$\phi(2170)$

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

See the review on "Spectroscopy of Light Meson Resonances."

$\phi(2170)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
2164 ± 5 OUR AVERAGE					
2164.7± 9.1± 3.1		[1] ABLIKIM	24AN	BES3	$e^+e^- \to K^0_S K^0_L \pi^0$
2178 ±20 ± 5		[2] ABLIKIM	23AX	BES3	$e^+e^- \to \phi\pi^+\pi^-$
2190 ±19 ±37		[3] ABLIKIM	22L	BES3	2.0–3.08 $e^+e^- \to K^+K^-\pi^0$
2163.5± 6.2± 3.0		[4] ABLIKIM	21T	BES3	$e^+e^- \to \phi\eta$
2177.5± 4.8±19.5		[5] ABLIKIM	20M	BES3	$e^+e^- \to \eta'\phi$
2126.5±16.8±12.4		[6] ABLIKIM	20S	BES3	$e^+e^- \to K^+K^-\pi^0\pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
2215.7± 8.3		[7] LICHARD	23	RVUE	$e^+e^- \to \Upsilon(nS) \to \phi\eta\gamma$
2169 ± 5 ± 6		[8] ZHU	23A	RVUE	$e^+e^- \to \eta\phi$
2273.7± 5.7±19.3		[9] ABLIKIM	21AP	BES3	$e^+e^- \to K^0_S K^0_L$
2135 ± 8 ± 9	95	ABLIKIM	19I	BES3	$e^+e^- \to \eta\phi f_0(980)$
2239.2± 7.1±11.3		[10] ABLIKIM	19L	BES3	$e^+e^- \to K^+K^-$
2200 ± 6 ± 5	471	ABLIKIM	15H	BES3	$J/\psi \to \eta\phi\pi^+\pi^-$
2180 ± 8 ± 8		[11,12] LEES	12F	BABR	10.6 $e^+e^- \to \phi\pi^+\pi^-\gamma$
2079 ±13 $^{+79}_{-28}$	4.8k	[13] SHEN	09	BELL	10.6 $e^+e^- \to K^+K^-\pi^+\pi^-\gamma$
2186 ±10 ± 6	52	ABLIKIM	08F	BES	$J/\psi \to \eta\phi f_0(980)$
2125 ±22 ±10	483	AUBERT	08S	BABR	10.6 $e^+e^- \to \phi\eta\gamma$
2192 ±14	116	[14] AUBERT	07AK	BABR	10.6 $e^+e^- \to K^+K^-\pi^+\pi^-\gamma$
2169 ±20	149	[14] AUBERT	07AK	BABR	10.6 $e^+e^- \to K^+K^-\pi^0\pi^0\gamma$
2175 ±10 ±15	201	[12,15] AUBERT,BE	06D	BABR	10.6 $e^+e^- \to K^+K^-\pi\pi\gamma$

[1] Seen in $e^+e^- \to K^*(892)^0 \overline{K}^0 \to K^0_S K^0_L \pi^0$ with a significance of 3.2σ.

[2] From a fit to the e^+e^- cross section between 2.00 and 3.08 GeV with a sum of Breit-Wigner amplitude and a non-resonant contribution.

[3] By a simultaneous fit of the $K^*_2(1430)^+K^-$ and $K^*(892)^+K^-$ intermediate channels in a partial-wave analysis, assuming the same structure, modelled with a coherent sum of a nonresonant component and a resonant component by a Breit-Wigner function.

[4] From a fit to the cross section below 3.5 GeV measured by BaBar and BESIII with a coherent sum of two modified Breit-Wigner amplitudes ($\phi(1680)$ and $\phi(2170)$) and a nonresonant term.

[5] From a fit using a coherent sum of a phase-space modified Breit-Wigner function and a phase-space term.

[6] By a simultaneous fit of the intermediate channels in a partial-wave analysis, assuming the same structure, modelled with a coherent sum of a nonresonant component and a resonant component by a Breit-Wigner function.

