NODE=M058

$\pi(1300)$

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

$\pi(1300)$ MASS

NODE=M058205

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
1300±100 OUR ESTIMATE					
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1345± 8±10	18k	[1] SCHEGELSKY	06	RVUE	$\gamma\gamma \to \pi^+\pi^-\pi^0$
1343± 15±24		CHUNG	02	B852	18.3 $\pi^- p \to \pi^+\pi^-\pi^- p$
1375± 40		ABELE	01	CBAR	0.0 $\overline{p}d \to \pi^- 4\pi^0 p$
1275± 15		BERTIN	97D	OBLX	0.05 $\overline{p}p \to 2\pi^+ 2\pi^-$
~ 1114		ABELE	96	CBAR	0.0 $\overline{p}p \to 5\pi^0$
1190± 30		ZIELINSKI	84	SPEC	200 $\pi^+ Z \to Z3\pi$
1240± 30		BELLINI	82	SPEC	40 $\pi^- A \to A3\pi$
1273± 50		[2] AARON	81	RVUE	
1342± 20		BONESINI	81	OMEG	12 $\pi^- p \to p3\pi$
~ 1400		DAUM	81B	SPEC	63,94 $\pi^- p$

[1] From analysis of L3 data at 183–209 GeV. NODE=M058M;LINKAGE=SC

[2] Uses multichannel Aitchison-Bowler model (BOWLER 75). Uses data from DAUM 80 and DANKOWYCH 81. NODE=M058M;LINKAGE=E

$\pi(1300)$ WIDTH

NODE=M058210

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
200 to 600 OUR ESTIMATE					
• • • We do not use the following data for averages, fits, limits, etc. • • •					
260± 20±30	18k	[3] SCHEGELSKY	06	RVUE	$\gamma\gamma \to \pi^+\pi^-\pi^0$
449± 39±47		CHUNG	02	B852	18.3 $\pi^- p \to \pi^+\pi^-\pi^- p$
268± 50		ABELE	01	CBAR	0.0 $\overline{p}d \to \pi^- 4\pi^0 p$
218±100		BERTIN	97D	OBLX	0.05 $\overline{p}p \to 2\pi^+ 2\pi^-$
~ 340		ABELE	96	CBAR	0.0 $\overline{p}p \to 5\pi^0$
440± 80		ZIELINSKI	84	SPEC	200 $\pi^+ Z \to Z3\pi$
360±120		BELLINI	82	SPEC	40 $\pi^- A \to A3\pi$
580±100		[4] AARON	81	RVUE	
220± 70		BONESINI	81	OMEG	12 $\pi^- p \to p3\pi$
~ 600		DAUM	81B	SPEC	63,94 $\pi^- p$

[3] From analysis of L3 data at 183–209 GeV. NODE=M058W;LINKAGE=SC

[4] Uses multichannel Aitchison-Bowler model (BOWLER 75). Uses data from DAUM 80 and DANKOWYCH 81. NODE=M058W;LINKAGE=E

$\pi(1300)$ DECAY MODES

NODE=M058215;NODE=M058

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$\rho\pi$	seen	DESIG=1;OUR EST;→ NOT CHECKED ←
Γ_2	$\pi(\pi\pi)_{S\text{-wave}}$	seen	DESIG=3;OUR EST;→ NOT CHECKED ←
Γ_3	$\gamma\gamma$		DESIG=4

$\pi(1300)$ Γ(i)Γ(γγ)/Γ(total)

NODE=M058218

$\Gamma(\rho\pi) \times \Gamma(\gamma\gamma)/\Gamma_{total}$ **$\Gamma_1\Gamma_3/\Gamma$**

NODE=M058G1

VALUE (keV)	CL%	DOCUMENT ID		TECN	COMMENT
<0.085	90	ACCIARRI	97T	L3	$e^+e^- \to e^+e^-\pi^+\pi^-\pi^0$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.8	95	[5] SCHEGELSKY	06	RVUE	$\gamma\gamma \to \pi^+\pi^-\pi^0$
<0.54	90	ALBRECHT	97B	ARG	$e^+e^- \to e^+e^-\pi^+\pi^-\pi^0$

[5] From analysis of L3 data at 183–209 GeV. NODE=M058G1;LINKAGE=SC

$\pi(1300)$ BRANCHING RATIOS

NODE=M058220

$\Gamma(\pi(\pi\pi)_{S\text{-wave}})/\Gamma(\rho\pi)$ Γ_2/Γ_1

NODE=M058R1
NODE=M058R1

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
seen		CHUNG	02	B852	18.3 $\pi^- p \rightarrow \pi^+\pi^-\pi^- p$
<0.15	90	ABELE	01	CBAR	0.0 $\overline{p}d \rightarrow \pi^- 4\pi^0 p$
2.12		[6] AARON	81	RVUE	

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

NODE=M058R1;LINKAGE=E

$\pi(1300)$ REFERENCES

NODE=M058

SCHEGELSKY	06	EPJ A27 199	V.A. Schegelsky *et al.*		REFID=51186
CHUNG	02	PR D65 072001	S.U. Chung *et al.*	(BNL E852 Collab.)	REFID=48837
ABELE	01	EPJ C19 667	A. Abele *et al.*	(Crystal Barrel Collab.)	REFID=48334
ACCIARRI	97T	PL B413 147	M. Acciarri *et al.*	(L3 Collab.)	REFID=45761
ALBRECHT	97B	ZPHY C74 469	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=45418
BERTIN	97D	PL B414 220	A. Bertin *et al.*	(OBELIX Collab.)	REFID=45763
ABELE	96	PL B380 453	A. Abele *et al.*	(Crystal Barrel Collab.)	REFID=45011
ZIELINSKI	84	PR D30 1855	M. Zielinski *et al.*	(ROCH, MINN, FNAL)	REFID=20881
BELLINI	82	PRL 48 1697	G. Bellini *et al.*	(MILA, BGNA, JINR)	REFID=21134
AARON	81	PR D24 1207	R.A. Aaron, R.S. Longacre	(NEAS, BNL)	REFID=20870
BONESINI	81	PL 103B 75	M. Bonesini *et al.*	(MILA, LIVP, DARE+)	REFID=21130
DANKOWY...	81	PRL 46 580	J.A. Dankowych *et al.*	(TNTO, BNL, CARL+)	REFID=20572
DAUM	81B	NP B182 269	C. Daum *et al.*	(AMST, CERN, CRAC, MPIM+)	REFID=20872
DAUM	80	PL 89B 281	C. Daum *et al.*	(AMST, CERN, CRAC, MPIM+)	REFID=20868
BOWLER	75	NP B97 227	M.G. Bowler *et al.*	(OXFTP, DARE)	REFID=20571

OTHER RELATED PAPERS

EBERT	05	MPL A20 1887	D. Ebert, R.N. Faustov, V.O. Galkin		REFID=50792
KATAEV	05	PAN 68 567	A.L. Kataev		REFID=50797
		Translated from YAF 68 597.			
ASNER	00	PR D61 012002	D.M. Asner *et al.*	(CLEO Collab.)	REFID=47339
ZAIMIDOROGA	99	PAN 30 1	O.A. Zaimidoroga		REFID=46907
		Translated from SJPN 30 5.			
ACKERSTAFF	97R	ZPHY C75 593	K. Ackerstaff *et al.*	(OPAL Collab.)	REFID=45616
ALBRECHT	95C	PL B349 576	H. Albrecht *et al.*	(ARGUS Collab.)	REFID=44267