$\Gamma(K\overline{K}\pi)/[\Gamma(a_0(980)\pi)+\Gamma(K\overline{K}^*(892)+\text{c.c.})]$ — $\Gamma_1/(\Gamma_3+\Gamma_5)$

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.65 ± 0.27	[9] DIONISI	80	HBC	$4\ \pi^- p$

[9] Calculated using $\Gamma(K\overline{K})/\Gamma(\eta\pi) = 0.24 \pm 0.07$ for $a_0(980)$ fractions.

$\Gamma(a_0(980)\pi)/\Gamma(K\overline{K}^*(892)+\text{c.c.})$ — Γ_3/Γ_5

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.04	68	ARMSTRONG	84	OMEG	$85\ \pi^+ p$

$\Gamma(4\pi)/\Gamma(K\overline{K}\pi)$ — Γ_6/Γ_1

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.62	95	ARMSTRONG	89G	OMEG	$85\ \pi p \to 4\pi X$

$\Gamma(\rho^0\gamma)/\Gamma_{\text{total}}$ — Γ_8/Γ

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
<0.08	95	[10] ARMSTRONG	92C	SPEC	$300\ pp \to pp\pi^+\pi^-\gamma$

[10] Using the data on the $\overline{K}K\pi$ mode from ARMSTRONG 89.

$f_1(1420)$ REFERENCES

ARMSTRONG 92C ZPHY C54 371 +Barnes, Benayoun+ (ATHU, BARI, BIRM, CERN, CDEF)
ARMSTRONG 92E ZPHY 56 29 +Benayoun+ (ATHU, BARI, BIRM, CERN, CDEF) JPC
AUGUSTIN 92 PR D46 1951 +Cosme (DM2 Collab.)
ARMSTRONG 91B ZPHY C52 389 +Barnes+ (ATHU, BARI, BIRM, CERN, CDEF)
BAI 90C PRL 65 2507 +Blaylock+ (Mark III Collab.)
ARMSTRONG 89 PL B221 216 +Benayoun+(CERN, CDEF, BIRM, BARI, ATHU, CURIN+) JPC
ARMSTRONG 89G ZPHY C43 55 +Bloodworth+ (CERN, BIRM, BARI, ATHU, CURIN+)
BEHREND 89 ZPHY C42 367 +Criegee+ (CELLO Collab.)
HILL 89 ZPHY C42 355 +Olsson+ (JADE Collab.) JP
KOPKE 89 PRPL 174 67 +Wermes+ (CERN)
AIHARA 88B PL B209 107 +Alston-Garnjost+ (TPC-2γ Collab.)
BECKER 87 PRL 59 186 +Blaylock, Bolton, Brown+ (Mark III Collab.) JP
GIDAL 87 PRL 59 2012 +Boyer, Butler, Cords, Abrams+ (LBL, SLAC, HARV)
GIDAL 87B PRL 59 2016 +Boyer, Butler, Cords, Abrams+ (LBL, SLAC, HARV)
AIHARA 86C PRL 57 2500 +Alston-Garnjost+ (TPC-2γ Collab.) JP
ANDO 86 PRL 57 1296 +Imai+ (KEK, KYOT, NIRS, SAGA, INUS, TSUK+)
ARMSTRONG 84 PL 146B 273 +Bloodworth, Burns+ (ATHU, BARI, BIRM, CERN) JP
CHAUVAT 84 PL 148B 382 +Meritet, Bonino+ (CERN, CLER, UCLA, SACL)
JENNI 83 PR D27 1031 +Burke, Telnov, Abrams, Blocker+ (SLAC, LBL)
BROMBERG 80 PR D22 1513 +Haggerty, Abrams, Dzierba (CIT, FNAL, ILLC, IND)
DIONISI 80 NP B169 1 +Gavillet+ (CERN, MADR, CDEF, STOH) IJP
CORDEN 78 NP B144 253 +Corbett, Alexander+ (BIRM, RHEL, TELA, LOWC)
NACASCH 78 NP B135 203 +Defoix, Dobrzynski+ (PARIS, MADR, CERN)
DEFOIX 72 NP B44 125 +Nascimento, Bizzarri+ (CDEF, CERN)
DUBOC 72 NP B46 429 +Goldberg, Makowski, Donald+ (PARIS, LIVP)
LORSTAD 69 NP B14 63 +D'Andlau, Astier+ (CDEF, CERN) JP
DAHL 67 PR 163 1377 +Hardy, Hess, Kirz, Miller (LRL) IJP
Also 65 PRL 14 1074 Miller, Chung, Dahl, Hess, Hardy, Kirz+ (LRL, UCB)
FRENCH 67 NC 52A 438 +Kinson, McDonald, Riddiford+ (CERN, BIRM)

OTHER RELATED PAPERS

CALDWELL 90 Hadron 89 Conf. p 127 (UCSB)
ISHIDA 89 PTP 82 119 +Oda, Sawazaki, Yamada (NIHO)
AIHARA 88C PR D38 1 +Alston-Garnjost+ (TPC-2γ Collab.) JPC
BITYUKOV 88 PL B203 327 +Borisov, Dorofeev+ (SERP)
PROTOPOP... 87B Hadron 87 Conf. Protopopescu, Chung (BNL)

$\omega(1420)$

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

See also $\omega(1600)$.