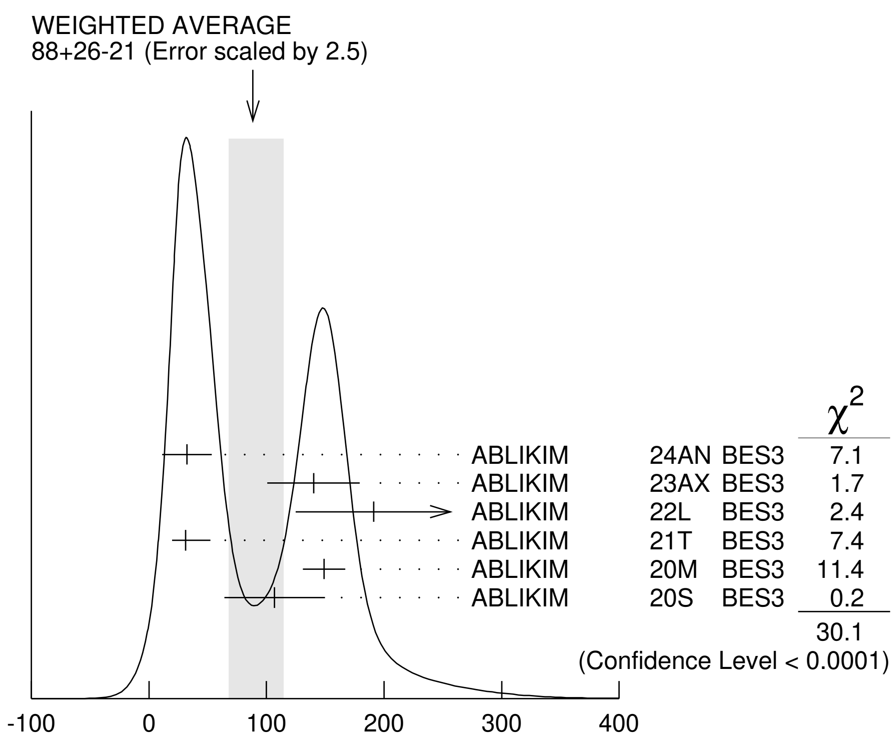
[7] From a VDM fit to ZHU 23 $\eta\phi\gamma$ data with two resonances, $\phi(1680)$, $\phi(2170)$, and a third resonance with mass 1850.7 ± 5.3 MeV and width 25 ± 35 MeV of 1.7 σ statistical evidence.
[8] From the analysis of the combined measurements of $\sigma(e^+e^- \to \eta\phi)$ from BaBar, Belle, BESIII, CMD3. The statistical significance for $\phi(2170)$ is 7.2 σ.
[9] From a fit to the cross section between 2.00 and 3.08 GeV with a sum of Breit-Wigner amplitude and a nonresonant contribution. The observed structure can be also due to $\rho(2150)$.
[10] The observed structure can be due to both the $\phi(2170)$ and $\rho(2150)$.
[11] Fit includes interference with the $\phi(1680)$.
[12] From the $\phi f_0(980)$ component.
[13] From a fit with two incoherent Breit-Wigners.
[14] From the $K^+K^- f_0(980)$ component.
[15] Superseded by LEES 12F.

ϕ(2170) WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
88 $^{+26}_{-21}$ OUR AVERAGE		Error includes scale factor of 2.5. See the ideogram below.			
$32.4 \pm 21.0 \pm 1.8$		[1] ABLIKIM	24AN	BES3	$e^+e^- \to K^0_S K^0_L \pi^0$
$140 \pm 36 \pm 16$		[2] ABLIKIM	23AX	BES3	$e^+e^- \to \phi\pi^+\pi^-$
$191 \pm 28 \pm 60$		[3] ABLIKIM	22L	BES3	2.0–3.08 $e^+e^- \to K^+K^-\pi^0$
$31.1^{+21.1}_{-11.6} \pm 1.1$		[4] ABLIKIM	21T	BES3	$e^+e^- \to \phi\eta$
$149.0 \pm 15.6 \pm 8.9$		[5] ABLIKIM	20M	BES3	$e^+e^- \to \eta'\phi$
$106.9 \pm 32.1 \pm 28.1$		[6] ABLIKIM	20S	BES3	$e^+e^- \to K^+K^-\pi^0\pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
35 ± 23		[7] LICHARD	23	RVUE	$e^+e^- \to \Upsilon(nS) \to \phi\eta\gamma$
$96^{+17}_{-14} \pm 9$		[8] ZHU	23A	RVUE	$e^+e^- \to \eta\phi$
$86 \pm 44 \pm 51$		[9] ABLIKIM	21AP	BES3	$e^+e^- \to K^0_S K^0_L$
$104 \pm 24 \pm 12$	95	ABLIKIM	19I	BES3	$e^+e^- \to \eta\phi f_0(980)$
$139.8 \pm 12.3 \pm 20.6$		[10] ABLIKIM	19L	BES3	$e^+e^- \to K^+K^-$
$104 \pm 15 \pm 15$	471	ABLIKIM	15H	BES3	$J/\psi \to \eta\phi\pi^+\pi^-$
$77 \pm 15 \pm 10$		[11,12] LEES	12F	BABR	10.6 $e^+e^- \to \phi\pi^+\pi^-\gamma$
$192 \pm 23 ^{+25}_{-61}$	4.8k	[13] SHEN	09	BELL	10.6 $e^+e^- \to K^+K^-\pi^+\pi^-\gamma$
$65 \pm 23 \pm 17$	52	ABLIKIM	08F	BES	$J/\psi \to \eta\phi f_0(980)$
$61 \pm 50 \pm 13$	483	AUBERT	08S	BABR	10.6 $e^+e^- \to \phi\eta\gamma$
71 ± 21	116	[14] AUBERT	07AK	BABR	10.6 $e^+e^- \to K^+K^-\pi^+\pi^-\gamma$
102 ± 27	149	[14] AUBERT	07AK	BABR	10.6 $e^+e^- \to K^+K^-\pi^0\pi^0\gamma$
$58 \pm 16 \pm 20$	201	[12,15] AUBERT,BE	06D	BABR	10.6 $e^+e^- \to K^+K^-\pi\pi\gamma$

