NODE=M227

$a_0(1950)$

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

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 $K^+K^-\pi^0$.

NODE=M227

$a_0(1950)$ MASS

NODE=M227M

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	$\gamma\gamma \to \eta_c(1S) \to K^+K^-\pi^0$

NODE=M227M
OCCUR=3
OCCUR=2

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

NODE=M227M;LINKAGE=A

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

NODE=M227M;LINKAGE=B

$a_0(1950)$ WIDTH

NODE=M227W

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	$\gamma\gamma \to \eta_c(1S) \to K^+K^-\pi^0$

NODE=M227W
OCCUR=3
OCCUR=2

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

NODE=M227W;LINKAGE=A

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

NODE=M227W;LINKAGE=B

$a_0(1950)$ DECAY MODES

NODE=M227215;NODE=M227

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

DESIG=1

$a_0(1950)$ BRANCHING RATIOS

NODE=M227225

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

NODE=M227R01

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

NODE=M227R01

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

NODE=M227R01;LINKAGE=A

$a_0(1950)$ REFERENCES

NODE=M227

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

REFID=57125