$\omega(1420)$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
1419±31	315	[1] ANTONELLI	92	DM2	$1.34\text{–}2.4 e^+e^- \to \rho\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1440 ± 70		[2] DONNACHIE	91	RVUE	
1391 ± 18		DONNACHIE	89	RVUE	$e^+e^- \to \rho\pi$

[1] From a fit to two Breit-Wigner functions interfering between them and with the ω,ϕ tails with fixed $(+,-,+)$ phases.
[2] Using data published later by ANTONELLI 92.

$\omega(1420)$ WIDTH

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	COMMENT
174±59	315	[3] ANTONELLI	92	DM2	$1.34\text{–}2.4 e^+e^- \to \rho\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
240 ± 70		[4] DONNACHIE	91	RVUE	
224 ± 49		DONNACHIE	89	RVUE	$e^+e^- \to \rho\pi$

[3] From a fit to two Breit-Wigner functions interfering between them and with the ω,ϕ tails with fixed $(+,-,+)$ phases.
[4] Using data published later by ANTONELLI 92.

$\omega(1420)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\rho\pi$	dominant
Γ_2	$\omega\pi\pi$	
Γ_3	e^+e^-	

$\omega(1420)$ $\Gamma(i)\Gamma(e^+e^-)/\Gamma(\text{total})$

$\Gamma(\rho\pi) \times \Gamma(e^+e^-)/\Gamma_{\text{total}}$ — $\Gamma_1\Gamma_3/\Gamma$

VALUE (eV)	EVTS	DOCUMENT ID		TECN	COMMENT
81±31	315	[5] ANTONELLI	92	DM2	$1.34\text{–}2.4 e^+e^- \to \rho\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
137 ± 40		DONNACHIE	89	RVUE	$e^+e^- \to \rho\pi$

[5] From a fit to two Breit-Wigner functions interfering between them and with the ω,ϕ tails with fixed $(+,-,+)$ phases.

$\Gamma(\omega\pi\pi) \times \Gamma(e^+e^-)/\Gamma_{\text{total}}$ — $\Gamma_2\Gamma_3/\Gamma$

VALUE (keV)	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<41	68	DONNACHIE	89	RVUE	$e^+e^- \to \omega 2\pi$

$\omega(1420)$ REFERENCES

ANTONELLI 92 ZPHY C56 15 +Baldini+ (DM2 Collab.)
DONNACHIE 91 ZPHY C51 689 +Clegg (MCHS, LANC)
DONNACHIE 89 ZPHY C42 663 +Clegg (CERN, MCHS)

OTHER RELATED PAPERS

ATKINSON 87 ZPHY C34 157 + (BONN, CERN, GLAS, LANC, MCHS, CURIN)
ATKINSON 84 NP B231 15 + (BONN, CERN, GLAS, LANC, MCHS, CURIN+)
ATKINSON 83B PL 127B 132 + (BONN, CERN, GLAS, LANC, MCHS, CURIN+)

$f_2(1430)$

$I^G(J^{PC}) = 0^+(2^{++})$

OMITTED FROM SUMMARY TABLE

This entry lists nearby peaks observed in the D wave of the $K\overline{K}$ and $\pi^+\pi^-$ systems.

$f_2(1430)$ MASS

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
≈ 1430 OUR ESTIMATE				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1421 ± 5	AUGUSTIN	87	DM2	$J/\psi \to \gamma\pi^+\pi^-$
1480.0 ± 50.0	AKESSON	86	SPEC	$pp \to pp\pi^+\pi^-$
$1436.0^{+26.0}_{-16.0}$	DAUM	84	CNTR	$17\text{–}18\ \pi^- p \to K^+K^- n$
1412.0 ± 3.0	DAUM	84	CNTR	$63\ \pi^- p \to K^0_S K^0_S n$, $K^+K^- n$
$1439.0^{+5.0}_{-6.0}$	[1] BEUSCH	67	OSPK	$5,7,12\ \pi^- p \to K^0_S K^0_S n$

[1] Not seen by WETZEL 76.

$f_2(1430)$ WIDTH

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
30 ± 9	AUGUSTIN	87	DM2	$J/\psi \to \gamma\pi^+\pi^-$
150.0 ± 40.0	AKESSON	86	SPEC	$pp \to pp\pi^+\pi^-$
$81.0^{+56.0}_{-29.0}$	DAUM	84	CNTR	$17\text{–}18\ \pi^- p \to K^+K^- n$
14.0 ± 6.0	DAUM	84	CNTR	$63\ \pi^- p \to K^0_S K^0_S n$, $K^+K^- n$
$43.0^{+17.0}_{-18.0}$	[2] BEUSCH	67	OSPK	$5,7,12\ \pi^- p \to K^0_S K^0_S n$

[2] Not seen by WETZEL 76.

$f_2(1430)$ DECAY MODES

	Mode
Γ_1	$K\overline{K}$
Γ_2	$\pi\pi$

$f_2(1430)$ REFERENCES

AUGUSTIN 87 ZPHY C36 369 +Cosme+ (LALO, CLER, FRAS, PADO)
AKESSON 86 NP B264 154 +Albrow, Almehed+ (Axial Field Spec. Collab.)
DAUM 84 ZPHY C23 339 +Hertzberger+ (AMST, CERN, CRAC, MPIM, OXF+) JP
WETZEL 76 NP B115 208 +Freudenreich, Beusch+ (ETH, CERN, LOIC)
BEUSCH 67 PL 25B 357 +Fischer, Gobbi, Astbury+ (ETH, CERN)