[1] Seen in $e^+e^- \to K^*(892)^0\overline{K}^0 \to K^0_S K^0_L \pi^0$ with a significance of 3.2σ.
[2] From a fit to the e^+e^- cross section between 2.00 and 3.08 GeV with a sum of Breit-Wigner amplitude and a non-resonant contribution.

[3] By a simultaneous fit of the $K_2^*(1430)^+ K^-$ and $K^*(892)^+ K^-$ intermediate channels in a partial-wave analysis, assuming the same structure, modelled with a coherent sum of a nonresonant component and a resonant component by a Breit-Wigner function.
[4] From a fit to the cross section below 3.5 GeV measured by BaBar and BESIII with a coherent sum of two modified Breit-Wigner amplitudes ($\phi(1680)$ and $\phi(2170)$) and a nonresonant term.
[5] From a fit using a coherent sum of a phase-space modified Breit-Wigner function and a phase-space term.
[6] By a simultaneous fit of the intermediate channels in a partial-wave analysis, assuming the same structure, modelled with a coherent sum of a nonresonant component and a resonant component by a Breit-Wigner function.
[7] From a VDM fit to ZHU 23 $\eta\phi\gamma$ data with two resonances, $\phi(1680)$, $\phi(2170)$, and a third resonance with mass 1850.7 ± 5.3 MeV and width 25 ± 35 MeV of 1.7 σ statistical evidence.
[8] From the analysis of the combined measurements of $\sigma(e^+ e^- \to \eta\phi)$ from BaBar, Belle, BESIII, CMD3. The statistical significance for $\phi(2170)$ is 7.2 σ.
[9] From a fit to the cross section between 2.00 and 3.08 GeV with a sum of Breit-Wigner amplitude and a nonresonant contribution. The observed structure can be also due to $\rho(2150)$.
[10] The observed structure can be due to both the $\phi(2170)$ and $\rho(2150)$.
[11] Fit includes interference with the $\phi(1680)$.
[12] From the $\phi f_0(980)$ component.
[13] From a fit with two incoherent Breit-Wigners.
[14] From the $K^+ K^- f_0(980)$ component.
[15] Superseded by LEES 12F.



$\phi(2170)$ WIDTH (MeV)

$\phi(2170)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	e^+e^-	seen
Γ_2	$\phi\eta$	seen
Γ_3	$\phi\eta'$	seen
Γ_4	$\phi\pi\pi$	seen
Γ_5	$\phi f_0(980)$	seen
Γ_6	$K^0_S K^0_L$	
Γ_7	$K^+K^-\pi^+\pi^-$	
Γ_8	$K^+K^- f_0(980) \to K^+K^-\pi^+\pi^-$	seen
Γ_9	$K^+K^-\pi^0\pi^0$	
Γ_{10}	$K^+K^- f_0(980) \to K^+K^-\pi^0\pi^0$	seen
Γ_{11}	$K^{*0}K^\pm\pi^\mp$	not seen
Γ_{12}	$K^*(892)^0\overline{K}^*(892)^0$	not seen
Γ_{13}	$K^*(892)^+K^*(892)^-$	
Γ_{14}	$K^*(892)^+K^- +$ c.c.	
Γ_{15}	$K^*(892)^0\overline{K}^0$	
Γ_{16}	$K(1460)^+K^- +$ c.c.	
Γ_{17}	$K_1(1270)^+K^- +$ c.c.	
Γ_{18}	$K_1(1400)^+K^- +$ c.c.	
Γ_{19}	$K^*_2(1430)^+K^- +$ c.c.	

