

a₁(1640)

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

OMITTED FROM SUMMARY TABLE

Seen in the amplitude analysis of the $3\pi^0$ system produced in $\bar{p}p \rightarrow 4\pi^0$. Possibly seen in the study of the hadronic structure in decay $\tau \rightarrow 3\pi\nu_\tau$ (ABREU 98G). Needs confirmation.

a₁(1640) MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
1640 ± 12 ± 30	¹ BAKER	99	SPEC 1.94 $\bar{p}p \rightarrow 4\pi^0$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
1670 ± 90	BELLINI	85	SPEC 40 $\pi^- A \rightarrow \pi^- \pi^+ \pi^- A$

¹ Using preliminary CBAR data.

a₁(1640) WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
300 ± 22 ± 40	² BAKER	99	SPEC 1.94 $\bar{p}p \rightarrow 4\pi^0$
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
300 ± 100	BELLINI	85	SPEC 40 $\pi^- A \rightarrow \pi^- \pi^+ \pi^- A$

² Using preliminary CBAR data.

a₁(1640) DECAY MODES

Mode
Γ_1 $f_2(1270)\pi$
Γ_2 $\sigma\pi$

a₁(1640) BRANCHING RATIOS

$\Gamma(f_2(1270)\pi)/\Gamma(\sigma\pi)$	DOCUMENT ID	TECN	COMMENT	Γ_1/Γ_2
0.24 ± 0.07	³ BAKER	99	SPEC 1.94 $\bar{p}p \rightarrow 4\pi^0$	

³ Using preliminary CBAR data.

a₁(1640) REFERENCES

BAKER	99	PL B449 114	C.A. Baker <i>et al.</i>	
ABREU	98G	PL B426 411	P. Abreu <i>et al.</i>	(DELPHI Collab.)
BELLINI	85	SJNP 41 781	D. Bellini <i>et al.</i>	
Translated from YAF 41 1223.				