### $\Gamma(K^-\pi^+\pi^+\pi^-)/\Gamma_{total}$ $\Gamma_{39}/\Gamma$

| VALUE | EVTS | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **0.081 ±0.005 OUR FIT** | | | | | |
| **0.086 ±0.009 OUR AVERAGE** | | Error includes scale factor of 1.1. | | | |
| 0.079 ±0.015 ±0.009 | | ALBRECHT | 94 | ARG | $e^+e^-\approx\Upsilon(4S)$ |
| 0.091 ±0.008 ±0.008 | 992 | ADLER | 88C | MRK3 | $e^+e^-$ 3.77 GeV |
| 0.117 ±0.025 | 185 | [36] SCHINDLER | 81 | MRK2 | $e^+e^-$ 3.771 GeV |
| 0.062 ±0.019 | 44 | [37] PERUZZI | 77 | MRK1 | $e^+e^-$ 3.77 GeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| $0.0844^{+0.0064}_{-0.0053}$ | | [38] BARLAG | 92C | ACCM | $\pi^-$ Cu 230 GeV |
| $0.065\ ^{+0.017}_{-0.011}$ ±0.019 | 13 | [38] AGUILAR-... | 87F | HYBR | $\pi p$, $pp$ 360, 400 GeV |

[36] SCHINDLER 81 (MARK-2) measures $\sigma(e^+e^-\to\psi(3770))\times$ branching fraction to be 0.68 ± 0.11. We use the MARK-3 (ADLER 88C) value of $\sigma$ = 5.8 ± 0.5 ± 0.6 nb.

[37] PERUZZI 77 (MARK-1) measures $\sigma(e^+e^-\to\psi(3770))\times$ branching fraction to be 0.36 ± 0.10. We use the MARK-3 (ADLER 88C) value of $\sigma$ = 5.8 ± 0.5 ± 0.6 nb.

[38] AGUILAR-BENITEZ 87F and BARLAG 92C compute the branching fraction using topological normalization.

### $\Gamma(K^-\pi^+\pi^+\pi^-)/\Gamma(K^-\pi^+)$ $\Gamma_{39}/\Gamma_{21}$

| VALUE | EVTS | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **2.02±0.11 OUR FIT** | | | | | |
| **2.01±0.13 OUR AVERAGE** | | | | | |
| 1.7 ±0.2 ±0.2 | 1745 | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |
| 1.90±0.25±0.20 | 337 | ALVAREZ | 91B | NA14 | Photoproduction |
| 2.12±0.16±0.09 | | BORTOLETTO | 88 | CLEO | $e^+e^-$ 10.55 GeV |
| 2.0 ±0.9 | 48 | BAILEY | 86 | ACCM | $\pi^-$ Be fixed target |
| 2.17±0.28±0.23 | | ALBRECHT | 85F | ARG | $e^+e^-$ 10 GeV |
| 2.0 ±1.0 | 10 | BAILEY | 83B | SPEC | $\pi^-$ Be $\to D^0$ |
| 2.2 ±0.8 | 214 | PICCOLO | 77 | MRK1 | $e^+e^-$ 4.03, 4.41 GeV |

### $\Gamma(K^-\pi^+\rho^0\text{total})/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{40}/\Gamma_{39}$

This includes $K^-a_1(1260)^+$, $\overline{K}^*(892)^0\rho^0$, etc. The next entry gives the specifically 3-body fraction. We rely on the MARKIII and E691 full amplitude analyses of the $K^-\pi^+\pi^+\pi^-$ channel for values of the resonant substructure.

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **0.835±0.035 OUR AVERAGE** | | | | |
| 0.80 ±0.03 ±0.05 | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |
| 0.855±0.032±0.030 | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | |
| 0.98 ±0.12 ±0.10 | ALVAREZ | 91B | NA14 | Photoproduction |

### $\Gamma(K^-\pi^+\rho^0\text{3-body})/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{41}/\Gamma_{39}$

We rely on the MARKIII and E691 full amplitude analyses of the $K^-\pi^+\pi^+\pi^-$ channel for values of the resonant substructure.

| VALUE | EVTS | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **0.063±0.028 OUR AVERAGE** | | | | | |
| 0.05 ±0.03 ±0.02 | | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |
| 0.084±0.022±0.04 | | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| 0.77 ±0.06 ±0.06 | | [39] ALVAREZ | 91B | NA14 | Photoproduction |
| $0.85\ ^{+0.11}_{-0.22}$ | 180 | PICCOLO | 77 | MRK1 | $e^+e^-$ 4.03, 4.41 GeV |

[39] This value is for $\rho^0$ $(K^-\pi^+)$-nonresonant. ALVAREZ 91B cannot determine what fraction of this is $K^-a_1(1260)^+$.

