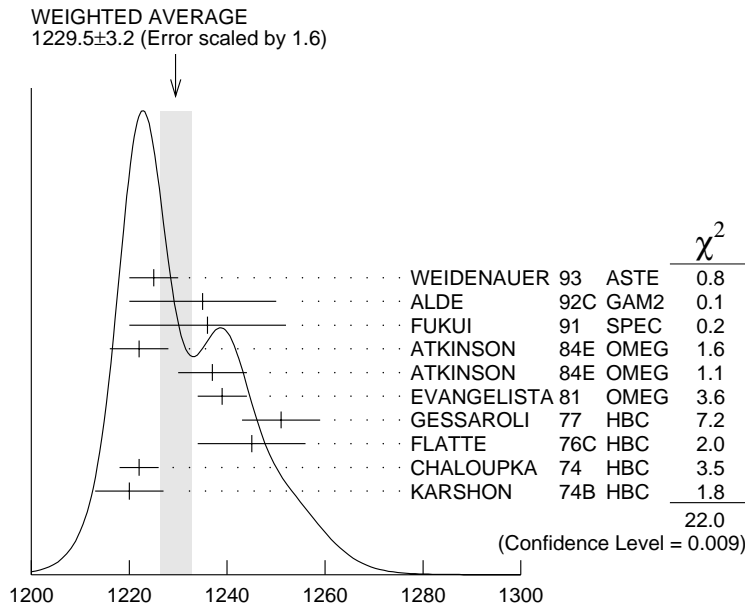


$b_1(1235)$

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

$b_1(1235)$ MASS

| <u>VALUE (MeV)</u> | <u>EVTS</u> | <u>DOCUMENT ID</u> | <u>TECN</u> | <u>CHG</u> | <u>COMMENT</u> |
|---|-------------|---|-------------|------------|---|
| 1229.5 ± 3.2 OUR AVERAGE | | Error includes scale factor of 1.6. See the ideogram below. | | | |
| 1225 ± 5 | | WEIDENAUER 93 | ASTE | | $\bar{p}p \rightarrow 2\pi^+ 2\pi^- \pi^0$ |
| 1235 ± 15 | | ALDE | 92C | GAM2 | 38,100 $\pi^- p \rightarrow \omega \pi^0 n$ |
| 1236 ± 16 | | FUKUI | 91 | SPEC | 8.95 $\pi^- p \rightarrow \omega \pi^0 n$ |
| 1222 ± 6 | | ATKINSON | 84E | OMEG ± | 25-55 $\gamma p \rightarrow \omega \pi X$ |
| 1237 ± 7 | | ATKINSON | 84E | OMEG 0 | 25-55 $\gamma p \rightarrow \omega \pi X$ |
| 1239 ± 5 | | EVANGELISTA 81 | OMEG | - | 12 $\pi^- p \rightarrow \omega \pi p$ |
| 1251 ± 8 | 450 | GESSAROLI 77 | HBC | - | 11 $\pi^- p \rightarrow \pi^- \omega p$ |
| 1245 ± 11 | 890 | FLATTE | 76C | HBC | - 4.2 $K^- p \rightarrow \pi^- \omega \Sigma^+$ |
| 1222 ± 4 | 1400 | CHALOUPIKA 74 | HBC | - | 3.9 $\pi^- p$ |
| 1220 ± 7 | 600 | KARSHON | 74B | HBC | + 4.9 $\pi^+ p$ |
| ● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ● | | | | | |
| 1190 ± 10 | | AUGUSTIN | 89 | DM2 | ± $e^+ e^- \rightarrow 5\pi$ |
| 1213 ± 5 | | ATKINSON | 84C | OMEG 0 | 20-70 γp |
| 1271 ± 11 | | COLLICK | 84 | SPEC | + 200 $\pi^+ Z \rightarrow Z \pi \omega$ |



$b_1(1235)$ mass (MeV)