$\phi(2170)$ $\Gamma(i)\Gamma(e^+e^-)/\Gamma(\text{total})$

$\Gamma(\phi\eta) \times \Gamma(e^+e^-)/\Gamma_{\text{total}}$ — $\Gamma_2\Gamma_1/\Gamma$

VALUE (eV)	CL%	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •						
0.17	90		[1] ZHU	23	BELL	$e^+e^- \to \Upsilon(\text{nS}) \to \phi\eta\gamma$
$0.36^{+0.05}_{-0.03}\pm0.07$ to $41\pm2\pm6$			[2] ZHU	23A	RVUE	$e^+e^- \to \eta\phi$
$0.24^{+0.12}_{-0.07}$			[3] ABLIKIM	21T	BES3	$e^+e^- \to \phi\eta$
$1.7\ \pm0.7\ \pm1.3$		483	AUBERT	08S	BABR	10.6 $e^+e^- \to \phi\eta\gamma$

[1] From a solution of the fit using a vector meson dominance model with contributions from $\phi(1680)$, $\phi(2170)$ and non resonant contribution with mass and width of $\phi(2170)$ fixed at 2163.5 MeV and 31.1 MeV respectively. Four solutions are found with equal fit quality giving 0.17 eV (solution I and II) and 18.6 eV (III and IV) at 90% CL.

[2] From the analysis of the combined measurements of $\sigma(e^+e^- \to \eta\phi)$ from BaBar, Belle, BESIII, CMD3. The statistical significance for $\phi(2170)$ is 7.2 σ. Four solutions are found, with equal fit quality: $(0.56^{+0.03}_{-0.02} \pm 0.07)$ eV, $(0.36^{+0.05}_{-0.03} \pm 0.07)$ eV, $(38 \pm 1 \pm 5)$ eV, $(41 \pm 2 \pm 6)$ eV.

[3] From a solution of the fit to the cross section below 3.5 GeV measured by BaBar and BESIII with a coherent sum of two modified Breit-Wigner amplitudes ($\phi(1680)$ and $\phi(2170)$) and a nonresonant term. The other solution gives $10.11^{+3.87}_{-3.13}$ eV.

$\Gamma(\phi\eta') \times \Gamma(e^+e^-)/\Gamma_{total}$ — $\Gamma_3\Gamma_1/\Gamma$

VALUE (eV)	DOCUMENT ID		TECN	COMMENT
7.1±0.7±0.7	[1] ABLIKIM	20M	BES3	$e^+e^- \rightarrow \eta'\phi$

[1] From a fit using a coherent sum of a phase-space modified Breit-Wigner function and a phase-space term.

$\Gamma(\phi f_0(980)) \times \Gamma(e^+e^-)/\Gamma_{total}$ — $\Gamma_5\Gamma_1/\Gamma$

VALUE (eV)	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
2.3±0.3±0.3		[1,2] LEES	12F	BABR	10.6 $e^+e^- \rightarrow \phi\pi^+\pi^-\gamma$
2.5±0.8±0.4	201	[2,3] AUBERT,BE	06D	BABR	10.6 $e^+e^- \rightarrow K^+K^-\pi\pi\gamma$

[1] From a fit with constructive interference with the $\phi(1680)$. In a fit with destructive interference, the value is larger by a factor of 12.
[2] For $f_0(980) \rightarrow \pi\pi$.
[3] Superseded by LEES 12F.

$\Gamma(K^0_S K^0_L) \times \Gamma(e^+e^-)/\Gamma_{total}$ — $\Gamma_6\Gamma_1/\Gamma$

VALUE (eV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.9±0.6±0.7	[1] ABLIKIM	21AP	BES3	$e^+e^- \rightarrow K^0_S K^0_L$

[1] From a fit to the cross section between 2.00 and 3.08 GeV with a sum of Breit-Wigner amplitude and a nonresonant contribution. The observed structure can be also due to $\rho(2150)$.

