τ – THIS IS PART 2 OF 4

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τ^- BRANCHING RATIOS

$\Gamma(\text{particle}^- \geq 0 \text{ neutrals } \geq 0K^0_L \nu_\tau(\text{"1-prong"}))/\Gamma_{\text{total}}$ Γ_1/Γ

$\Gamma_1/\Gamma = (\Gamma_3+\Gamma_5+\Gamma_9+\Gamma_{10}+\Gamma_{13}+\Gamma_{15}+\Gamma_{19}+\Gamma_{20}+\Gamma_{23}+\Gamma_{24}+\Gamma_{26}+0.6569\Gamma_{30}+0.6569\Gamma_{32}+0.6569\Gamma_{34}+0.6569\Gamma_{35}+0.4316\Gamma_{37}+0.708\Gamma_{91}+0.085\Gamma_{98}+0.085\Gamma_{99})/\Gamma$

The charged particle here can be e, μ, or hadron. In many analyses, the sum of the topological branching fractions (1, 3, and 5 prongs) is constrained to be unity. Since the 5-prong fraction is very small, the measured 1-prong and 3-prong fractions are highly correlated and cannot be treated as independent quantities in our overall fit. We arbitrarily choose to use the 3-prong fraction in our fit, and leave the 1-prong fraction out. We do, however, use these 1-prong measurements in our average below. The measurements used only for the average are marked "avg," whereas "f&a" marks a result used for the fit and the average.

VALUE (%)			*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
84.96±0.14 OUR FIT Error includes scale factor of 1.3.							
85.90±0.30 OUR AVERAGE Error includes scale factor of 1.2.							
85.6 ±0.6	±0.3	avg	3300	[11] ADEVA	91F	L3	E^{ee}_{cm}= 88.3–94.3 GeV
86.4 ±0.3	±0.3	avg		ABACHI	89B	HRS	E^{ee}_{cm}= 29 GeV
84.9 ±0.4	±0.3	avg		BEHREND	89B	CELL	E^{ee}_{cm}= 14–47 GeV
84.7 ±0.8	±0.6	avg		[12] AIHARA	87B	TPC	E^{ee}_{cm}= 29 GeV
87.2 ±0.5	±0.8	avg		SCHMIDKE	86	MRK2	E^{ee}_{cm}= 29 GeV
84.7 ±1.1	$^{+1.6}_{-1.3}$	avg	169	[13] ALTHOFF	85	TASS	E^{ee}_{cm}= 34.5 GeV
86.1 ±0.5	±0.9	avg		BARTEL	85F	JADE	E^{ee}_{cm}= 34.6 GeV
86.7 ±0.3	±0.6	avg		FERNANDEZ	85	MAC	E^{ee}_{cm}= 29 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •							
87.1 ±1.0	±0.7			[14] BURCHAT	87	MRK2	E^{ee}_{cm}= 29 GeV
87.8 ±1.3	±3.9			[15] BERGER	85	PLUT	E^{ee}_{cm}= 34.6 GeV

[11] Not independent of ADEVA 91F $\Gamma(h^-h^-h^+ \geq 0\text{neut. } \nu_\tau(\text{"3-prong"}))/\Gamma_{\text{total}}$ value.

[12] Not independent of AIHARA 87B $\Gamma(\mu^-\overline{\nu}_\mu\nu_\tau)/\Gamma_{\text{total}}$, $\Gamma(e^-\overline{\nu}_e\nu_\tau)/\Gamma_{\text{total}}$, and $\Gamma(h^- \geq 0 \text{ neutrals } \geq 0K^0_L\ \nu_\tau)/\Gamma_{\text{total}}$ values.

[13] Not independent of ALTHOFF 85 $\Gamma(\mu^-\overline{\nu}_\mu\nu_\tau)/\Gamma_{\text{total}}$, $\Gamma(e^-\overline{\nu}_e\nu_\tau)/\Gamma_{\text{total}}$, $\Gamma(h^- \geq 0$ neutrals $\geq 0K^0_L\ \nu_\tau)/\Gamma_{\text{total}}$, and $\Gamma(h^-h^-h^+ \geq 0\text{neut. } \nu_\tau(\text{"3-prong"}))/\Gamma_{\text{total}}$ values.

[14] Not independent of SCHMIDKE 86 value (also not independent of BURCHAT 87 value for $\Gamma(h^-h^-h^+ \geq 0\text{neut. } \nu_\tau(\text{"3-prong"}))/\Gamma_{\text{total}}$.

[15] Not independent of (1-prong + $0\pi^0$) and (1-prong + $\geq 1\pi^0$) values.

$\Gamma(\text{particle}^- \geq 0 \text{ neutrals } \geq 0K^0\nu_\tau)/\Gamma_{\text{total}}$ Γ_2/Γ

$\Gamma_2/\Gamma = (\Gamma_3+\Gamma_5+\Gamma_9+\Gamma_{10}+\Gamma_{13}+\Gamma_{15}+\Gamma_{19}+\Gamma_{20}+\Gamma_{23}+\Gamma_{24}+\Gamma_{26}+\Gamma_{30}+\Gamma_{32}+\Gamma_{34}+\Gamma_{35}+\Gamma_{37}+0.708\Gamma_{91}+0.085\Gamma_{98}+0.085\Gamma_{99})/\Gamma$

VALUE (%)		*DOCUMENT ID*		*TECN*	*COMMENT*
85.53±0.14 OUR FIT Error includes scale factor of 1.3.					
84.59±0.33 OUR AVERAGE					
84.48±0.27±0.23	avg	ACTON	92H	OPAL	1990–1991 LEP runs
$85.45^{+0.69}_{-0.73}$±0.65	f&a	DECAMP	92C	ALEP	1989–1990 LEP runs

$\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau)/\Gamma_{\text{total}}$ Γ_3/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.

