$a_0(1950)$

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

OMITTED FROM SUMMARY TABLE

Needs confirmation. Seen in $\gamma\gamma \to \eta_c(1S) \to K\overline{K}\pi$ by LEES 16A with significance 2.5 σ in $K^0_S K^\pm \pi^\mp$ and 4.2 σ in $K^+ K^- \pi^0$.

$a_0(1950)$ MASS

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
1931±14±22	12k	[1,2] LEES	16A	BABR	$\gamma\gamma \to \eta_c(1S) \to K\overline{K}\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1949±32±76	8k	[1] LEES	16A	BABR	$\gamma\gamma \to \eta_c(1S) \to K^0_S K^\pm \pi^\mp$
1927±15±23	4k	[1] LEES	16A	BABR	$\gamma\gamma \to \eta_c(1S) \to K^+ K^- \pi^0$

[1] From a model-independent partial wave analysis fit to a relativistic Breit-Wigner function with a floating width.

[2] Weighted average of the $K^0_S K^\pm$ and $K^+ K^-$ decay modes.

$a_0(1950)$ WIDTH

VALUE (MeV)	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
271±22± 29	12k	[1,2] LEES	16A	BABR	$\gamma\gamma \to \eta_c(1S) \to K\overline{K}\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
265±36±110	8k	[1] LEES	16A	BABR	$\gamma\gamma \to \eta_c(1S) \to K^0_S K^\pm \pi^\mp$
274±28± 30	4k	[1] LEES	16A	BABR	$\gamma\gamma \to \eta_c(1S) \to K^+ K^- \pi^0$

[1] From a model-independent partial wave analysis fit to a relativistic Breit-Wigner function with a floating mass.

[2] Weighted average of the $K^0_S K^\pm$ and $K^+ K^-$ decay modes.

$a_0(1950)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$K\overline{K}$	seen

$a_0(1950)$ BRANCHING RATIOS

$\Gamma(K\overline{K})/\Gamma_{total}$ **Γ_1/Γ**

VALUE	*EVTS*	*DOCUMENT ID*		*TECN*	*COMMENT*
seen	12k	[1] LEES	16A	BABR	$\gamma\gamma \to \eta_c(1S) \to K\overline{K}\pi$

[1] From a model-independent partial wave analysis.

$a_0(1950)$ REFERENCES

LEES 16A PR D93 012005 J.P. Lees et al. (BABAR Collab.)