$a_1(1640)$

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

OMITTED FROM SUMMARY TABLE

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

$a_1(1640)$ MASS

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

[1] Using preliminary CBAR data.

$a_1(1640)$ WIDTH

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

[2] Using preliminary CBAR data.

$a_1(1640)$ DECAY MODES

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

$a_1(1640)$ BRANCHING RATIOS

$\Gamma(f_2(1270)\pi)/\Gamma(\sigma\pi)$ **Γ_1/Γ_2**

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.24±0.07	[3] BAKER	99	SPEC	1.94 $\overline{p}p \to 4\pi^0$

[3] Using preliminary CBAR data.

$a_1(1640)$ REFERENCES

BAKER	99	PL B449 114	C.A. Baker *et al.*	
ABREU	98G	PL B426 411	P. Abreu *et al.*	(DELPHI Collab.)
BELLINI	85	SJNP 41 781	D. Bellini *et al.*	

Translated from YAF 41 1223.