$\Gamma(K^*(892)^+ K^*(892)^-) \times \Gamma(e^+e^-)/\Gamma_{total}$ — $\Gamma_{13}\Gamma_1/\Gamma$

VALUE (eV)	CL%	DOCUMENT ID		TECN	COMMENT
<1.9	90	[1] ABLIKIM	20S	BES3	$e^+e^- \rightarrow K^+K^-\pi^0\pi^0$

[1] By a simultaneous fit of the intermediate channels in a partial-wave analysis, assuming the same structure, modelled with a coherent sum of a nonresonant component and a resonant component by a Breit-Wigner function.

$\Gamma(K^*(892)^+ K^- + c.c.) \times \Gamma(e^+e^-)/\Gamma_{total}$ — $\Gamma_{14}\Gamma_1/\Gamma$

VALUE (eV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1.0±0.3	[1] ABLIKIM	22L	BES3	2.0–3.08 $e^+e^- \rightarrow K^+K^-\pi^0$

[1] From a solution of a simultaneous fit of the $K^*_2(1430)^+ K^-$ and $K^*(892)^+ K^-$ intermediate channels in a partial-wave analysis, assuming the same structure, modelled with a coherent sum of a nonresonant component and a resonant component by a Breit-Wigner function. The other solution gives 7.1 ± 0.9 eV. Significance 3.7 σ.

$\Gamma(K^*(892)^0 \overline{K}^0) \times \Gamma(e^+e^-)/\Gamma_{total}$ — $\Gamma_{15}\Gamma_1/\Gamma$

VALUE (eV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1.0±0.2±0.1	[1] ABLIKIM	24AN	BES3	$e^+e^- \rightarrow K^0_S K^0_L \pi^0$
73.6±4.4±2.0	[2] ABLIKIM	24AN	BES3	$e^+e^- \rightarrow K^0_S K^0_L \pi^0$

[1] Solution 1 of 2. Seen in $e^+e^- \rightarrow K^*(892)^0 \overline{K}^0 \rightarrow K^0_S K^0_L \pi^0$ with a significance of 3.2σ.
[2] Solution 2 of 2. Seen in $e^+e^- \rightarrow K^*(892)^0 \overline{K}^0 \rightarrow K^0_S K^0_L \pi^0$ with a significance of 3.2σ.

$\Gamma(K(1460)^+ K^- + c.c.) \times \Gamma(e^+ e^-)/\Gamma_{total}$ $\Gamma_{16}\Gamma_1/\Gamma$

VALUE (eV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
3.0 ± 3.8	[1] ABLIKIM	20S	BES3	$e^+ e^- \to K^+ K^- \pi^0 \pi^0$

[1] By a simultaneous fit of the intermediate channels in a partial-wave analysis, assuming the same structure, modelled with a coherent sum of a nonresonant component and a resonant component by a Breit-Wigner function.

$\Gamma(K_1(1270)^+ K^- + c.c.) \times \Gamma(e^+ e^-)/\Gamma_{total}$ $\Gamma_{17}\Gamma_1/\Gamma$

VALUE (eV)	CL%	DOCUMENT ID		TECN	COMMENT
<12.5	90	[1] ABLIKIM	20S	BES3	$e^+ e^- \to K^+ K^- \pi^0 \pi^0$

[1] By a simultaneous fit of the intermediate channels in a partial-wave analysis, assuming the same structure, modelled with a coherent sum of a nonresonant component and a resonant component by a Breit-Wigner function. A second solution of the fit with equal fit quality gives an upper limit value of 297.6 eV.

$\Gamma(K_1(1400)^+ K^- + c.c.) \times \Gamma(e^+ e^-)/\Gamma_{total}$ $\Gamma_{18}\Gamma_1/\Gamma$

VALUE (eV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
4.7 ± 3.3	[1] ABLIKIM	20S	BES3	$e^+ e^- \to K^+ K^- \pi^0 \pi^0$

[1] By a simultaneous fit of the intermediate channels in a partial-wave analysis, assuming the same structure, modelled with a coherent sum of a nonresonant component and a resonant component by a Breit-Wigner function. A second solution of the fit with equal fit quality gives a value of 98.8 ± 7.8 eV.