### $\Gamma(\overline{K}^*(892)^0\rho^0)/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{87}/\Gamma_{39}$

Unseen decay modes of the $\overline{K}^*(892)^0$ are included. We rely on the MARKIII and E691 full amplitude analyses of the $K^-\pi^+\pi^+\pi^-$ channel for values of the resonant substructure.

| VALUE | EVTS | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **0.195±0.03±0.03** | | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| 0.34 ±0.09±0.09 | | ALVAREZ | 91B | NA14 | Photoproduction |
| 0.75 ±0.3 | 5 | BAILEY | 83B | SPEC | $\pi$ Be $\to D^0$ |
| $0.15\ ^{+0.16}_{-0.15}$ | 20 | PICCOLO | 77 | MRK1 | $e^+e^-$ 4.03, 4.41 GeV |

### $\Gamma(\overline{K}^*(892)^0\rho^0\text{transverse})/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{88}/\Gamma_{39}$

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **0.20 ±0.07 OUR FIT** | | | | |
| **0.213±0.024±0.075** | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |

### $\Gamma(\overline{K}^*(892)^0\rho^0S\text{-wave})/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{89}/\Gamma_{39}$

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **0.375±0.045±0.06** | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |

### $\Gamma(\overline{K}^*(892)^0\rho^0S\text{-wave long.})/\Gamma_{total}$ $\Gamma_{90}/\Gamma$

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **<0.003** | 90 | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |

### $\Gamma(\overline{K}^*(892)^0\rho^0P\text{-wave})/\Gamma_{total}$ $\Gamma_{91}/\Gamma$

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **<0.003** | 90 | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| <0.009 | 90 | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |

### $\Gamma(\overline{K}^*(892)^0\rho^0D\text{-wave})/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{92}/\Gamma_{39}$

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **0.255±0.045±0.06** | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |

### $\Gamma(\overline{K}^*(892)^0f_0(980))/\Gamma_{total}$ $\Gamma_{98}/\Gamma$

Unseen decay modes of the $\overline{K}^*(892)^0$ and $f_0(980)$ are included.

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **<0.007** | 90 | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |

### $\Gamma(K^-a_1(1260)^+)/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{76}/\Gamma_{39}$

Unseen decay modes of the $a_1(1260)^+$ are included.

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **0.97 ±0.14 OUR AVERAGE** | | | | |
| 0.94 ±0.13 ±0.20 | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |
| 0.984±0.048±0.16 | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |

### $\Gamma(K^-a_2(1320)^+)/\Gamma_{total}$ $\Gamma_{80}/\Gamma$

Unseen decay modes of the $a_2(1320)^+$ are included.

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **<0.002** | 90 | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| <0.006 | 90 | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |

### $\Gamma(K_1(1270)^-\pi^+)/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{99}/\Gamma_{39}$

Unseen decay modes of the $K_1(1270)^-$ are included. The two experiments disagree considerably here.

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **0.13 ±0.04 OUR FIT** | | | | | |
| **0.194±0.056±0.088** | | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| <0.013 | 90 | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |

### $\Gamma(K_1(1400)^-\pi^+)/\Gamma_{total}$ $\Gamma_{100}/\Gamma$

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **<0.012** | 90 | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |

### $\Gamma(K^*(1410)^-\pi^+)/\Gamma_{total}$ $\Gamma_{102}/\Gamma$

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **<0.012** | 90 | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |

### $\Gamma(\overline{K}^*(892)^0\pi^+\pi^-\text{total})/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{83}/\Gamma_{39}$

This includes $\overline{K}^*(892)^0\rho^0$, *etc.* The next entry gives the specifically 3-body fraction. Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **0.30±0.06±0.03** | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |

### $\Gamma(\overline{K}^*(892)^0\pi^+\pi^-\text{3-body})/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{84}/\Gamma_{39}$

Unseen decay modes of the $\overline{K}^*(892)^0$ are included.

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **0.19 ±0.04 OUR FIT** | | | | |
| **0.18 ±0.04 OUR AVERAGE** | | | | |
| 0.165±0.03 ±0.045 | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |
| 0.210±0.027±0.06 | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |

### $\Gamma(K^-\pi^+f_0(980))/\Gamma_{total}$ $\Gamma_{97}/\Gamma$

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **<0.011** | 90 | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |

### $\Gamma(K^-\pi^+\pi^+\pi^-\text{nonresonant})/\Gamma(K^-\pi^+\pi^+\pi^-)$ $\Gamma_{47}/\Gamma_{39}$

| VALUE | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **0.233±0.032 OUR AVERAGE** | | | | |
| 0.23 ±0.02 ±0.03 | ANJOS | 92C | E691 | $\gamma$ Be 90–260 GeV |
| 0.242±0.025±0.06 | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |

### $\Gamma(\overline{K}^0\pi^+\pi^-\pi^0)/\Gamma_{total}$ $\Gamma_{48}/\Gamma$

| VALUE | EVTS | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **0.098±0.014 OUR FIT** | | Error includes scale factor of 1.1. | | | |
| **0.103±0.022±0.025** | 140 | COFFMAN | 92B | MRK3 | $e^+e^-$ 3.77 GeV |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| $0.134^{+0.032}_{-0.033}$ | | [40] BARLAG | 92C | ACCM | $\pi^-$ Cu 230 GeV |

[40] BARLAG 92C computes the branching fraction using topological normalization.