$b_1(1235)$ WIDTH

| VALUE (MeV) | EVTS | DOCUMENT ID | TECN | CHG | COMMENT |
|---|-------------------------------------|----------------|------|-----|---|
| 142± 9 OUR AVERAGE | Error includes scale factor of 1.2. | | | | |
| 113±12 | | WEIDENAUER 93 | ASTE | | $\bar{p}p \rightarrow 2\pi^+ 2\pi^- \pi^0$ |
| 160±30 | | ALDE 92C | GAM2 | | 38,100 $\pi^- p \rightarrow \omega \pi^0 n$ |
| 151±31 | | FUKUI 91 | SPEC | | 8.95 $\pi^- p \rightarrow \omega \pi^0 n$ |
| 170±15 | | EVANGELISTA 81 | OMEG | - | 12 $\pi^- p \rightarrow \omega \pi p$ |
| 170±50 | 225 | BALTAY 78B | HBC | + | 15 $\pi^+ p \rightarrow p 4\pi$ |
| 155±32 | 450 | GESSAROLI 77 | HBC | - | 11 $\pi^- p \rightarrow \pi^- \omega p$ |
| 182±45 | 890 | FLATTE 76C | HBC | - | 4.2 $K^- p \rightarrow \pi^- \omega \Sigma^+$ |
| 135±20 | 1400 | CHALOUPKA 74 | HBC | - | 3.9 $\pi^- p$ |
| 156±22 | 600 | KARSHON 74B | HBC | + | 4.9 $\pi^+ p$ |
| ● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ● | | | | | |
| 210±19 | | AUGUSTIN 89 | DM2 | ± | $e^+ e^- \rightarrow 5\pi$ |
| 231±14 | | ATKINSON 84C | OMEG | 0 | 20-70 γp |
| 232±29 | | COLLICK 84 | SPEC | + | 200 $\pi^+ Z \rightarrow Z \pi \omega$ |

$b_1(1235)$ DECAY MODES

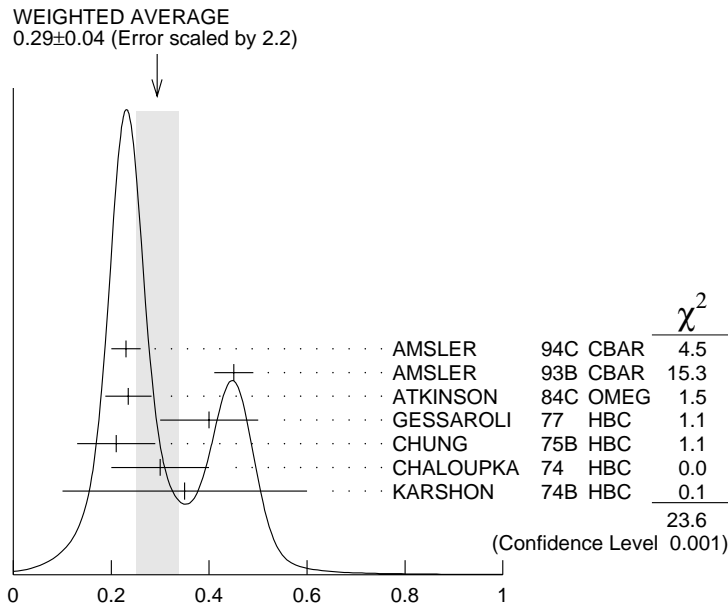
| Mode | Fraction (Γ_i/Γ) | Confidence level |
|--|--------------------------------|------------------|
| Γ_1 $\omega\pi$ [D/S amplitude ratio = 0.29 ± 0.04] | dominant | |
| Γ_2 $\pi^\pm\gamma$ | $(1.6 \pm 0.4) \times 10^{-3}$ | |
| Γ_3 $\eta\rho$ | seen | |
| Γ_4 $\pi^+\pi^+\pi^-\pi^0$ | < 50 % | 84% |
| Γ_5 $(K\bar{K})^\pm\pi^0$ | < 8 % | 90% |
| Γ_6 $K_S^0 K_L^0 \pi^\pm$ | < 6 % | 90% |
| Γ_7 $K_S^0 K_S^0 \pi^\pm$ | < 2 % | 90% |
| Γ_8 $\phi\pi$ | < 1.5 % | 84% |

$b_1(1235)$ PARTIAL WIDTHS

| $\Gamma(\pi^\pm\gamma)$ | | | | | | Γ_2 |
|-------------------------|-------------|------|------|---------|--------------------------------------|------------|
| VALUE (keV) | DOCUMENT ID | TECN | CHG | COMMENT | | |
| 230 ± 60 | COLLICK | 84 | SPEC | + | 200 $\pi^+ Z \rightarrow Z\pi\omega$ | |