To minimize the effect of experiments with large systematic errors, we exclude experiments which together would contribute 5% of the weight in the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
17.35±0.10 OUR FIT						
17.30±0.10 OUR AVERAGE						
17.31±0.11±0.05	f&a	20.7k	BUSKULIC	96C	ALEP	1991–1993 LEP runs
17.02±0.19±0.24	f&a	6586	ABREU	95T	DLPH	1991–1992 LEP runs
17.36±0.27	f&a	7941	AKERS	95I	OPAL	1990–1992 LEP runs
17.6 ±0.4 ±0.4	f&a	2148	ADRIANI	93M	L3	E_{cm}^{ee}= 88–94 GeV
17.4 ±0.3 ±0.5	avg		[16] ALBRECHT	93G	ARG	E_{cm}^{ee}= 9.4–10.6 GeV
17.35±0.41±0.37	f&a		DECAMP	92C	ALEP	1989–1990 LEP runs
17.7 ±0.8 ±0.4	f&a	568	BEHREND	90	CELL	E_{cm}^{ee}= 35 GeV
17.4 ±1.0	f&a	2197	ADEVA	88	MRKJ	E_{cm}^{ee}= 14–16 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
17.7 ±1.2 ±0.7			AIHARA	87B	TPC	E_{cm}^{ee}= 29 GeV
18.3 ±0.9 ±0.8			BURCHAT	87	MRK2	E_{cm}^{ee}= 29 GeV
18.6 ±0.8 ±0.7		558	[17] BARTEL	86D	JADE	E_{cm}^{ee}= 34.6 GeV
12.9 ±1.7 $^{+0.7}_{-0.5}$			ALTHOFF	85	TASS	E_{cm}^{ee}= 34.5 GeV
18.0 ±0.9 ±0.5		473	[17] ASH	85B	MAC	E_{cm}^{ee}= 29 GeV
18.0 ±1.0 ±0.6			[18] BALTRUSAIT...	85	MRK3	E_{cm}^{ee}= 3.77 GeV
19.4 ±1.6 ±1.7		153	BERGER	85	PLUT	E_{cm}^{ee}= 34.6 GeV
17.6 ±2.6 ±2.1		47	BEHREND	83C	CELL	E_{cm}^{ee}= 34 GeV
17.8 ±2.0 ±1.8			BERGER	81B	PLUT	E_{cm}^{ee}= 9–32 GeV

[16] Not independent of ALBRECHT 92D $\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau)/\Gamma(e^- \overline{\nu}_e \nu_\tau)$ and ALBRECHT 93G $\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau) \times \Gamma(e^- \overline{\nu}_e \nu_\tau)/\Gamma^2_{\text{total}}$ values.

[17] Modified using $B(e^- \overline{\nu}_e \nu_\tau)/B(\text{"1 prong"})$ and B("1 prong") ,= 0.855.

[18] Error correlated with BALTRUSAITIS 85 $e\nu\overline{\nu}$ value.

$\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau)/\Gamma(\text{particle}^- \geq 0 \text{ neutrals } \geq 0 K_L^0 \nu_\tau(\text{"1-prong"}))$ Γ_3/Γ_1

$\Gamma_3/\Gamma_1 = \Gamma_3/(\Gamma_3+\Gamma_5+\Gamma_9+\Gamma_{10}+\Gamma_{13}+\Gamma_{15}+\Gamma_{19}+\Gamma_{20}+\Gamma_{23}+\Gamma_{24}+\Gamma_{26}+ 0.6569\Gamma_{30}+0.6569\Gamma_{32}+0.6569\Gamma_{34}+0.6569\Gamma_{35}+0.4316\Gamma_{37}+0.708\Gamma_{91}+0.085\Gamma_{98}+ 0.085\Gamma_{99})$

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
0.2042±0.0011 OUR FIT				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.217 ±0.009 ±0.008		BARTEL	86D JADE	E_{cm}^{ee}= 34.6 GeV
0.211 ±0.010 ±0.006	390	ASH	85B MAC	E_{cm}^{ee}= 29 GeV

$\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau \gamma)/\Gamma_{\text{total}}$ Γ_4/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
0.30±0.04±0.05	116	[19] ALEXANDER	96S	OPAL	1991–1994 LEP runs
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.23±0.10	10	[20] WU	90	MRK2	E_{cm}^{ee}= 29 GeV

[19] ALEXANDER 96S impose requirements on detected γ's corresponding to a τ-rest-frame energy cutoff E_γ >20 MeV.

[20] WU 90 reports $\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau \gamma)/\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau) = 0.013 \pm 0.006$, which is converted to $\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau \gamma)/\Gamma_{\text{total}}$ using $\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau \gamma)/\Gamma_{\text{total}} = 17.35\%$. Requirements on detected γ's correspond to a τ rest frame energy cutoff $E_\gamma > 37$ MeV.

$\Gamma(e^- \overline{\nu}_e \nu_\tau)/\Gamma_{\text{total}}$ Γ_5/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.

To minimize the effect of experiments with large systematic errors, we exclude experiments which together would contribute 5% of the weight in the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
17.83±0.08 OUR FIT						
17.80±0.08 OUR AVERAGE						
17.78±0.10±0.09	f&a	25.3k	ALEXANDER	96D	OPAL	1991–1994 LEP runs
17.79±0.12±0.06	f&a	20.6k	BUSKULIC	96C	ALEP	1991–1993 LEP runs
17.51±0.23±0.31	f&a	5059	ABREU	95T	DLPH	1991–1992 LEP runs
17.9 ±0.4 ±0.4	f&a	2892	ADRIANI	93M	L3	E_{cm}^{ee}= 88–94 GeV
17.5 ±0.3 ±0.5	avg		[21] ALBRECHT	93G	ARG	E_{cm}^{ee}= 9.4–10.6 GeV
17.97±0.14±0.23	f&a	3970	AKERIB	92	CLEO	E_{cm}^{ee}= 10.6 GeV
19.1 ±0.4 ±0.6	avg	2960	[22] AMMAR	92	CLEO	E_{cm}^{ee}= 10.5–10.9 GeV
18.09±0.45±0.45	f&a		DECAMP	92C	ALEP	1989–1990 LEP runs
17.0 ±0.5 ±0.6	f&a	1.7k	ABACHI	90	HRS	E_{cm}^{ee}= 29 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
18.4 ±0.8 ±0.4		644	BEHREND	90	CELL	E_{cm}^{ee}= 35 GeV
16.3 ±0.3 ±3.2			JANSSEN	89	CBAL	E_{cm}^{ee}= 9.4–10.6 GeV
18.4 ±1.2 ±1.0			AIHARA	87B	TPC	E_{cm}^{ee}= 29 GeV
19.1 ±0.8 ±1.1			BURCHAT	87	MRK2	E_{cm}^{ee}= 29 GeV
16.8 ±0.7 ±0.9		515	[22] BARTEL	86D	JADE	E_{cm}^{ee}= 34.6 GeV
20.4 ±3.0 $^{+1.4}_{-0.9}$			ALTHOFF	85	TASS	E_{cm}^{ee}= 34.5 GeV
17.8 ±0.9 ±0.6		390	[22] ASH	85B	MAC	E_{cm}^{ee}= 29 GeV
18.2 ±0.7 ±0.5			[23] BALTRUSAIT...	85	MRK3	E_{cm}^{ee}= 3.77 GeV
13.0 ±1.9 ±2.9			BERGER	85	PLUT	E_{cm}^{ee}= 34.6 GeV
18.3 ±2.4 ±1.9		60	BEHREND	83C	CELL	E_{cm}^{ee}= 34 GeV
16.0 ±1.3		459	[24] BACINO	78B	DLCO	E_{cm}^{ee}= 3.1–7.4 GeV

[21] Not independent of ALBRECHT 92D $\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau)/\Gamma(e^- \overline{\nu}_e \nu_\tau)$ and ALBRECHT 93G $\Gamma(\mu^- \overline{\nu}_\mu \nu_\tau) \times \Gamma(e^- \overline{\nu}_e \nu_\tau)/\Gamma^2_{\text{total}}$ values.

