$a_0(1450)$

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

See minireview on scalar mesons under $f_0(1370)$.

$a_0(1450)$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
1474±19 OUR AVERAGE				
1480±30	ABELE	98	CBAR	0.0 $\overline{p}p \to K^0_L K^\pm \pi^\mp$
1470±25	[1] AMSLER	95D	CBAR	0.0 $\overline{p}p \to \pi^0\pi^0\pi^0$, $\pi^0\eta\eta$, $\pi^0\pi^0\eta$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1450±40	AMSLER	94D	CBAR	0.0 $\overline{p}p \to \pi^0\pi^0\eta$
1435±40	BUGG	94	RVUE	$\overline{p}p \to \eta 2\pi^0$

[1] Coupled-channel analysis of AMSLER 95B, AMSLER 95C, and AMSLER 94D.

$a_0(1450)$ WIDTH

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
265±13 OUR AVERAGE				
265±15	ABELE	98	CBAR	0.0 $\overline{p}p \to K^0_L K^\pm \pi^\mp$
265±30	[2] AMSLER	95D	CBAR	0.0 $\overline{p}p \to \pi^0\pi^0\pi^0$, $\pi^0\eta\eta$, $\pi^0\pi^0\eta$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
270±40	AMSLER	94D	CBAR	0.0 $\overline{p}p \to \pi^0\pi^0\eta$
270±40	BUGG	94	RVUE	$\overline{p}p \to \eta 2\pi^0$

[2] Coupled-channel analysis of AMSLER 95B, AMSLER 95C, and AMSLER 94D.

$a_0(1450)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\pi\eta$	seen
Γ_2	$\pi\eta'(958)$	seen
Γ_3	$K\overline{K}$	seen

$\Gamma(\pi\eta'(958))/\Gamma(\pi\eta)$ — Γ_2/Γ_1

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.35±0.16	[3] ABELE	98	CBAR	0.0 $\overline{p}p \to K^0_L K^\pm \pi^\mp$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.43±0.19	ABELE	97C	CBAR	0.0 $\overline{p}p \to \pi^0\pi^0\eta'$

[3] Using $\pi^0\eta$ from AMSLER 94D.

$\Gamma(K\overline{K})/\Gamma(\pi\eta)$ — Γ_3/Γ_1

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.88±0.23	[3] ABELE	98	CBAR	0.0 $\overline{p}p \rightarrow K^0_L K^{\pm}\pi^{\mp}$

$a_0(1450)$ REFERENCES

ABELE	98	PR D57 3860	A. Abele, Adomeit, Amsler+	(Crystal Barrel Collab.)
ABELE	97C	PL B404 179	A. Abele, Adomeit, Amsler+	(Crystal Barrel Collab.)
AMSLER	95B	PL B342 433	+Armstrong, Brose+	(Crystal Barrel Collab.)
AMSLER	95C	PL B353 571	+Armstrong, Hackman+	(Crystal Barrel Collab.)
AMSLER	95D	PL B355 425	+Armstrong, Spanier+	(Crystal Barrel Collab.)
AMSLER	94D	PL B333 277	+Anisovich, Spanier+	(Crystal Barrel Collab.) IGJPC
BUGG	94	PR D50 4412	+Anisovich+	(LOQM)