4–10.6 GeV

[129] BUSKULIC 96 quote the fraction of $\tau \to h^-h^-h^+\pi^0\nu_\tau$(ex. K^0) decays which originate in a $h^-\omega$ final state = 0.383 ± 0.029. We divide this by the $\omega(782) \to \pi^+\pi^-\pi^0$ branching fraction (0.888).

[130] BALEST 95C quote the fraction of $\tau^- \to h^-h^-h^+\pi^0\nu_\tau$ (ex. K^0) decays which originate in a $h^-\omega$ final state equals 0.412 ± 0.014 ± 0.015. We divide this by the $\omega(782) \to \pi^+\pi^-\pi^0$ branching fraction (0.888).

[131] ALBRECHT 91D quote the fraction of $\tau^- \to h^-h^-h^+\pi^0\nu_\tau$ decays which originate in a $\pi^-\omega$ final state equals 0.33 ± 0.04 ± 0.02. We divide this by the $\omega(782) \to \pi^+\pi^-\pi^0$ branching fraction (0.888).

$\Gamma(h^-\omega\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{98}/Γ

VALUE (%)	DOCUMENT ID
0.41±0.06 OUR FIT	

$\Gamma(h^-\omega\pi^0\nu_\tau)/\Gamma(h^-h^-h^+ \geq 0\text{neut. } \nu_\tau(\text{"3-prong"}))$ Γ_{98}/Γ_{42}

$\Gamma_{98}/\Gamma_{42} = \Gamma_{98}/(0.3431\Gamma_{30}+0.3431\Gamma_{32}+0.3431\Gamma_{34}+0.3431\Gamma_{35}+0.4508\Gamma_{37}+\Gamma_{47}+\Gamma_{52}+\Gamma_{60}+\Gamma_{61}+0.285\Gamma_{90}+0.9101\Gamma_{97}+0.9101\Gamma_{98})$

Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE		EVTS	DOCUMENT ID	TECN	COMMENT
0.028±0.004 OUR FIT					
0.028±0.003±0.003	**avg**	430	[132] BORTOLETTO93	CLEO	$E_{cm}^{ee} \approx 10.6$ GeV

[132] Not independent of BORTOLETTO 93 $\Gamma(\tau^- \to h^-\omega\pi^0\nu_\tau)/\Gamma(\tau^- \to h^-h^-h^+2\pi^0\nu_\tau(\text{ex.}K^0))$ value.

$\Gamma(h^-\omega\pi^0\nu_\tau)/\Gamma(h^-h^-h^+2\pi^0\nu_\tau(\text{ex.}K^0))$ Γ_{98}/Γ_{59}

$\Gamma_{98}/\Gamma_{59} = \Gamma_{98}/(\Gamma_{60}+0.236\Gamma_{90}+0.888\Gamma_{98})$

VALUE	DOCUMENT ID	TECN	COMMENT
0.81±0.08 OUR FIT			
0.81±0.06±0.06	BORTOLETTO93	CLEO	$E_{cm}^{ee} \approx 10.6$ GeV