### $\Gamma(\pi^+\pi^-\pi^0\pi^0)/\Gamma_{total}$ — $\Gamma_{14}/\Gamma$

| VALUE (units $10^{-4}$) | CL% | DOCUMENT ID | | TECN | CHG | COMMENT |
|---|---|---|---|---|---|---|
| **<0.4** | 90 | AULCHENKO | 87C | ND | 0 | $e^+e^- \to \pi^+\pi^-\pi^0\pi^0$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | | |
| <2 | 90 | KURDADZE | 86 | OLYA | 0 | $e^+e^- \to \pi^+\pi^-\pi^0\pi^0$ |

### $\Gamma(\pi^+\pi^-\gamma)/\Gamma_{total}$ — $\Gamma_7/\Gamma$

| VALUE | CL% | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **0.0099±0.0016** | | [31] DOLINSKY | 91 | ND | $e^+e^- \to \pi^+\pi^-\gamma$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| 0.0111±0.0014 | | [32] VASSERMAN | 88 | ND | $e^+e^- \to \pi^+\pi^-\gamma$ |
| <0.005 | 90 | [33] VASSERMAN | 88 | ND | $e^+e^- \to \pi^+\pi^-\gamma$ |

[31] Bremsstrahlung from a decay pion and for photon energy above 50 MeV.
[32] Superseded by DOLINSKY 91.
[33] Structure radiation due to quark rearrangement in the decay.

### $\Gamma(\pi^0\gamma)/\Gamma_{total}$ — $\Gamma_8/\Gamma$

| VALUE (units $10^{-4}$) | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|
| **7.9±2.0** | DOLINSKY | 89 | ND | $e^+e^- \to \pi^0\gamma$ |

## $\rho(770)$ REFERENCES

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AGUILAR-... 91 ZPHY C50 405 Aguilar-Benitez, Allison, Batalor+ (LEBC-EHS Collab.)
DOLINSKY 91 PRPL 202 99 +Druzhinin, Dubrovin+ (NOVO)
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VASSERMAN 88B SJNP 48 480 +Golubev, Dolinsky+ (NOVO)
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## OTHER RELATED PAPERS

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XUONG 62 PR 128 1849 +Lynch (LRL)
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ERWIN 61 PRL 6 628 +March, Walker, West (WISC)