[22] Modified using $B(e^- \overline{\nu}_e \nu_\tau)/B(\text{"1 prong"})$ and B("1 prong") ,= 0.855.

[23] Error correlated with BALTRUSAITIS 85 $\Gamma(\mu^-\overline{\nu}_\mu\nu_\tau)/\Gamma_{\rm total}$.

[24] BACINO 78B value comes from fit to events with $e^\pm$ and one other nonelectron charged prong.

$\Gamma(e^-\overline{\nu}_e\nu_\tau)/\Gamma(\text{particle}^- \geq 0\ \text{neutrals} \geq 0K^0_L\nu_\tau(\text{"1-prong"}))$ Γ_5/Γ_1

$\Gamma_5/\Gamma_1 = \Gamma_5/(\Gamma_3+\Gamma_5+\Gamma_9+\Gamma_{10}+\Gamma_{13}+\Gamma_{15}+\Gamma_{19}+\Gamma_{20}+\Gamma_{23}+\Gamma_{24}+\Gamma_{26}+0.6569\Gamma_{30}+0.6569\Gamma_{32}+0.6569\Gamma_{34}+0.6569\Gamma_{35}+0.4316\Gamma_{37}+0.708\Gamma_{91}+0.085\Gamma_{98}+0.085\Gamma_{99})$

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.2099±0.0010 OUR FIT	Error includes scale factor of 1.1.				
0.2231±0.0044±0.0073	2856	AMMAR	92	CLEO	$E^{ee}_{\rm cm}$= 10.5–10.9 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.196 ±0.008 ±0.010		BARTEL	86D	JADE	$E^{ee}_{\rm cm}$= 34.6 GeV
0.208 ±0.010 ±0.007	390	ASH	85B	MAC	$E^{ee}_{\rm cm}$= 29 GeV

$\Gamma(\mu^-\overline{\nu}_\mu\nu_\tau) \times \Gamma(e^-\overline{\nu}_e\nu_\tau)/\Gamma^2_{\rm total}$ $\Gamma_3\Gamma_5/\Gamma^2$

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.03094±0.00022 OUR FIT					
0.0306 ±0.0005 ±0.0013	3230	ALBRECHT	93G	ARG	$E^{ee}_{\rm cm}$= 9.4–10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.0288 ±0.0017 ±0.0019		ASH	85B	MAC	$E^{ee}_{\rm cm}$= 29 GeV

$\Gamma(\mu^-\overline{\nu}_\mu\nu_\tau)/\Gamma(e^-\overline{\nu}_e\nu_\tau)$ Γ_3/Γ_5

Predicted to be 1 for sequential lepton, 1/2 for para-electron, and 2 for para-muon. Para-electron also ruled out by HEILE 78.

VALUE	DOCUMENT ID		TECN	COMMENT
0.973±0.007 OUR FIT				
0.997±0.035±0.040	ALBRECHT	92D	ARG	$E^{ee}_{\rm cm}$= 9.4–10.6 GeV

$\Gamma(h^- \geq 0\ \text{neutrals} \geq 0K^0_L\nu_\tau)/\Gamma_{\rm total}$ Γ_6/Γ

$\Gamma_6/\Gamma = (\Gamma_9+\Gamma_{10}+\Gamma_{13}+\Gamma_{15}+\Gamma_{19}+\Gamma_{20}+\Gamma_{23}+\Gamma_{24}+\Gamma_{26}+0.6569\Gamma_{30}+0.6569\Gamma_{32}+0.6569\Gamma_{34}+0.6569\Gamma_{35}+0.4316\Gamma_{37}+0.708\Gamma_{91}+0.085\Gamma_{98}+0.085\Gamma_{99})/\Gamma$

VALUE (%)		DOCUMENT ID		TECN	COMMENT
49.78±0.17 OUR FIT	Error includes scale factor of 1.2.				
48.6 ±1.2 ±0.9 avg		[25] AIHARA	87B	TPC	$E^{ee}_{\rm cm}$= 29 GeV

[25] Not independent of AIHARA 87B $e\nu\overline{\nu}$, $\mu\nu\overline{\nu}$, and $\pi^+2\pi^-(\geq 0\pi^0)\nu$ values.

$\Gamma(h^- \geq 0K^0_L\nu_\tau)/\Gamma_{\rm total}$ Γ_7/Γ

$\Gamma_7/\Gamma = (\Gamma_9+\Gamma_{10}+\frac{1}{2}\Gamma_{30}+\frac{1}{2}\Gamma_{32}+\frac{1}{4}\Gamma_{37})/\Gamma$

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
12.51±0.13 OUR FIT	Error includes scale factor of 1.1.					
12.42±0.14 OUR AVERAGE						
12.44±0.11±0.11	f&a	15k	[26] BUSKULIC	96	ALEP	1991–1993 LEP run
12.47±0.26±0.43	f&a	2967	[27] ACCIARRI	95	L3	1992 LEP run
12.4 ±0.7 ±0.7	f&a	283	[28] ABREU	92N	DLPH	1990 LEP run

11.7 ±0.6 ±0.8	avg		[29] ALBRECHT	92D	ARG	E_{cm}^{ee}= 9.4–10.6 GeV
12.98±0.44±0.33	f&a		[30] DECAMP	92C	ALEP	1989–1990 LEP runs
12.1 ±0.7 ±0.5	f&a	309	ALEXANDER	91D	OPAL	1990 LEP run
12.3 ±0.9 ±0.5	f&a	1338	BEHREND	90	CELL	E_{cm}^{ee}= 35 GeV
11.3 ±0.5 ±0.8	avg	798	[31] FORD	87	MAC	E_{cm}^{ee}= 29 GeV
12.3 ±0.6 ±1.1	avg	328	[32] BARTEL	86D	JADE	E_{cm}^{ee}= 34.6 GeV

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

11.1 ±1.1 ±1.4			[33] BURCHAT	87	MRK2	E_{cm}^{ee}= 29 GeV
13.0 ±2.0 ±4.0			BERGER	85	PLUT	E_{cm}^{ee}= 34.6 GeV
11.2 ±1.7 ±1.2		34	[34] BEHREND	83C	CELL	E_{cm}^{ee}= 34 GeV

[26] BUSKULIC 96 quote 11.78 ± 0.11 ± 0.13 We add 0.66 to undo their correction for unseen K_L^0 and modify the systematic error accordingly.

