

$f_0(1770)$

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

OMITTED FROM SUMMARY TABLE

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

NODE=M264

NODE=M264

 $f_0(1770)$ Breit-Wigner MASS

NODE=M264M

NODE=M264M

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
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1784⁺¹⁶₋₁₄ OUR AVERAGE Error includes scale factor of 1.1.

1814±31	7.2k	¹ KHOLODENK..21	VES	29 $\pi^- p \rightarrow n\omega\phi$
1795±7 ⁺²³ ₋₂₀		ABLIKIM	13J	BES3 $J/\psi \rightarrow \gamma\omega\phi$
1760±15 ⁺¹⁵ ₋₁₀		ABLIKIM	05Q	BES2 $\psi(2S) \rightarrow \gamma\pi^+\pi^-K^+K^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
1765±15		SARANTSEV	21	RVUE $J/\psi \rightarrow \gamma(\pi\pi, K\bar{K}, \eta\eta, \omega\phi)$
1814±18	2,3	AAIJ	14BR	LHCB $\bar{B}_s^0 \rightarrow J/\psi\pi^+\pi^-$
1812 ⁺¹⁹ ₋₂₆ ±18		⁴ ABLIKIM	06J	BES2 $J/\psi \rightarrow \gamma\omega\phi$
1790 ⁺⁴⁰ ₋₃₀		ABLIKIM	05	BES2 $J/\psi \rightarrow \phi\pi^+\pi^-$

¹ From partial wave analysis of $\omega\phi$ invariant mass including 0^{++} , 2^{++} , and 0^{-+} resonances.² Second solution: 1800 ± 22 MeV. The fit favors $f_0(1770)$ to $f_0(1710)$.³ Statistical error only.⁴ Not seen by LIU 09 in $B^\pm \rightarrow K^\pm\omega\phi$.

NODE=M264M;LINKAGE=M

NODE=M264M;LINKAGE=A

NODE=M264M;LINKAGE=B

NODE=M264M;LINKAGE=L

 $f_0(1770)$ Breit-Wigner WIDTH

NODE=M264W

NODE=M264W

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
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161±21 OUR AVERAGE Error includes scale factor of 1.4. See the ideogram below.

182±19	7.2k	¹ KHOLODENK..21	VES	29 $\pi^- p \rightarrow n\omega\phi$
95±10 ⁺⁷⁸ ₋₈₂		ABLIKIM	13J	BES3 $J/\psi \rightarrow \gamma\omega\phi$
125±25 ⁺¹⁰ ₋₁₅		ABLIKIM	05Q	BES2 $\psi(2S) \rightarrow \gamma\pi^+\pi^-K^+K^-$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
180±20		SARANTSEV	21	RVUE $J/\psi \rightarrow \gamma(\pi\pi, K\bar{K}, \eta\eta, \omega\phi)$
328±34	2,3	AAIJ	14BR	LHCB $\bar{B}_s^0 \rightarrow J/\psi\pi^+\pi^-$
105±20±28		⁴ ABLIKIM	06J	BES2 $J/\psi \rightarrow \gamma\omega\phi$
270 ⁺⁶⁰ ₋₃₀		⁵ ABLIKIM	05	BES2 $J/\psi \rightarrow \phi\pi^+\pi^-$

¹ From partial wave analysis of $\omega\phi$ invariant mass including 0^{++} , 2^{++} , and 0^{-+} resonances.² Second solution: 263 ± 30 MeV. The fit favors $f_0(1770)$ to $f_0(1710)$.³ Statistical error only.⁴ Not seen by LIU 09 in $B^\pm \rightarrow K^\pm\omega\phi$.⁵ $f_0(1710)$ width fixed to PDG value.

