

$f_0(2100)$

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

OMITTED FROM SUMMARY TABLE

Needs confirmation.

 $f_0(2100)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
2095^{+17}_{-19} OUR AVERAGE				
$2116 \pm 27 \pm 17$		LEES	21A BABR	$\gamma\gamma \rightarrow \eta_c(1S) \rightarrow \eta' \pi^+ \pi^-$
$2081 \pm 13^{+24}_{-36}$	5.5k	¹ ABLIKIM	13N BES3	$e^+ e^- \rightarrow J/\psi \rightarrow \gamma \eta \eta$
2090 ± 30		BAI	00A BES	$J/\psi \rightarrow \gamma(\pi^+ \pi^- \pi^+ \pi^-)$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
2075 ± 20		SARANTSEV	21 RVUE	$J/\psi(1S) \rightarrow \gamma(\pi\pi, K\bar{K}, \eta\eta, \omega\phi)$
$2090 \pm 10 \pm 6$	529	^{2,3} DOBBS	15	$J/\psi \rightarrow \gamma \pi^+ \pi^-$
$2099 \pm 17 \pm 8$	283	^{2,3} DOBBS	15	$\psi(2S) \rightarrow \gamma \pi^+ \pi^-$
2105 ± 8	80k	⁴ UMAN	06 E835	$5.2 \bar{p}p \rightarrow \eta \eta \pi^0$
2102 ± 13		⁵ ANISOVICH	00J SPEC	$2.0 \bar{p}p \rightarrow \eta \pi^0 \pi^0, \pi^0 \pi^0, \eta \eta, \eta \eta', \pi^+ \pi^-$
2105 ± 10		ANISOVICH	99K SPEC	$0.6-1.94 \bar{p}p \rightarrow \eta \eta, \eta \eta'$
~ 2104		BUGG	95	$J/\psi \rightarrow \gamma \pi^+ \pi^- \pi^+ \pi^-$
~ 2122		HASAN	94 RVUE	$\bar{p}p \rightarrow \pi \pi$

¹ From partial wave analysis including all possible combinations of 0^{++} , 2^{++} , and 4^{++} resonances.² Using CLEO-c data but not authored by the CLEO Collaboration.³ From a fit to a Breit-Wigner line shape with fixed $\Gamma = 209$ MeV.⁴ Statistical error only.⁵ Includes the data of ANISOVICH 00B indicating to exotic decay pattern. **$f_0(2100)$ WIDTH**

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
287^{+32}_{-24} OUR AVERAGE				
$289 \pm 34 \pm 15$		LEES	21A BABR	$\gamma\gamma \rightarrow \eta_c(1S) \rightarrow \eta' \pi^+ \pi^-$
$273^{+27}_{-24} {}^{+70}_{-23}$	5.5k	¹ ABLIKIM	13N BES3	$e^+ e^- \rightarrow J/\psi \rightarrow \gamma \eta \eta$
330 ± 100		BAI	00A BES	$J/\psi \rightarrow \gamma(\pi^+ \pi^- \pi^+ \pi^-)$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●				
260 ± 25		SARANTSEV	21 RVUE	$J/\psi(1S) \rightarrow \gamma(\pi\pi, K\bar{K}, \eta\eta, \omega\phi)$
236 ± 14	80k	² UMAN	06 E835	$5.2 \bar{p}p \rightarrow \eta \eta \pi^0$
211 ± 29		³ ANISOVICH	00J SPEC	$2.0 \bar{p}p \rightarrow \eta \pi^0 \pi^0, \pi^0 \pi^0, \eta \eta, \eta \eta', \pi^+ \pi^-$
200 ± 25		ANISOVICH	99K SPEC	$0.6-1.94 \bar{p}p \rightarrow \eta \eta, \eta \eta'$

~ 203	BUGG	95	$J/\psi \rightarrow \gamma \pi^+ \pi^- \pi^+ \pi^-$
~ 273	HASAN	94	RVUE $\bar{p} p \rightarrow \pi \pi$

¹ From partial wave analysis including all possible combinations of 0^{++} , 2^{++} , and 4^{++} resonances.
² Statistical error only.
³ Includes the data of ANISOVICH 00B indicating to exotic decay pattern.

$f_0(2100)$ REFERENCES

LEES	21A	PR D104 072002	J.P. Lees <i>et al.</i>	(BABAR Collab.)
SARANTSEV	21	PL B816 136227	A.V. Sarantsev <i>et al.</i>	(BONN, PNPI)
DOBBS	15	PR D91 052006	S. Dobbs <i>et al.</i>	(NWES)
ABLIKIM	13N	PR D87 092009	M. Ablikim <i>et al.</i>	(BESIII Collab.)
UMAN	06	PR D73 052009	I. Uman <i>et al.</i>	(FNAL E835)
ANISOVICH	00B	NP A662 319	A.V. Anisovich <i>et al.</i>	
ANISOVICH	00J	PL B491 47	A.V. Anisovich <i>et al.</i>	(RAL, LOQM, PNPI+)
BAI	00A	PL B472 207	J.Z. Bai <i>et al.</i>	(BES Collab.)
ANISOVICH	99K	PL B468 309	A.V. Anisovich <i>et al.</i>	
BUGG	95	PL B353 378	D.V. Bugg <i>et al.</i>	(LOQM, PNPI, WASH)
HASAN	94	PL B334 215	A. Hasan, D.V. Bugg	(LOQM)