$b_1(1235)$ D-wave/S-wave AMPLITUDE RATIO IN DECAY OF $b_1(1235) \rightarrow \omega\pi$

| VALUE | EVTS | DOCUMENT ID | TECN | CHG | COMMENT |
|----------------------|--------------------|---|------|------|---|
| 0.29 ± 0.04 | OUR AVERAGE | Error includes scale factor of 2.2. See the ideogram below. | | | |
| 0.23 ± 0.03 | | AMSLER | 94C | CBAR | 0.0 $\bar{p}p \rightarrow \omega\eta\pi^0$ |
| 0.45 ± 0.04 | | AMSLER | 93B | CBAR | 0.0 $\bar{p}p \rightarrow \omega\pi^0\pi^0$ |
| 0.235 ± 0.047 | | ATKINSON | 84C | OMEG | 20-70 γp |
| 0.4 $^{+0.1}_{-0.1}$ | | GESSAROLI | 77 | HBC | - 11 $\pi^- p \rightarrow \pi^- \omega p$ |
| 0.21 ± 0.08 | | CHUNG | 75B | HBC | + 7.1 $\pi^+ p$ |
| 0.3 ± 0.1 | | CHALOUPIKA | 74 | HBC | - 3.9-7.5 $\pi^- p$ |
| 0.35 ± 0.25 | 600 | KARSHON | 74B | HBC | + 4.9 $\pi^+ p$ |



$b_1(1235)$ D-wave/S-wave amplitude ratio in decay of $b_1(1235) \rightarrow \omega\pi$

$b_1(1235)$ BRANCHING RATIOS

| $\Gamma(\eta\rho)/\Gamma(\omega\pi)$ | | | | | | Γ_3/Γ_1 |
|--|-----|-------------|------|------|-----------------------|---------------------|
| VALUE | | DOCUMENT ID | TECN | CHG | COMMENT | |
| <0.10 | | ATKINSON | 84D | OMEG | 20-70 γp | |
| $\Gamma(\pi^+\pi^+\pi^-\pi^0)/\Gamma(\omega\pi)$ | | | | | | Γ_4/Γ_1 |
| VALUE | | DOCUMENT ID | TECN | CHG | COMMENT | |
| <0.5 | | ABOLINS | 63 | HBC | + 3.5 $\pi^+ p$ | |
| $\Gamma((K\bar{K})^\pm\pi^0)/\Gamma(\omega\pi)$ | | | | | | Γ_5/Γ_1 |
| VALUE | CL% | DOCUMENT ID | TECN | CHG | COMMENT | |
| <0.08 | 90 | BALTAY | 67 | HBC | \pm 0.0 $\bar{p} p$ | |
| $\Gamma(K_S^0 K_L^0 \pi^\pm)/\Gamma(\omega\pi)$ | | | | | | Γ_6/Γ_1 |
| VALUE | CL% | DOCUMENT ID | TECN | CHG | COMMENT | |
| <0.06 | 90 | BALTAY | 67 | HBC | \pm 0.0 $\bar{p} p$ | |
| $\Gamma(K_S^0 K_S^0 \pi^\pm)/\Gamma(\omega\pi)$ | | | | | | Γ_7/Γ_1 |
| VALUE | CL% | DOCUMENT ID | TECN | CHG | COMMENT | |
| <0.02 | 90 | BALTAY | 67 | HBC | \pm 0.0 $\bar{p} p$ | |

| $\Gamma(\phi\pi)/\Gamma(\omega\pi)$ | | | | | | Γ_8/Γ_1 |
|---|-----|-------------|------|------|---------|--|
| VALUE | CL% | DOCUMENT ID | TECN | CHG | COMMENT | |
| <0.004 | 95 | VIKTOROV | 96 | SPEC | 0 | $32.5 \pi^- p \rightarrow K^+ K^- \pi^0 n$ |
| ● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ● | | | | | | |
| <0.04 | 95 | BIZZARRI | 69 | HBC | ± | $0.0 \bar{p} p$ |
| <0.015 | | DAHL | 67 | HBC | | $1.6-4.2 \pi^- p$ |

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