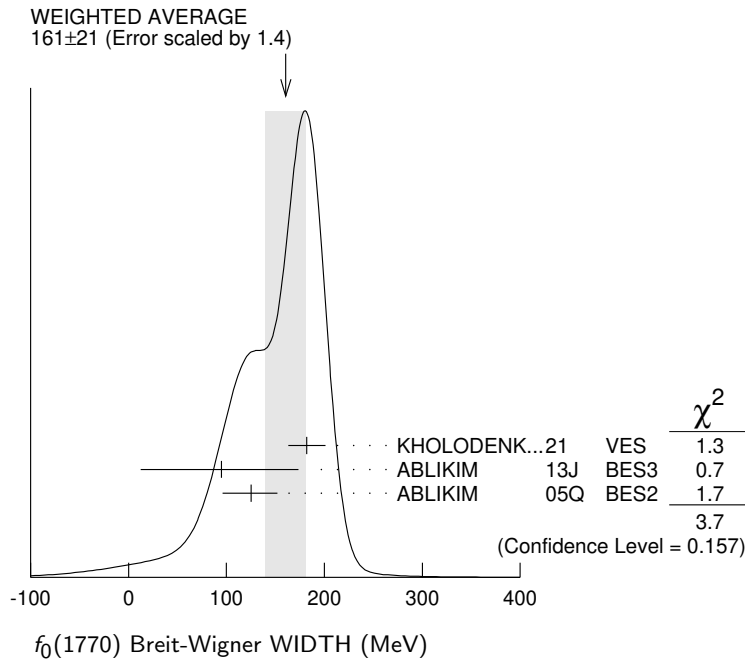
NODE=M264W;LINKAGE=J

NODE=M264W;LINKAGE=A

NODE=M264W;LINKAGE=B

NODE=M264W;LINKAGE=I

NODE=M264W;LINKAGE=AB



$f_0(1770)$ DECAY MODES

NODE=M264215;NODE=M264

Mode	Fraction (Γ_i/Γ)
Γ_1 $\pi\pi$	seen
Γ_2 $K\bar{K}$	seen
Γ_3 $\eta\eta$	seen
Γ_4 $\omega\phi$	seen

DESIG=1

DESIG=2

DESIG=3

DESIG=4

$\Gamma(\pi\pi)/\Gamma_{\text{total}}$	VALUE	DOCUMENT ID	TECN	COMMENT	Γ_1/Γ
seen		SARANTSEV	21	RVUE	$J/\psi \rightarrow \gamma(\pi\pi, K\bar{K}, \eta\eta, \omega\phi)$
seen		AAIJ	14BR	LHCB	$\bar{B}_s^0 \rightarrow J/\psi\pi^+\pi^-$
seen		ABLIKIM	05	BES2	$J/\psi \rightarrow \phi\pi^+\pi^-$

NODE=M264R01

NODE=M264R01

$\Gamma(K\bar{K})/\Gamma_{\text{total}}$	VALUE	DOCUMENT ID	TECN	COMMENT	Γ_2/Γ
seen		SARANTSEV	21	RVUE	$J/\psi \rightarrow \gamma(\pi\pi, K\bar{K}, \eta\eta, \omega\phi)$

NODE=M264R02

NODE=M264R02

$\Gamma(\eta\eta)/\Gamma_{\text{total}}$	VALUE	DOCUMENT ID	TECN	COMMENT	Γ_3/Γ
seen		SARANTSEV	21	RVUE	$J/\psi \rightarrow \gamma(\pi\pi, K\bar{K}, \eta\eta, \omega\phi)$

NODE=M264R03

NODE=M264R03

$\Gamma(\omega\phi)/\Gamma_{\text{total}}$	VALUE	DOCUMENT ID	TECN	COMMENT	Γ_4/Γ
seen	7.2k	KHOLODENK..21	VES	29	$\pi^-p \rightarrow n\omega\phi$
seen		SARANTSEV	21	RVUE	$J/\psi \rightarrow \gamma(\pi\pi, K\bar{K}, \eta\eta, \omega\phi)$

NODE=M264R04

NODE=M264R04

$f_0(1770)$ REFERENCES

NODE=M264

KHOLODENK...21	PAN 83 1602	M.S. Kholodenko	(VES Collab.)	REFID=61410
SARANTSEV 21	PL B816 136227	A.V. Sarantsev <i>et al.</i>	(BONN, PNPI)	REFID=61091
AAIJ 14BR	PR D89 092006	R. Aaij <i>et al.</i>	(LHCb Collab.)	REFID=56035
ABLIKIM 13J	PR D87 032008	M. Ablikim <i>et al.</i>	(BESIII Collab.)	REFID=54955
LIU 09	PR D79 071102	C. Liu <i>et al.</i>	(BELLE Collab.)	REFID=52752
ABLIKIM 06J	PRL 96 162002	M. Ablikim <i>et al.</i>	(BES Collab.)	REFID=51127
ABLIKIM 05	PL B607 243	M. Ablikim <i>et al.</i>	(BES Collab.)	REFID=50450
ABLIKIM 05Q	PR D72 092002	M. Ablikim <i>et al.</i>	(BES Collab.)	REFID=50958