branching ratio of order 5:1. The same resonance is observed in $\overline{p}p \to \eta\eta\pi^0$ (AMSLER 93C) and in $\overline{p}p \to 3\pi^0$ (AKER 91) leading to an $\eta\eta$:$\pi\pi$ branching ratio of order 1:3.

Thus we collect all the broad $\pi\pi$ inelastic S-wave resonance claims under a new entry, the $f_0(1370)$, although they could be the $f_0(1300)$, provided the inelasticity of the latter is in fact larger than is presently believed.

In a simultaneous fit to the $\overline{p}p \to 3\pi^0$ and $\overline{p}p \to \eta\eta\pi^0$ data, ANISOVITCH 94 find again the $f_0(1370)$ and, in addition, they observe another scalar resonance with $M = 1520 \pm 25$ MeV and $\Gamma = 146 \pm 25$ MeV. We list this observation under the $f_0(1525)$, although it perhaps does not belong there.

The fifth scalar entry is the $f_0(1590)$ of the GAMS collaboration (BINON 83).

$f_0(1300)$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
1000-1500 OUR ESTIMATE				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$\simeq 1000$	[1] MORGAN	93	RVUE	
1472 ± 12	ARMSTRONG	91	OMEG	$300\ pp \to pp\pi\pi,\ ppKK$
1440 ± 20	CHEN	91	MRK3	$J/\psi \to \gamma\pi^+\pi^-,\ \gamma K\overline{K}$
1275 ± 20	BREAKSTONE	90	SFM	$62\ pp \to pp\pi^+\pi^-$
1440 ± 50	BOLONKIN	88	SPEC	$40\ \pi^- p \to K^0_S K^0_S n$
1420 ± 20	AKESSON	86	SPEC	$63\ pp \to pp\pi^+\pi^-$
1220 ± 40	ALDE	86D	GAM4	$100\ \pi^- p \to n2\eta$
1463 ± 9	ETKIN	82B	MPS	$23\ \pi^- p \to n2K^0_S$
~ 1237	TORNQVIST	82	RVUE	
1425 ± 15	WICKLUND	80	SPEC	$6\ \pi N \to K^+K^-N$
~ 1300	POLYCHRO...	79	STRC	$7\ \pi^- p \to n2K^0_S$
1256	FROGGATT	77	RVUE	$\pi^+\pi^-$ channel

[1] Combining new data on $f_0(980)$ production in J/ψ and D_s decays with earlier information on central production and elastic $\pi\pi$, $K\overline{K}$ processes.

$f_0(1300)$ WIDTH

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
150 to 400 OUR ESTIMATE				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$\simeq 700$	[2] MORGAN	93	RVUE	
195 ± 33	ARMSTRONG	91	OMEG	$300\ pp \to pp\pi\pi,\ ppKK$
160 ± 40	CHEN	91	MRK3	$J/\psi \to \gamma\pi^+\pi^-,\ \gamma K\overline{K}$
285 ± 60	BREAKSTONE	90	SFM	$62\ pp \to pp\pi^+\pi^-$
250 ± 80	BOLONKIN	88	SPEC	$40\ \pi^- p \to K^0_S K^0_S n$
460 ± 50	AKESSON	86	SPEC	$63\ pp \to pp\pi^+\pi^-$
320 ± 40	ALDE	86D	GAM4	$100\ \pi^- p \to n2\eta$
~ 1400	TORNQVIST	82	RVUE	
160 ± 30	WICKLUND	80	SPEC	$6\ \pi N \to K^+K^-N$
~ 150	POLYCHRO...	79	STRC	$7\ \pi^- p \to n2K^0_S$
~ 400	[3] FROGGATT	77	RVUE	$\pi^+\pi^-$ channel

[2] Combining new data on $f_0(980)$ production in J/ψ and D_s decays with earlier information on central production and elastic $\pi\pi$, $K\overline{K}$ processes.
[3] Width defined as distance between 45 and 135° phase shift.

$f_0(1300)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\pi\pi$	$(93.6^{+1.9}_{-1.5})$ %
Γ_2	$K\overline{K}$	(7.5 ± 0.9) %
Γ_3	$\eta\eta$	seen
Γ_4	$\gamma\gamma$	seen
Γ_5	e^+e^-	not seen

$f_0(1300)$ PARTIAL WIDTHS

$\Gamma(\gamma\gamma)$ — Γ_4

VALUE (keV)	*DOCUMENT ID*		*TECN*	*COMMENT*
5.4±2.3	[4] MORGAN	90	RVUE	$\gamma\gamma \to \pi^+\pi^-,\ \pi^0\pi^0$

[4] Error includes spread of different solutions. Authors report strong correlation with $\gamma\gamma$ width of $f_2(1270)$.