[27] ACCIARRI 95 with 0.65% added to remove their correction for $\pi^- K_L^0$ backgrounds.

[28] ABREU 92N with 0.5% added to remove their correction for $K^*(892)^-$ backgrounds.

[29] Not independent of ALBRECHT 92D $\Gamma(\mu^-\overline{\nu}_\mu\nu_\tau)/\Gamma(e^-\overline{\nu}_e\nu_\tau)$, $\Gamma(\mu^-\overline{\nu}_\mu\nu_\tau) \times \Gamma(e^-\overline{\nu}_e\nu_\tau)$, and $\Gamma(h^- \geq 0 K_L^0\nu_\tau)/\Gamma(e^-\overline{\nu}_e\nu_\tau)$ values.

[30] DECAMP 92C quote $B(h^- \geq 0 K_L^0 \geq 0 (K_S^0 \rightarrow \pi^+\pi^-)\nu_\tau) = 13.32 \pm 0.44 \pm 0.33$. We subtract 0.35 to correct for their inclusion of the K_S^0 decays.

[31] FORD 87 result for $B(\pi^-\nu_\tau)$ with 0.67% added to remove their K^- correction and adjusted for 1992 B("1 prong").

[32] BARTEL 86D result for $B(\pi^-\nu_\tau)$ with 0.59% added to remove their K^- correction and adjusted for 1992 B("1 prong").

[33] BURCHAT 87 with 1.1% added to remove their correction for K^- and $K^*(892)^-$ backgrounds.

[34] BEHREND 83C quote $B(\pi^-\nu_\tau) = 9.9 \pm 1.7 \pm 1.3$ after subtracting 1.3 ± 0.5 to correct for $B(K^-\nu_\tau)$.

$\Gamma(h^- \geq 0 K_L^0 \nu_\tau)/\Gamma(\text{particle}^- \geq 0 \text{ neutrals} \geq 0 K_L^0 \nu_\tau(\text{"1-prong"}))$ Γ_7/Γ_1

$\Gamma_7/\Gamma_1 = (\Gamma_9+\Gamma_{10}+\frac{1}{2}\Gamma_{30}+\frac{1}{2}\Gamma_{32}+\frac{1}{4}\Gamma_{37})/(\Gamma_3+\Gamma_5+\Gamma_9+\Gamma_{10}+\Gamma_{13}+\Gamma_{15}+\Gamma_{19}+\Gamma_{20}+\Gamma_{23}+\Gamma_{24}+\Gamma_{26}+0.6569\Gamma_{30}+0.6569\Gamma_{32}+0.6569\Gamma_{34}+0.6569\Gamma_{35}+0.4316\Gamma_{37}+0.708\Gamma_{91}+0.085\Gamma_{98}+0.085\Gamma_{99})$

VALUE	EVTS	DOCUMENT ID		TECN	COMMENT
0.1473±0.0015 OUR FIT Error includes scale factor of 1.1.					
0.135 ±0.009 OUR AVERAGE					
0.131 ±0.006 ±0.009	798	[35] FORD	87	MAC	E_{cm}^{ee}= 29 GeV
0.143 ±0.007 ±0.013	328	[36] BARTEL	86D	JADE	E_{cm}^{ee}= 34.6 GeV

[35] FORD 87 result divided by 0.865, their assumed value for B("1 prong").

[36] BARTEL 86D result with 0.6% added to remove their K^- correction and then divided by 0.866, their assumed value for B("1 prong").

$\Gamma(h^- \geq 0K^0_L\,\nu_\tau)/\Gamma(e^-\overline{\nu}_e\nu_\tau)$ Γ_7/Γ_5

$\Gamma_7/\Gamma_5 = (\Gamma_9+\Gamma_{10}+\frac{1}{2}\Gamma_{30}+\frac{1}{2}\Gamma_{32}+\frac{1}{4}\Gamma_{37})/\Gamma_5$

VALUE	DOCUMENT ID	TECN	COMMENT
0.702±0.008 OUR FIT Error includes scale factor of 1.1.			
0.678±0.037±0.044	ALBRECHT	92D ARG	E^{ee}_{cm}= 9.4–10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •			
0.647±0.039±0.061	[37] BARTEL	86D JADE	E^{ee}_{cm}= 34.6 GeV

[37] Combined result of BARTEL 86D $e\nu\overline{\nu}$, $\mu\nu\overline{\nu}$, and $\pi^-\nu$ assuming B($\mu\nu\overline{\nu}$)/B($e\nu\overline{\nu}$) = 0.973.

$\Gamma(h^-\nu_\tau)/\Gamma_{total}$ $\Gamma_8/\Gamma = (\Gamma_9+\Gamma_{10})/\Gamma$

VALUE	DOCUMENT ID
0.1203±0.0014 OUR FIT Error includes scale factor of 1.1.	

$\Gamma(\pi^-\nu_\tau)/\Gamma_{total}$ Γ_9/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
11.31±0.15 OUR FIT Error includes scale factor of 1.1.					
11.07±0.18 OUR AVERAGE					
11.06±0.11±0.14	avg		[38] BUSKULIC	96 ALEP	LEP 1991–1993 data
11.7 ±0.4 ±1.8	f&a	1138	BLOCKER	82D MRK2	E^{ee}_{cm}= 3.5–6.7 GeV

[38] Not independent of BUSKULIC 96 B($h^-\nu_\tau$) and B($K^-\nu_\tau$) values.