$\Gamma(K_2^*(1430)^+ K^- + c.c.) \times \Gamma(e^+ e^-)/\Gamma_{total}$ $\Gamma_{19}\Gamma_1/\Gamma$

VALUE (eV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
12.6 ± 2.4	[1] ABLIKIM	22L	BES3	2.0–3.08 $e^+ e^- \to K^+ K^- \pi^0$

[1] From a solution of a simultaneous fit of the $K_2^*(1430)^+ K^-$ and $K^*(892)^+ K^-$ intermediate channels in a partial-wave analysis, assuming the same structure, modelled with a coherent sum of a nonresonant component and a resonant component by a Breit-Wigner function. The other solution gives 161.1 ± 20.6 eV.

$\phi(2170)$ $\Gamma(i)\Gamma(e^+ e^-)/\Gamma^2(\text{total})$

$\Gamma(\phi\pi\pi)/\Gamma_{total} \times \Gamma(e^+ e^-)/\Gamma_{total}$ $\Gamma_4/\Gamma \times \Gamma_1/\Gamma$

VALUE (units 10^{-7})	EVTS	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
$1.65\pm0.15\pm0.18$	4.8k	[1] SHEN	09	BELL	10.6 $e^+ e^- \to K^+ K^- \pi^+ \pi^- \gamma$

[1] Multiplied by 3/2 to take into account the $\phi\pi^0\pi^0$ mode. Using B($\phi \to K^+ K^-$) = (49.2 ± 0.6)%.

$\phi(2170)$ BRANCHING RATIOS

$\Gamma(\phi\pi\pi)/\Gamma_{total}$ — Γ_4/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
seen	[1] ABLIKIM	23AX	BES3	$e^+e^- \to \phi\pi^+\pi^-$

[1] From a fit to the e^+e^- cross section between 2.00 and 3.08 GeV with a sum of Breit-Wigner amplitude and a non-resonant contribution.

$\Gamma(K^+K^- f_0(980) \to K^+K^-\pi^+\pi^-)/\Gamma_{total}$ — Γ_8/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
seen	AUBERT	07AK	BABR	10.6 $e^+e^- \to K^+K^-\pi^+\pi^-\gamma$

$\Gamma(K^+K^- f_0(980) \to K^+K^-\pi^0\pi^0)/\Gamma_{total}$ — Γ_{10}/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
seen	AUBERT	07AK	BABR	10.6 $e^+e^- \to K^+K^-\pi^0\pi^0\gamma$

$\Gamma(K^{*0}K^\pm\pi^\mp)/\Gamma_{total}$ — Γ_{11}/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
not seen	AUBERT	07AK	BABR	10.6 GeV e^+e^-

$\Gamma(K^*(892)^0\overline{K}^*(892)^0)/\Gamma_{total}$ — Γ_{12}/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
not seen	ABLIKIM	10C	BES2	$J/\psi \to \eta K^+\pi^-K^-\pi^+$

$\phi(2170)$ REFERENCES

ABLIKIM	24AN	JHEP 2401 180	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	23AX	PR D108 032011	M. Ablikim *et al.*	(BESIII Collab.)
LICHARD	23	PR D108 092005	P. Lichard	(OPAV, CTUP)
ZHU	23	PR D107 012006	W. Zhu *et al.*	(BELLE Collab.)
ZHU	23A	CP C47 113003	W. Zhu, X. Wang	(RVUE)
ABLIKIM	22L	JHEP 2207 045	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	21AP	PR D104 092014	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	21T	PR D104 032007	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	20M	PR D102 012008	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	20S	PRL 124 112001	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	19I	PR D99 012014	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	19L	PR D99 032001	M. Ablikim *et al.*	(BESIII Collab.)
ABLIKIM	15H	PR D91 052017	M. Ablikim *et al.*	(BESIII Collab.)
LEES	12F	PR D86 012008	J.P. Lees *et al.*	(BABAR Collab.)
ABLIKIM	10C	PL B685 27	M. Ablikim *et al.*	(BES II Collab.)
SHEN	09	PR D80 031101	C.P. Shen *et al.*	(BELLE Collab.)
ABLIKIM	08F	PRL 100 102003	M. Ablikim *et al.*	(BES Collab.)
AUBERT	08S	PR D77 092002	B. Aubert *et al.*	(BABAR Collab.)
AUBERT	07AK	PR D76 012008	B. Aubert *et al.*	(BABAR Collab.)
AUBERT,BE	06D	PR D74 091103	B. Aubert *et al.*	(BABAR Collab.)