

$f_0(2470)$

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

OMITTED FROM SUMMARY TABLE

Seen by ABLIKIM 22C with a significance of 5.2σ 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
$2470 \pm 4_{-6}^{+4}$	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
$75 \pm 9_{-8}^{+11}$	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

$\Gamma(\eta' \eta')/\Gamma_{\text{total}}$	Γ_1/Γ
seen	

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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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