$\Gamma(K^-\nu_\tau)/\Gamma_{total}$ Γ_{10}/Γ

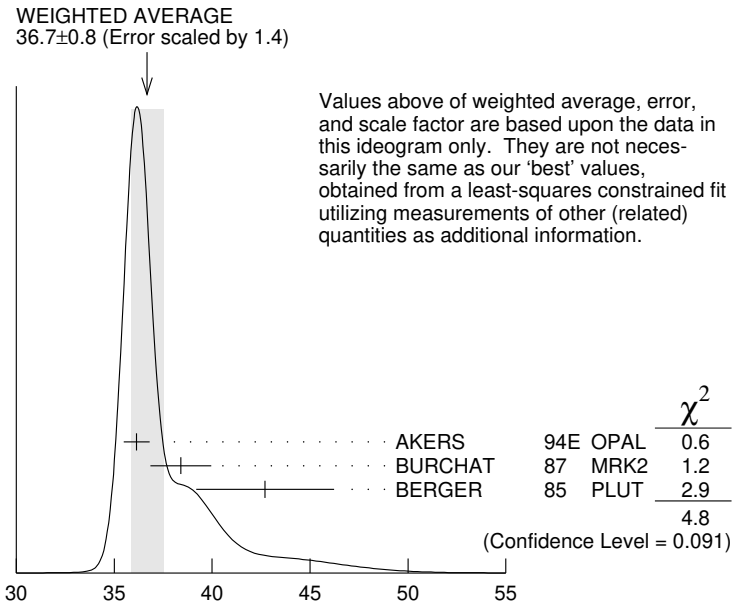
VALUE (%)	EVTS	DOCUMENT ID	TECN	COMMENT
0.71±0.05 OUR FIT				
0.71±0.05 OUR AVERAGE				
0.72±0.04±0.04	728	BUSKULIC	96 ALEP	LEP 1991–1993 data
0.85±0.18	27	ABREU	94K DLPH	LEP 1992 Z data
0.66±0.07±0.09	99	BATTLE	94 CLEO	$E^{ee}_{cm}\approx$ 10.6 GeV
0.59±0.18	16	MILLS	84 DLCO	E^{ee}_{cm}= 29 GeV
1.3 ±0.5	15	BLOCKER	82B MRK2	E^{ee}_{cm}= 3.9–6.7 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.64±0.05±0.05	336	BUSKULIC	94E ALEP	Repl. by BUSKULIC 96

$\Gamma(h^- \geq 1\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{11}/Γ

$\Gamma_{11}/\Gamma = (\Gamma_{13}+\Gamma_{15}+\Gamma_{19}+\Gamma_{20}+\Gamma_{23}+\Gamma_{24}+\Gamma_{26}+0.157\Gamma_{30}+0.157\Gamma_{32}+0.157\Gamma_{34}+0.157\Gamma_{35}+0.0246\Gamma_{37}+0.708\Gamma_{91}+0.085\Gamma_{98}+0.085\Gamma_{99})/\Gamma$

VALUE (%)	DOCUMENT ID	TECN	COMMENT
36.97±0.18 OUR FIT Error includes scale factor of 1.1.			
36.7 ±0.8 OUR AVERAGE Error includes scale factor of 1.4. See the ideogram below.			
36.14±0.33±0.58	AKERS	94E OPAL	1991–1992 LEP runs
38.4 ±1.2 ±1.0	[39] BURCHAT	87 MRK2	E^{ee}_{cm}= 29 GeV
42.7 ±2.0 ±2.9	BERGER	85 PLUT	E^{ee}_{cm}= 34.6 GeV

[39] BURCHAT 87 quote for B($\pi^{\pm} \geq 1$ neutral ν_τ) = 0.378 ± 0.012 ± 0.010. We add 0.006 to account for contribution from ($K^{*-}\nu_\tau$) which they fixed at BR = 0.013.



$\Gamma\left(h^- \geq 1\,\pi^0\,\nu_\tau\right)/\Gamma_{\text{total}}$ (%)

$\Gamma(h^-\pi^0\nu_\tau)/\Gamma_{\text{total}}$ **$\Gamma_{12}/\Gamma = (\Gamma_{13}+\Gamma_{15})/\Gamma$**

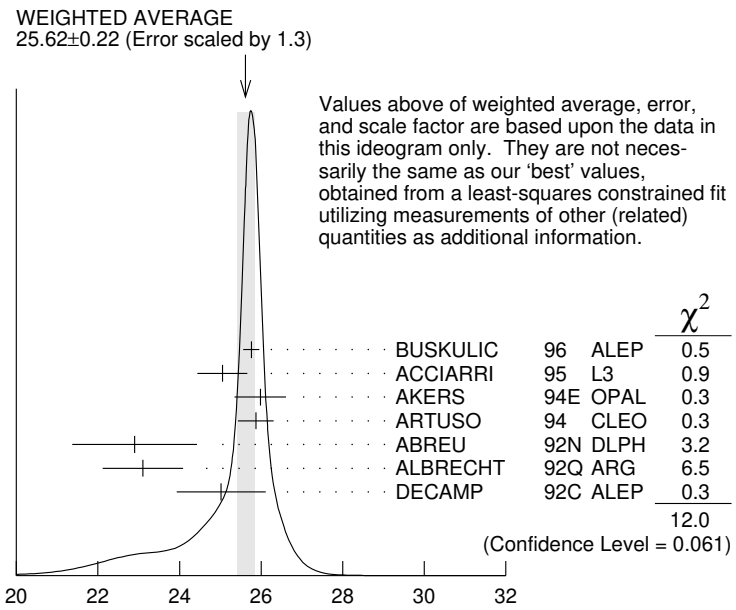
VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
25.76±0.15 OUR FIT	Error includes scale factor of 1.1.				
25.62±0.22 OUR AVERAGE	Error includes scale factor of 1.3. See the ideogram below.				
25.76±0.15±0.13	31k	BUSKULIC	96	ALEP	LEP 1991–1993 data
25.05±0.35±0.50	6613	ACCIARRI	95	L3	1992 LEP run
25.98±0.36±0.52		[40] AKERS	94E	OPAL	1991–1992 LEP runs
25.87±0.12±0.42	51k	[41] ARTUSO	94	CLEO	E_{cm}^{ee} = 10.6 GeV
22.9 ±0.8 ±1.3	283	[42] ABREU	92N	DLPH	E_{cm}^{ee} = 88.2–94.2 GeV
23.1 ±0.4 ±0.9	1249	[43] ALBRECHT	92Q	ARG	E_{cm}^{ee} = 10 GeV
25.02±0.64±0.88	1849	DECAMP	92C	ALEP	1989–1990 LEP runs
• • • We do not use the following data for averages, fits, limits, etc. • • •					
22.0 ±0.8 ±1.9	779	ANTREASYAN	91	CBAL	E_{cm}^{ee} = 9.4–10.6 GeV
22.6 ±1.5 ±0.7	1101	BEHREND	90	CELL	E_{cm}^{ee} = 35 GeV
23.1 ±1.9 ±1.6		BEHREND	84	CELL	E_{cm}^{ee} = 14,22 GeV

[40] AKERS 94E quote $(26.25 \pm 0.36 \pm 0.52) \times 10^{-2}$; we subtract 0.27% from their number to correct for $\tau^- \to h^- K_L^0 \nu_\tau$.

[41] ARTUSO 94 reports the combined result from three independent methods, one of which (23% of the $\tau^- \to h^- \pi^0 \nu_\tau$) is normalized to the inclusive one-prong branching fraction, taken as 0.854 ± 0.004. Renormalization to the present value causes negligible change.

