

π(1300)

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

π(1300) MASS

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
1300±100 OUR ESTIMATE			
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
1375 ± 40	ABELE	01	CBAR 0.0 $\bar{p}d \rightarrow \pi^- 4\pi^0 p$
1275 ± 15	BERTIN	97D	OBLX 0.05 $\bar{p}p \rightarrow 2\pi^+ 2\pi^-$
~ 1114	ABELE	96	CBAR 0.0 $\bar{p}p \rightarrow 5\pi^0$
1190 ± 30	ZIELINSKI	84	SPEC 200 $\pi^+ Z \rightarrow Z 3\pi$
1240 ± 30	BELLINI	82	SPEC 40 $\pi^- A \rightarrow A 3\pi$
1273 ± 50	¹ AARON	81	RVUE
1342 ± 20	BONESINI	81	OMEG 12 $\pi^- p \rightarrow p 3\pi$
~ 1400	DAUM	81B	SPEC 63,94 $\pi^- p$
¹ Uses multichannel Aitchison-Bowler model (BOWLER 75). Uses data from DAUM 80 and DANKOWYCH 81.			

π(1300) WIDTH

VALUE (MeV)	DOCUMENT ID	TECN	COMMENT
200 to 600 OUR ESTIMATE			
● ● ● We do not use the following data for averages, fits, limits, etc. ● ● ●			
268 ± 50	ABELE	01	CBAR 0.0 $\bar{p}d \rightarrow \pi^- 4\pi^0 p$
218 ± 100	BERTIN	97D	OBLX 0.05 $\bar{p}p \rightarrow 2\pi^+ 2\pi^-$
~ 340	ABELE	96	CBAR 0.0 $\bar{p}p \rightarrow 5\pi^0$
440 ± 80	ZIELINSKI	84	SPEC 200 $\pi^+ Z \rightarrow Z 3\pi$
360 ± 120	BELLINI	82	SPEC 40 $\pi^- A \rightarrow A 3\pi$
580 ± 100	² AARON	81	RVUE
220 ± 70	BONESINI	81	OMEG 12 $\pi^- p \rightarrow p 3\pi$
~ 600	DAUM	81B	SPEC 63,94 $\pi^- p$
² Uses multichannel Aitchison-Bowler model (BOWLER 75). Uses data from DAUM 80 and DANKOWYCH 81.			

π(1300) DECAY MODES

Mode	Fraction (Γ_i/Γ)
Γ_1 $\rho\pi$	seen
Γ_2 $\pi(\pi\pi)S$ -wave	
Γ_3 $\gamma\gamma$	

$\pi(1300) \Gamma(i)\Gamma(\gamma\gamma)/\Gamma(\text{total})$

$\Gamma(\rho\pi) \times \Gamma(\gamma\gamma)/\Gamma_{\text{total}}$					$\Gamma_1\Gamma_3/\Gamma$
VALUE (keV)	CL%	DOCUMENT ID	TECN	COMMENT	
<0.085	90	ACCIARRI	97T L3	$e^+e^- \rightarrow e^+e^-\pi^+\pi^-\pi^0$	
<0.54	90	ALBRECHT	97B ARG	$e^+e^- \rightarrow e^+e^-\pi^+\pi^-\pi^0$	

$\Gamma(\pi(\pi\pi)_{\text{S-wave}})/\Gamma(\rho\pi)$					Γ_2/Γ_1
VALUE	CL%	DOCUMENT ID	TECN	COMMENT	

• • • We do not use the following data for averages, fits, limits, etc. • • •

<0.15	90	ABELE	01 CBAR	$0.0 \bar{p}d \rightarrow \pi^- 4\pi^0 p$	
2.12		³ AARON	81 RVUE		

³ Uses multichannel Aitchison-Bowler model (BOWLER 75). Uses data from DAUM 80 and DANKOWYCH 81.

$\pi(1300)$ REFERENCES

ABELE	01	EPJ C19 667	A. Abele <i>et al.</i>	(Crystal Barrel Collab.)
ACCIARRI	97T	PL B413 147	M. Acciari <i>et al.</i>	(L3 Collab.)
ALBRECHT	97B	ZPHY C74 469	H. Albrecht <i>et al.</i>	(ARGUS Collab.)
BERTIN	97D	PL B414 220	A. Bertin <i>et al.</i>	(OBELIX Collab.)
ABELE	96	PL B380 453	A. Abele <i>et al.</i>	(Crystal Barrel Collab.)
ZIELINSKI	84	PR D30 1855	M. Zielinski <i>et al.</i>	(ROCH, MINN, FNAL)
BELLINI	82	PRL 48 1697	G. Bellini <i>et al.</i>	(MILA, BGNA, JINR)
AARON	81	PR D24 1207	R.A. Aaron, R.S. Longacre	(NEAS, BNL)
BONESINI	81	PL 103B 75	M. Bonesini <i>et al.</i>	(MILA, LIVP, DARE+)
DANKOWY...	81	PRL 46 580	J.A. Dankowych <i>et al.</i>	(TNTO, BNL, CARL+)
DAUM	81B	NP B182 269	C. Daum <i>et al.</i>	(AMST, CERN, CRAC, MPIM+)
DAUM	80	PL 89B 281	C. Daum <i>et al.</i>	(AMST, CERN, CRAC, MPIM+)
BOWLER	75	NP B97 227	M.G. Bowler <i>et al.</i>	(OXFTP, DARE)

OTHER RELATED PAPERS

ASNER	00	PR D61 012002	D.M. Asner <i>et al.</i>	(CLEO Collab.)
ZAIMIDOROGA	99	PAN 30 1	O.A. Zaimidoroga	
		Translated from SJPN 30 5.		
ACKERSTAFF	97R	ZPHY C75 593	K. Ackerstaff <i>et al.</i>	(OPAL Collab.)
ALBRECHT	95C	PL B349 576	H. Albrecht <i>et al.</i>	(ARGUS Collab.)