

$f_0(2470)$

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

OMITTED FROM SUMMARY TABLE

Seen by ABLIKIM 22C with a significance of $5.2\,\sigma$ in a partial-wave analysis of the systems (γX) , $X \rightarrow \eta'\eta'$ and $(\eta' X)$, $X \rightarrow \gamma\eta'$ in the decay $J/\psi \rightarrow \gamma\eta'\eta'$.

$f_0(2470)$ MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
$2470 \pm 4^{+4}_{-6}$	¹ ABLIKIM	22C	BES3 $J/\psi \rightarrow \gamma\eta'\eta' \rightarrow 4/5\gamma 2(\pi^+\pi^-)$

¹From a partial wave analysis of the systems (γX) , with $X \rightarrow \eta'\eta'$, and $(\eta' X)$, with $X \rightarrow \gamma\eta'$ in the decay $J/\psi \rightarrow \gamma\eta'\eta'$. The intermediate resonance X is parametrized by a constant-width, relativistic Breit-Wigner.

$f_0(2470)$ WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
$75 \pm 9^{+11}_{-8}$	¹ ABLIKIM	22C	BES3 $J/\psi \rightarrow \gamma\eta'\eta' \rightarrow 4/5\gamma 2(\pi^+\pi^-)$

¹From a partial wave analysis of the systems (γX) , with $X \rightarrow \eta'\eta'$, and $(\eta' X)$, with $X \rightarrow \gamma\eta'$ in the decay $J/\psi \rightarrow \gamma\eta'\eta'$. The intermediate resonance X is parametrized by a constant-width, relativistic Breit-Wigner.

$f_0(2470)$ DECAY MODES

Mode	Fraction (Γ_i/Γ)
$\Gamma_1 \quad \eta'\eta'$	seen

$f_0(2470)$ BRANCHING RATIOS

$\Gamma(\eta'\eta')/\Gamma_{\text{total}}$	Γ_1/Γ		
<u>VALUE</u>	<u>DOCUMENT ID</u>	<u>TECN</u>	<u>COMMENT</u>
seen	¹ ABLIKIM	22C	BES3 $J/\psi \rightarrow \gamma\eta'\eta' \rightarrow 4/5\gamma 2(\pi^+\pi^-)$

¹From a partial wave analysis of the systems (γX) , with $X \rightarrow \eta'\eta'$, and $(\eta' X)$, with $X \rightarrow \gamma\eta'$ in the decay $J/\psi \rightarrow \gamma\eta'\eta'$. The intermediate resonance X is parametrized by a constant-width, relativistic Breit-Wigner.

$f_0(2470)$ REFERENCES

ABLIKIM	22C	PR D105 072002	M. Ablikim <i>et al.</i>	(BESIII Collab.)
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