[42] ABREU 92N with 0.5% added to remove their correction for $K^*(892)^-$ backgrounds.

[43] ALBRECHT 92Q with 0.5% added to remove their correction for $\tau^- \to K^*(892)^- \nu_\tau$ background.



$\Gamma\left(h^- \pi^0 \nu_\tau\right)/\Gamma_{\text{total}}$ (%)

$\Gamma\left(\pi^- \pi^0 \nu_\tau\right)/\Gamma_{\text{total}}$ Γ_{13}/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*
25.24±0.16 OUR FIT Error includes scale factor of 1.1.						
25.31±0.18 OUR AVERAGE						
25.30±0.15±0.13	avg		[44] BUSKULIC	96	ALEP	LEP 1991–1993
25.36±0.44	avg		[45] ARTUSO	94	CLEO	E_{cm}^{ee} = 10.6 GeV data
• • • We do not use the following data for averages, fits, limits, etc. • • •						
21.5 ±0.4 ±1.9		4400	[46,47] ALBRECHT	88L	ARG	E_{cm}^{ee} = 10 GeV
23.0 ±1.3 ±1.7		582	ADLER	87B	MRK3	E_{cm}^{ee} = 3.77 GeV
25.8 ±1.7 ±2.5			[48] BURCHAT	87	MRK2	E_{cm}^{ee} = 29 GeV
22.3 ±0.6 ±1.4		629	[47] YELTON	86	MRK2	E_{cm}^{ee} = 29 GeV

[44] Not independent of BUSKULIC 96 B($h^- \pi^0 \nu_\tau$) and B($K^- \pi^0 \nu_\tau$) values.

[45] Not independent of ARTUSO 94 B($h^- \pi^0 \nu_\tau$) and BATTLE 94 B($K^- \pi^0 \nu_\tau$) values.

[46] The authors divide by ($\Gamma_3 + \Gamma_5 + \Gamma_9 + \Gamma_{10}$)/Γ = 0.467 to obtain this result.

[47] Experiment had no hadron identification. Kaon corrections were made, but insufficient information is given to permit their removal.

[48] BURCHAT 87 value is not independent of YELTON 86 value. Nonresonant decays included.

$\Gamma(\pi^-\pi^0$ non-$\rho(770)\nu_\tau)/\Gamma_{total}$ Γ_{14}/Γ

VALUE (%)	DOCUMENT ID		TECN	COMMENT
0.3 ±0.1 ±0.3	[49] BEHREND	84	CELL	E_{cm}^{ee}= 14,22 GeV

[49] BEHREND 84 assume a flat nonresonant mass distribution down to the $\rho(770)$ mass, using events with mass above 1300 to set the level.

$\Gamma(K^-\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{15}/Γ

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
0.52±0.05 OUR FIT					
0.52±0.06 OUR AVERAGE					
0.52±0.04±0.05	395	BUSKULIC	96	ALEP	LEP 1991–1993 data
0.51±0.10±0.07	37	BATTLE	94	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.53±0.05±0.07	220	BUSKULIC	94E	ALEP	Repl. by BUSKULIC 96

$\Gamma(h^- \geq 2\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{16}/Γ

$\Gamma_{16}/\Gamma = (\Gamma_{19}+\Gamma_{20}+\Gamma_{23}+\Gamma_{24}+\Gamma_{26}+0.157\Gamma_{30}+0.157\Gamma_{32}+0.157\Gamma_{34}+0.157\Gamma_{35}+0.0246\Gamma_{37}+0.319\Gamma_{91})/\Gamma$

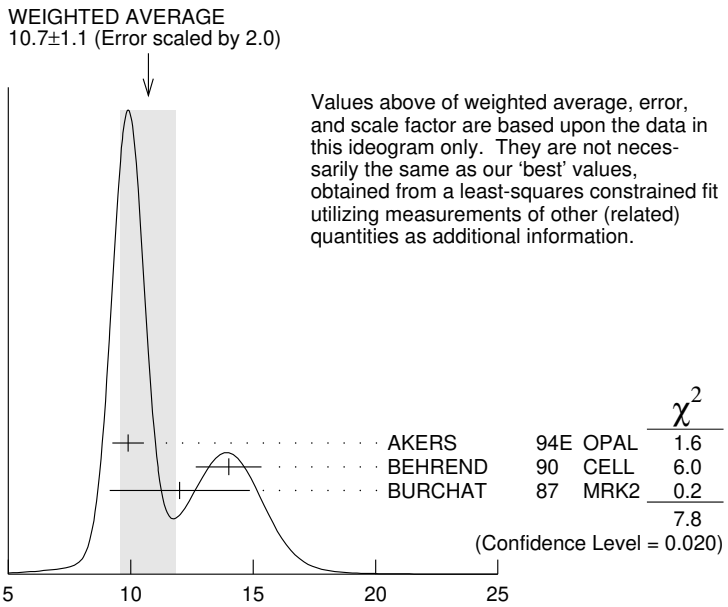
Data marked "avg" are highly correlated with data appearing elsewhere in the Listings, and are therefore used for the average given below but not in the overall fits. "f&a" marks results used for the fit and the average.

VALUE (%)		EVTS	DOCUMENT ID		TECN	COMMENT
10.95±0.16 OUR FIT Error includes scale factor of 1.1.						
10.7 ±1.1 OUR AVERAGE Error includes scale factor of 2.0. See the ideogram below.						
9.89±0.34±0.55	avg		[50] AKERS	94E	OPAL	1991–1992 LEP runs
14.0 ±1.2 ±0.6	f&a	938	BEHREND	90	CELL	E_{cm}^{ee}= 35 GeV
12.0 ±1.4 ±2.5	f&a		[51] BURCHAT	87	MRK2	E_{cm}^{ee}= 29 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
13.9 ±2.0 $^{+1.9}_{-2.2}$			[52] AIHARA	86E	TPC	E_{cm}^{ee}= 29 GeV

[50] AKERS 94E not independent of AKERS 94E B($h^- \geq 1\pi^0\nu_\tau$) and B($h^-\pi^0\nu_\tau$) measurements.

[51] Error correlated with BURCHAT 87 $\Gamma(\rho^-\nu_e)/\Gamma$(total) value.

[52] AIHARA 86E (TPC) quote B($2\pi^0\pi^-\nu_\tau$) + 1.6B($3\pi^0\pi^-\nu_\tau$) + 1.1B($\pi^0\eta\pi^-\nu_\tau$).