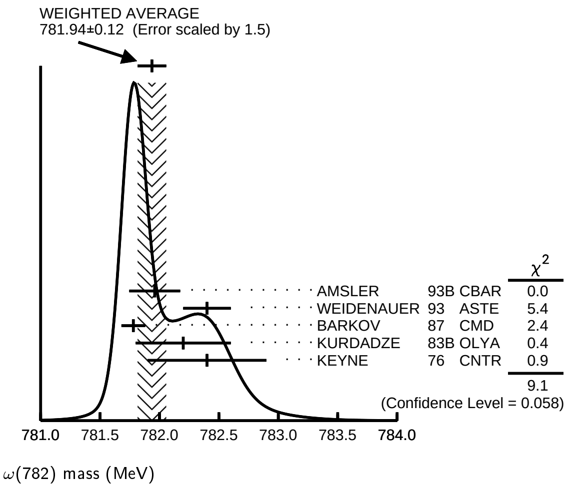
# $\omega(782)$

$I^G(J^{PC}) = 0^-(1^{--})$

## $\omega(782)$ MASS

| VALUE (MeV) | EVTS | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **781.94±0.12 OUR AVERAGE** | | Error includes scale factor of 1.5. See the ideogram below. | | | |
| 781.96±0.13±0.17 | 15k | AMSLER | 93B | CBAR | $0.0\bar{p}p \to \omega\pi^0\pi^0$ |
| 782.4 ±0.2 | 270k | WEIDENAUER | 93 | ASTE | $\bar{p}p \to 2\pi^+2\pi^-\pi^0$ |
| 781.78±0.10 | | BARKOV | 87 | CMD | $e^+e^- \to \pi^+\pi^-\pi^0$ |
| 782.2 ±0.4 | 1488 | KURDADZE | 83B | OLYA | $e^+e^- \to \pi^+\pi^-\pi^0$ |
| 782.4 ±0.5 | 7000 | [1] KEYNE | 76 | CNTR | $\pi^-p \to \omega n$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| 783.3 ±0.4 | | CORDIER | 80 | WIRE | $e^+e^- \to \pi^+\pi^-\pi^0$ |
| 782.5 ±0.8 | 33260 | ROOS | 80 | RVUE | 0.0–3.6 $\bar{p}p$ |
| 782.6 ±0.8 | 3000 | BENKHEIRI | 79 | OMEG | 9–12 $\pi^\pm p$ |
| 781.8 ±0.6 | 1430 | COOPER | 78B | HBC | 0.7–0.8 $\bar{p}p \to 5\pi$ |
| 782.7 ±0.9 | 535 | VANAPEL... | 78 | HBC | 7.2 $\bar{p}p \to \bar{p}p\omega$ |
| 783.5 ±0.8 | 2100 | GESSAROLI | 77 | HBC | 11 $\pi^-p \to \omega n$ |
| 782.5 ±0.8 | 418 | AGUILAR-... | 72B | HBC | 3.9,4.6 $K^-p$ |
| 783.4 ±1.0 | 248 | BIZZARRI | 71 | HBC | 0.0 $p\bar{p} \to K^+K^-\omega$ |
| 781.0 ±0.6 | 510 | BIZZARRI | 71 | HBC | 0.0 $p\bar{p} \to K_1K_1\omega$ |
| 783.7 ±1.0 | 3583 | [2] COYNE | 71 | HBC | 3.7 $\pi^+p \to p\pi^+\pi^+\pi^-\pi^0$ |
| 784.1 ±1.2 | 750 | ABRAMOVI... | 70 | HBC | 3.9 $\pi^-p$ |
| 783.2 ±1.6 | | [3] BIGGS | 70B | CNTR | <4.1 $\gamma C \to \pi^+\pi^- C$ |
| 782.4 ±0.5 | 2400 | BIZZARRI | 69 | HBC | 0.0 $\bar{p}p$ |

[1] Observed by threshold-crossing technique. Mass resolution = 4.8 MeV FWHM.
[2] From best-resolution sample of COYNE 71.
[3] From $\omega$-$\rho$ interference in the $\pi^+\pi^-$ mass spectrum assuming $\omega$ width 12.6 MeV.




## $\omega(782)$ WIDTH

| VALUE (MeV) | EVTS | DOCUMENT ID | | TECN | COMMENT |
|---|---|---|---|---|---|
| **8.43±0.10 OUR AVERAGE** | | | | | |
| 8.4 ±0.1 | | [4] AULCHENKO | 87 | ND | $e^+e^- \to \pi^+\pi^-\pi^0$ |
| 8.30±0.40 | | BARKOV | 87 | CMD | $e^+e^- \to \pi^+\pi^-\pi^0$ |
| 9.8 ±0.9 | 1488 | KURDADZE | 83B | OLYA | $e^+e \to \pi^+\pi^-\pi^0$ |
| 9.0 ±0.8 | | CORDIER | 80 | WIRE | $e^+e^- \to \pi^+\pi^-\pi^0$ |
| 9.1 ±0.8 | | BENAKSAS | 72B | OSPK | $e^+e^-$ |
| • • • We do not use the following data for averages, fits, limits, etc. • • • | | | | | |
| 12.0 ±2.0 | 1430 | COOPER | 78B | HBC | 0.7–0.8 $\bar{p}p \to 5\pi$ |
| 9.4 ±2.5 | 2100 | GESSAROLI | 77 | HBC | 11 $\pi^-p \to \omega n$ |
| 10.22±0.43 | 20000 | [5] KEYNE | 76 | CNTR | $\pi^-p \to \omega n$ |
| 13.3 ±2 | 418 | AGUILAR-... | 72B | HBC | 3.9,4.6 $K^-p$ |
| 10.5 ±1.5 | | BORENSTEIN | 72 | HBC | 2.18 $K^-p$ |
| 7.70±0.9 ±1.15 | 940 | BROWN | 72 | MMS | 2.5 $\pi^-p \to n$MM |
| 10.3 ±1.4 | 510 | BIZZARRI | 71 | HBC | 0.0 $p\bar{p} \to K_1K_1\omega$ |
| 12.8 ±3.0 | 248 | BIZZARRI | 71 | HBC | 0.0 $p\bar{p} \to K^+K^-\omega$ |
| 9.5 ±1.0 | 3583 | COYNE | 71 | HBC | 3.7 $\pi^+p \to p\pi^+\pi^+\pi^-\pi^0$ |

[4] Relativistic Breit-Wigner includes radiative corrections.
[5] Observed by threshold-crossing technique. Mass resolution = 4.8 MeV FWHM.