NODE=M103

$\phi(2170)$

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

OMITTED FROM SUMMARY TABLE

Observed by AUBERT,BE 06D in the initial-state radiation process $e^+e^- \to \phi f_0(980)\gamma$.

NODE=M103

$\phi(2170)$ MASS

NODE=M103205

NODE=M103M

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
2175±15 OUR AVERAGE		Error includes scale factor of 1.6. See the ideogram below.			
2186±10± 6	52	ABLIKIM	08F	BES	$J/\psi \to \eta\phi f_0(980)$
2125±22±10	483	AUBERT	08S	BABR	10.6 $e^+e^- \to \phi\eta\gamma$
2175±10±15	201	[1] AUBERT,BE	06D	BABR	10.6 $e^+e^- \to K^+K^-\pi\pi\gamma$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
2192±14	116 ± 95	[2] AUBERT	07AK	BABR	10.6 $e^+e^- \to K^+K^-\pi^+\pi^-\gamma$
2169±20	149 ± 36	[2] AUBERT	07AK	BABR	10.6 $e^+e^- \to K^+K^-\pi^0\pi^0\gamma$

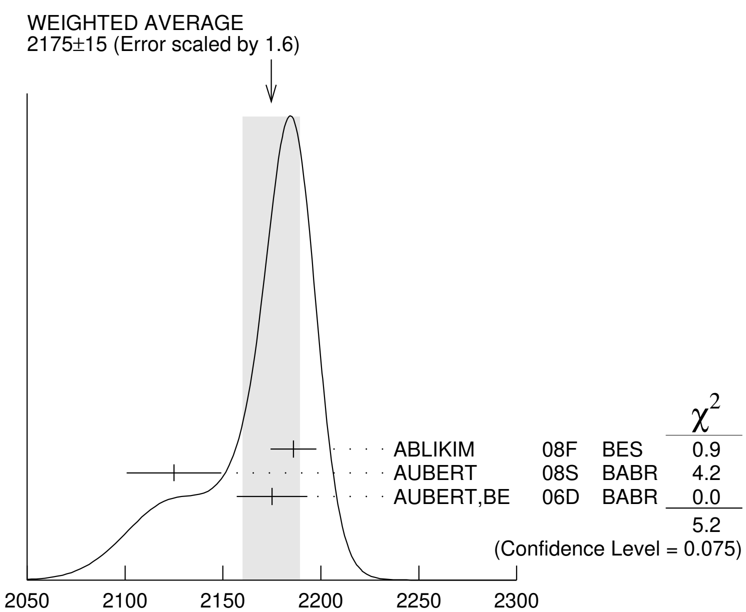
OCCUR=2

[1] From the $\phi f_0(980)$ component.

NODE=M103M;LINKAGE=AB

[2] From the $K^+K^- f_0(980)$ component.

NODE=M103M;LINKAGE=AU



$\phi(2170)$ MASS (MeV)

$\phi(2170)$ WIDTH

NODE=M103210

NODE=M103W

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
61±18 OUR AVERAGE					
65±23±17	52	ABLIKIM	08F	BES	$J/\psi \to \eta\phi f_0(980)$
61±50±13	483	AUBERT	08S	BABR	10.6 $e^+e^- \to \phi\eta\gamma$
58±16±20	201	[3] AUBERT,BE	06D	BABR	10.6 $e^+e^- \to K^+K^-\pi\pi\gamma$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
71±21	116 ± 95	[4] AUBERT	07AK	BABR	10.6 $e^+e^- \to K^+K^-\pi^+\pi^-\gamma$
102±27	149 ± 36	[4] AUBERT	07AK	BABR	10.6 $e^+e^- \to K^+K^-\pi^0\pi^0\gamma$

OCCUR=2

[3] From the $\phi f_0(980)$ component.

NODE=M103W;LINKAGE=AB

[4] From the $K^+K^- f_0(980)$ component.

NODE=M103W;LINKAGE=AU

$\phi(2170)$ DECAY MODES

NODE=M103215;NODE=M103

	Mode	Fraction (Γ_i/Γ)	
Γ_1	e^+e^-	seen	DESIG=1;OUR EVAL;→ NOT CHECKED ←
Γ_2	$\phi\eta$		DESIG=5
Γ_3	$\phi f_0(980)$	seen	DESIG=2;OUR EVAL;→ NOT CHECKED ←
Γ_4	$K^+K^-\pi^+\pi^-$		DESIG=3
Γ_5	$K^+K^- f_0(980) \rightarrow K^+K^-\pi^+\pi^-$	seen	DESIG=6
Γ_6	$K^+K^-\pi^0\pi^0$		DESIG=4
Γ_7	$K^+K^- f_0(980) \rightarrow K^+K^-\pi^0\pi^0$	seen	DESIG=7
Γ_8	$K^{*0}K^\pm\pi^\mp$	not seen	DESIG=8

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

NODE=M103230

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

NODE=M103G2
NODE=M103G2

VALUE (eV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1.7±0.7±1.3	483	AUBERT	08S	BABR	10.6 $e^+e^- \rightarrow \phi\eta\gamma$

$\Gamma(\phi f_0(980)) \times \Gamma(e^+e^-)/\Gamma_{\text{total}}$ $\Gamma_3\Gamma_1/\Gamma$

NODE=M103G1
NODE=M103G1

VALUE (eV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
2.5±0.8±0.4	201	[5] AUBERT,BE	06D	BABR	10.6 $e^+e^- \rightarrow K^+K^-\pi\pi\gamma$

[5] From the $\phi f_0(980)$ component.

NODE=M103G1;LINKAGE=AB

$\phi(2170)$ BRANCHING RATIOS

NODE=M103225

$\Gamma(K^+K^- f_0(980) \rightarrow K^+K^-\pi^+\pi^-)/\Gamma_{\text{total}}$ Γ_5/Γ

NODE=M103R01
NODE=M103R01

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

$\Gamma(K^+K^- f_0(980) \rightarrow K^+K^-\pi^0\pi^0)/\Gamma_{\text{total}}$ Γ_7/Γ

NODE=M103R02
NODE=M103R02

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

$\Gamma(K^{*0}K^\pm\pi^\mp)/\Gamma_{\text{total}}$ Γ_8/Γ

NODE=M103R03
NODE=M103R03

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

$\phi(2170)$ REFERENCES

NODE=M103

ABLIKIM	08F	PRL 100 102003	M. Ablikim *et al.*	(BES Collab.)	REFID=52154
AUBERT	08S	PR D77 092002	B. Aubert *et al.*	(BABAR Collab.)	REFID=52242
AUBERT	07AK	PR D76 012008	B. Aubert *et al.*	(BABAR Collab.)	REFID=51908
AUBERT,BE	06D	PR D74 091103R	B. Aubert *et al.*	(BABAR Collab.)	REFID=51511

OTHER RELATED PAPERS

DING	07	PL B650 390	G.-J. Ding, M.-L. Yan	REFID=51709
DING	07A	PL B657 49	G.-J. Ding, M.-L. Yan	REFID=52060