$\Gamma\left(h^- \geq 2\pi^0\,\nu_\tau\right)/\Gamma_{\rm total}$ (%)

$\Gamma\left(h^- 2\pi^0\,\nu_\tau\right)/\Gamma_{\rm total}$ Γ_{17}/Γ

$\Gamma_{17}/\Gamma = (\Gamma_{19}+\Gamma_{20}+0.157\Gamma_{30}+0.157\Gamma_{32})/\Gamma$

VALUE (%)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
9.50±0.14 OUR FIT	Error includes scale factor of 1.1.				
9.48±0.13±0.10	12k	[53] BUSKULIC	96	ALEP	LEP 1991–1993 data

[53] BUSKULIC 96 quote 9.29 ± 0.13 ± 0.10. We add 0.19 to undo their correction for $\tau^- \to h^- K^0\,\nu_\tau$.

$\Gamma\left(h^- 2\pi^0\,\nu_\tau(\text{ex.}K^0)\right)/\Gamma_{\rm total}$ Γ_{18}/Γ

$\Gamma_{18}/\Gamma = (\Gamma_{19}+\Gamma_{20})/\Gamma$

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*
9.35±0.14 OUR FIT	Error includes scale factor of 1.1.					
8.95±0.33 OUR AVERAGE	Error includes scale factor of 1.1.					
8.88±0.37±0.42	f&a	1060	ACCIARRI	95	L3	1992 LEP run
8.96±0.16±0.44	avg		[54] PROCARIO	93	CLEO	$E_{\rm cm}^{ee} \approx$ 10.6 GeV
10.38±0.66±0.82	f&a	809	[55] DECAMP	92C	ALEP	1989–1990 LEP runs
5.7 ±0.5 $^{+1.7}_{-1.0}$	f&a	133	[56] ANTREASYAN	91	CBAL	$E_{\rm cm}^{ee}$= 9.4–10.6 GeV
10.0 ±1.5 ±1.1	f&a	333	[57] BEHREND	90	CELL	$E_{\rm cm}^{ee}$= 35 GeV
8.7 ±0.4 ±1.1	f&a	815	[58] BAND	87	MAC	$E_{\rm cm}^{ee}$= 29 GeV
6.0 ±3.0 ±1.8	f&a		BEHREND	84	CELL	$E_{\rm cm}^{ee}$= 14,22 GeV

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

6.2 ±0.6 ±1.2 [59] GAN 87 MRK2 E_{cm}^{ee}= 29 GeV

[54] PROCARIO 93 entry is obtained from B($h^-2\pi^0\nu_\tau$)/B($h^-\pi^0\nu_\tau$) using ARTUSO 94 result for B($h^-\pi^0\nu_\tau$).

[55] We subtract 0.0015 to account for $\tau^- \to K^*(892)^-\nu_\tau$ contribution.

[56] ANTREASYAN 91 subtract 0.001 to account for the $\tau^- \to K^*(892)^-\nu_\tau$ contribution.

[57] BEHREND 90 subtract 0.002 to account for the $\tau^- \to K^*(892)^-\nu_\tau$ contribution.

[58] BAND 87 assume B($\pi^-3\pi^0\nu_\tau$) = 0.01 and B($\pi^-\pi^0\eta\nu_\tau$) = 0.005.

[59] GAN 87 analysis use photon multiplicity distribution.

$\Gamma(h^-2\pi^0\nu_\tau(\text{ex.}K^0))/\Gamma(h^-\pi^0\nu_\tau)$ Γ_{18}/Γ_{12}

$\Gamma_{18}/\Gamma_{12} = (\Gamma_{19}+\Gamma_{20})/(\Gamma_{13}+\Gamma_{15})$

VALUE	DOCUMENT ID	TECN	COMMENT
0.363±0.006 OUR FIT	Error includes scale factor of 1.1.		
0.342±0.006±0.016	[60] PROCARIO 93	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV

[60] PROCARIO 93 quote 0.345 ± 0.006 ± 0.016 after correction for 2 kaon backgrounds assuming B($K^{*-}\nu_\tau$)=1.42 ± 0.18% and B($h^-K^0\pi^0\nu_\tau$)=0.48 ± 0.48%. We multiply by 0.990 ± 0.010 to remove these corrections to B($h^-\pi^0\nu_\tau$).

$\Gamma(\pi^-2\pi^0\nu_\tau(\text{ex.}K^0))/\Gamma_{\text{total}}$ Γ_{19}/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 (%)		DOCUMENT ID	TECN	COMMENT
9.27±0.14 OUR FIT	Error includes scale factor of 1.1.			
9.21±0.13±0.11	**avg**	[61] BUSKULIC 96	ALEP	LEP 1991–1993 data

[61] Not independent of BUSKULIC 96 B($h^-2\pi^0\nu_\tau$(ex. K^0)) and B($K^-2\pi^0\nu_\tau$(ex. K^0)) values.

$\Gamma(K^-2\pi^0\nu_\tau(\text{ex.}K^0))/\Gamma_{\text{total}}$ Γ_{20}/Γ

VALUE (%)	EVTS	DOCUMENT ID	TECN	COMMENT
0.081±0.027 OUR FIT				
0.081±0.027 OUR AVERAGE				
0.08 ±0.02 ±0.02	59	BUSKULIC 96	ALEP	LEP 1991–1993 data
0.09 ±0.10 ±0.03	3	[62] BATTLE 94	CLEO	$E_{cm}^{ee} \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.04 ±0.03 ±0.02	11	BUSKULIC 94E	ALEP	Repl. by BUSKULIC 96

[62] BATTLE 94 quote 0.14 ± 0.10 ± 0.03 or < 0.3% at 90% CL. We subtract (0.05 ± 0.02)% to account for $\tau^- \to K^-(K^0 \to \pi^0\pi^0)\nu_\tau$ background.

$\Gamma(h^- \geq 3\pi^0\nu_\tau)/\Gamma_{\text{total}}$ Γ_{21}/Γ

$\Gamma_{21}/\Gamma = (\Gamma_{23}+\Gamma_{24}+\Gamma_{26}+0.157\Gamma_{34}+0.157\Gamma_{35}+0.0246\Gamma_{37}+0.319\Gamma_{91})/\Gamma$

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
1.46±0.11 OUR FIT	Error includes scale factor of 1.1.				
1.8 ±0.6 OUR AVERAGE	Error includes scale factor of 1.1.				
1.53±0.40±0.46	f&a	186	DECAMP 92C	ALEP	1989–1990 LEP
3.2 ±1.0 ±1.0	avg		[63] BEHREND 90	CELL	E_{cm}^{ee}(runs)= 35 GeV

[63] Not independent of BEHREND 90 $\Gamma(h^- \geq 2\pi^0\nu_\tau)/\Gamma_{\text{total}}$ and $\Gamma(h^-2\pi^0\nu_\tau)/\Gamma_{\text{total}}$ values.