$\Gamma(e^+e^-)$ — Γ_5

VALUE (eV)	*CL%*	*DOCUMENT ID*		*TECN*	*COMMENT*
<20	90	VOROBYEV	88	ND	$e^+e^- \to \pi^0\pi^0$

$f_0(1300)$ BRANCHING RATIOS

$\Gamma(\pi\pi)/\Gamma_{\text{total}}$ — Γ_1/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
$\mathbf{0.936^{+0.019}_{-0.015}}$	GORLICH	80	ASPK	$17{,}18\ \pi^- p$ polarized
• • • We do not use the following data for averages, fits, limits, etc. • • •				
~ 0.93	TORNQVIST	82	RVUE	
0.93	LOVERRE	80	HBC	$4\ \pi^- p \to K\overline{K}N$
0.73	HYAMS	75	ASPK	$17.2\ \pi^- p \to n\pi^+\pi^-$

$\Gamma(K\overline{K})/\Gamma(\pi\pi)$ — Γ_2/Γ_1

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.08 ±0.01	COSTA...	80	OMEG	$10\ \pi^- p \to K^+K^-n$

$\Gamma(\eta\eta)/\Gamma_{\text{total}}$ — Γ_3/Γ

VALUE	*DOCUMENT ID*		*TECN*	*COMMENT*
0.02	ALDE	86D	GAM4	$100\ \pi^- p \to n2\eta$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
seen	BINON	83	GAM2	$38\ \pi^- p \to 2\eta n$

$f_0(1300)$ REFERENCES

MORGAN	93	PR D48 1185	+Pennington	(RAL, DURH)
Also	93C	NC A Conf. Suppl.	Morgan	(RAL)
ARMSTRONG	91	ZPHY C51 351	+Benayoun+	(ATHU, BARI, BIRM, CERN, CDEF)
CHEN	91	Hadron 91 Conf.		(Mark III Collab.)
SLAC-PUB-5669				
BREAKSTONE	90	ZPHY C48 569	+	(ISU, BGNA, CERN, DORT, HEIDH, WARS)
MORGAN	90	ZPHY C48 623	+Pennington	(RAL, DURH)
BOLONKIN	88	NP B309 426	+Bloshenko, Gorin+	(ITEP, SERP)
VOROBYEV	88	SJNP 48 273	+Golubev, Dolinsky, Druzhinin+	(NOVO)
		Translated from YAF 48 436.		
AKESSON	86	NP B264 154	+Albrow, Almehed+	(Axial Field Spec. Collab.)
ALDE	86D	NP B269 485	+Binon, Bricman+	(BELG, LAPP, SERP, CERN)
BINON	83	NC 78A 313	+Donskov, Duteil+	(BELG, LAPP, SERP, CERN)
ETKIN	82B	PR D25 1786	+Foley, Lai+	(BNL, CUNY, TUFTS, VAND)
TORNQVIST	82	PRL 49 624		(HELS)
COSTA...	80	NP B175 402	Costa De Beauregard+	(BARI, BONN, CERN+)
GORLICH	80	NP B174 16	+Niczyporuk+	(CRAC, MPIM, CERN, ZEEM)
LOVERRE	80	ZPHY C6 187	+Armenteros, Dionisi+	(CERN, CDEF, MADR, STOH) IJP
WICKLUND	80	PRL 45 1469	+Ayres, Cohen, Diebold, Pawlicki	(ANL)
POLYCHRO...	79	PR D19 1317	Polychronakos, Cason, Bishop+	(NDAM, ANL) IJP
FROGGATT	77	NP B129 89	+Petersen	(GLAS, NORD)
HYAMS	75	NP B100 205	+Jones, Weilhammer, Blum, Dietl+	(CERN, MPIM)

OTHER RELATED PAPERS

AMSLER	94	PL B322 431	+Armstrong+	(Crystal Barrel Collab.)
ANISOVICH	94	PL B323 233	+Armstrong+	(Crystal Barrel Collab.)
ADAMO	93	NP A558 13C	+Agnello+	(OBELIX Collab.)
GASPERO	93	NP A562 407		(ROMAI)
SVEC	92	PR D45 55	+de Lesquen, van Rossum	(MCGI, SACL)
SVEC	92B	PR D45 1518	+de Lesquen, van Rossum	(MCGI, SACL)
SVEC	92C	PR D46 949	+de Lesquen, van Rossum	(MCGI, SACL)
MORGAN	91	PL B258 444	+Pennington	(RAL, DURH)
WEINSTEIN	89	UTPT 89 03	+Isgur	(TNTO)
ALDE	88	PL B201 160	+Bellazzini, Binon+	(SERP, BELG, LANL, LAPP, PISA)
AU	87	PR D35 1633	+Morgan, Pennington	(DURH, RAL)
ACHASOV	84	ZPHY C22 53	+Devyanin, Shestakov	(NOVO)
CASON	83	PR D28 1586	+Cannata, Baumbaugh, Bishop+	(NDAM, ANL)
WEINSTEIN	83B	PR D27 588	+Isgur	(TNTO)
BECKER	79	NP B151 46	+Blanar, Blum+	(MPIM, CERN, ZEEM, CRAC)
BECKER	79B	NP B150 301	+Blanar, Blum+	(MPIM, CERN, ZEEM, CRAC)
CORDEN	79	NP B157 250	+Dowell, Garvey+	(BIRM, RHEL, TELA, LOWC) JP
CASON	76	PRL 36 1485	+Polychronakos, Bishop, Biswas+	(NDAM, ANL) IJ
WETZEL	76	NP B115 208	+Freudenreich, Beusch+	(ETH, CERN, LOIC)
ESTABROOKS	74	NP B79 301	+Martin	(DURH)
GRAYER	74	NP B75 189	+Hyams, Blum, Dietl+	(CERN, MPIM)
HYAMS	73	NP B64 134	+Jones, Weilhammer, Blum, Dietl+	(CERN, MPIM)