$\Gamma(h^-3\pi^0\nu_\tau)/\Gamma_{total}$ Γ_{22}/Γ

$\Gamma_{22}/\Gamma = (\Gamma_{23}+\Gamma_{24}+0.157\Gamma_{34}+0.157\Gamma_{35})/\Gamma$

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
1.28±0.10 OUR FIT						
1.22±0.10 OUR AVERAGE						
1.24±0.09±0.11	f&a	2.3k	[64] BUSKULIC	96	ALEP	LEP 1991–1993 data
1.70±0.24±0.38	f&a	293	ACCIARRI	95	L3	1992 LEP run
1.15±0.08±0.13	avg		[65] PROCARIO	93	CLEO	$E^{ee}_{cm} \approx$ 10.6 GeV
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$0.0\ ^{+1.4}_{-0.1}\ ^{+1.1}_{-0.1}$			[66] GAN	87	MRK2	E^{ee}_{cm}= 29 GeV

[64] BUSKULIC 96 quote $B(h^-3\pi^0\nu_\tau(\text{ex. } K^0)) = 1.17 \pm 0.09 \pm 0.11$. We add 0.07 to remove their correction for K^0 backgrounds.

[65] PROCARIO 93 entry is obtained from $B(h^-3\pi^0\nu_\tau)/B(h^-\pi^0\nu_\tau)$ using ARTUSO 94 result for $B(h^-\pi^0\nu_\tau)$.

[66] Highly correlated with GAN 87 $\Gamma(\eta\pi^-\pi^0\nu_\tau)/\Gamma_{total}$ value. Authors quote $B(\pi^\pm 3\pi^0\nu_\tau) + 0.67B(\pi^\pm\eta\pi^0\nu_\tau) = 0.047 \pm 0.010 \pm 0.011$.

$\Gamma(h^-3\pi^0\nu_\tau)/\Gamma(h^-\pi^0\nu_\tau)$ Γ_{22}/Γ_{12}

$\Gamma_{22}/\Gamma_{12} = (\Gamma_{23}+\Gamma_{24}+0.157\Gamma_{34}+0.157\Gamma_{35})/(\Gamma_{13}+\Gamma_{15})$

VALUE	DOCUMENT ID		TECN	COMMENT
0.050±0.004 OUR FIT				
0.044±0.003±0.005	[67] PROCARIO	93	CLEO	$E^{ee}_{cm} \approx$ 10.6 GeV

[67] PROCARIO 93 quote 0.041 ± 0.003 ± 0.005 after correction for 2 kaon backgrounds assuming $B(K^{*-}\nu_\tau)$=1.42 ± 0.18% and $B(h^-K^0\pi^0\nu_\tau)$=0.48 ± 0.48%. We add 0.003 ± 0.003 and multiply the sum by 0.990 ± 0.010 to remove these corrections.

$\Gamma(\pi^-3\pi^0\nu_\tau(\text{ex.}K^0))/\Gamma_{total}$ Γ_{23}/Γ

VALUE (%)	DOCUMENT ID
1.14±0.14 OUR FIT	

$\Gamma(K^-3\pi^0\nu_\tau(\text{ex.}K^0))/\Gamma_{total}$ Γ_{24}/Γ

VALUE (%)	DOCUMENT ID		TECN	COMMENT
$\mathbf{0.050\ ^{+0.100}_{-0.033}}$ **OUR FIT**				
0.05 ±0.13	[68] BUSKULIC	94E	ALEP	1991-1992 LEP runs

[68] BUSKULIC 94E quote $B(K^- \geq 0\pi^0 \geq 0K^0\nu_\tau) - [B(K^-\nu_\tau) + B(K^-\pi^0\nu_\tau) + B(K^-K^0\nu_\tau) + B(K^-\pi^0\pi^0\nu_\tau) + B(K^-\pi^0K^0\nu_\tau)] = 0.05 \pm 0.13\%$ accounting for common systematic errors in BUSKULIC 94E and BUSKULIC 94F measurements of these modes. We assume $B(K^- \geq 2K^0\nu_\tau)$ and $B(K^- \geq 4\pi^0\nu_\tau)$ are negligible.

$\Gamma(h^- 4\pi^0 \nu_\tau (\text{ex.}K^0))/\Gamma_{\text{total}}$ Γ_{25}/Γ

$\Gamma_{25}/\Gamma = (\Gamma_{26}+0.319\Gamma_{91})/\Gamma$

VALUE (%)	EVTS	DOCUMENT ID		TECN	COMMENT
0.18±0.06 OUR FIT					
0.16±0.06 OUR AVERAGE					
0.16±0.04±0.09	232	[69] BUSKULIC	96	ALEP	LEP 1991–1993 data
0.16±0.05±0.05		[70] PROCARIO	93	CLEO	$E_{\text{cm}}^{ee} \approx$ 10.6 GeV

[69] BUSKULIC 96 quote result for $\tau^- \rightarrow h^- \geq 4\pi^0 \nu_\tau$. We assume B($h^- \geq 5\pi^0 \nu_\tau$) is negligible.

[70] PROCARIO 93 quotes B($h^- 4\pi^0 \nu_\tau$)/B($h^- \pi^0 \nu_\tau$) =0.006 ± 0.002 ± 0.002. We multiply by the ARTUSO 94 result for B($h^- \pi^0 \nu_\tau$) to obtain B($h^- 4\pi^0 \nu_\tau$). PROCARIO 93 assume B($h^- \geq 5\ \pi^0 \nu_\tau$) is small and do not correct for it.

$\Gamma(h^- 4\pi^0 \nu_\tau (\text{ex.}K^0, \eta))/\Gamma_{\text{total}}$ Γ_{26}/Γ

VALUE (%)	DOCUMENT ID
0.12±0.06 OUR FIT	

$\Gamma(K^- \geq 1(\pi^0 \text{ or } K^0)\ \nu_\tau)/\Gamma_{\text{total}}$ Γ_{27}/Γ

$\Gamma_{27}/\Gamma = (\Gamma_{15}+\Gamma_{20}+\Gamma_{24}+\Gamma_{32}+\Gamma_{35})/\Gamma$

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
0.94±0.10 OUR FIT						
0.76±0.23 OUR AVERAGE						
0.69±0.25		avg	[71] ABREU	94K	DLPH	LEP 1992 Z data
1.2 ±0.5	$^{+0.2}_{-0.4}$	f&a 9	AIHARA	87B	TPC	E_{cm}^{ee}= 29 GeV

[71]