$\hat{\rho}(1405)$

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

OMITTED FROM SUMMARY TABLE

See also the mini-review under non-$q\overline{q}$ candidates. (See the index for the page number.)

$\hat{\rho}(1405)$ MASS

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*CHG*	*COMMENT*
1392 $^{+25}_{-22}$ OUR AVERAGE					
1400 ± 20 ± 20	ABELE	98B	CBAR		0.0 $\overline{p}n \to \pi^-\pi^0\eta$
1370 ± 16 $^{+50}_{-30}$	[1] THOMPSON	97	MPS		18 $\pi^- p \to \eta\pi^- p$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1323.1$\pm$ 4.6	[2] AOYAGI	93	BKEI		$\pi^- p \to \eta\pi^- p$
1406 ± 20	[3] ALDE	88B	GAM4	0	100 $\pi^- p \to \eta\pi^0 n$

[1] Natural parity exchange.
[2] Unnatural parity exchange.
[3] Seen in the P_0-wave intensity of the $\eta\pi^0$ system, unnatural parity exchange.

$\hat{\rho}(1405)$ WIDTH

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*CHG*	*COMMENT*
333 ± 50 OUR AVERAGE					
310 ± 50 $^{+50}_{-30}$	ABELE	98B	CBAR		0.0 $\overline{p}n \to \pi^-\pi^0\eta$
385 ± 40 $^{+65}_{-105}$	[4] THOMPSON	97	MPS		18 $\pi^- p \to \eta\pi^- p$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
143.2$\pm$12.5	[5] AOYAGI	93	BKEI		$\pi^- p \to \eta\pi^- p$
180 ± 20	[6] ALDE	88B	GAM4	0	100 $\pi^- p \to \eta\pi^0 n$

[4] Resolution is not unfolded, natural parity exchange.
[5] Unnatural parity exchange.
[6] Seen in the P_0-wave intensity of the $\eta\pi^0$ system, unnatural parity exchange.

$\hat{\rho}(1405)$ DECAY MODES

	Mode	Fraction (Γ_i/Γ)
Γ_1	$\eta\pi^0$	seen
Γ_2	$\eta\pi^-$	seen
Γ_3	$\eta'\pi$	possibly seen

$\hat{\rho}$(1405) BRANCHING RATIOS

$\Gamma(\eta\pi^0)/\Gamma_{total}$ — Γ_1/Γ

VALUE	DOCUMENT ID		TECN	CHG	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
not seen	PROKOSHKIN	95B	GAM4		100 $\pi^- p \rightarrow \eta\pi^0 n$
not seen	[7] BUGG	94	RVUE		$\overline{p}p \rightarrow \eta 2\pi^0$
not seen	[8] APEL	81	NICE	0	40 $\pi^- p \rightarrow \eta\pi^0 n$

[7] Using Crystal Barrel data.

[8] A general fit allowing *S*, *D*, and *P* waves (including m=0) is not done because of limited statistics.

$\Gamma(\eta\pi^-)/\Gamma_{total}$ — Γ_2/Γ

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
possibly seen	BELADIDZE	93	VES	$37\pi^- N \rightarrow \eta\pi^- N$

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

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
possibly seen	BELADIDZE	93	VES	$37\pi^- N \rightarrow \eta\pi^- N$

$\Gamma(\eta'\pi)/\Gamma(\eta\pi^0)$ — Γ_3/Γ_1

VALUE	CL%	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
<0.80	95	BOUTEMEUR	90	GAM4	100 $\pi^- p \rightarrow 4\gamma n$

$\hat{\rho}$(1405) REFERENCES

ABELE	98B	PL B423 175	A. Abele, Adomeit, Amsler+	(Crystal Barrel Collab.)
THOMPSON	97	PRL 79 1630	+Adams+	(E852 Collab.)
PROKOSHKIN	95B	PAN 58 606	+Sadovski	(SERP)
		Translated from YAF 58 662.		
BUGG	94	PR D50 4412	+Anisovich+	(LOQM)
AOYAGI	93	PL B314 246	+Fukui, Hasegawa+	(BKEI Collab.)
BELADIDZE	93	PL 313 276	+Berdnikov, Bityukov+	(VES Collab.)
BOUTEMEUR	90	Hadron 89 Conf. p 119	+Poulet	(SERP, BELG, LANL, LAPP, PISA, KEK)
ALDE	88B	PL B205 397	+Binon, Boutemeur+	(SERP, BELG, LANL, LAPP) IGJPC
APEL	81	NP B193 269	+Augenstein, Bertolucci, Donskov+	(SERP, CERN)

OTHER RELATED PAPERS

LACOCK	97	PL B401 308	P. Lacock+	(EDIN, LIVP)
SVEC	97C	PR D56 4355	M. Svec	(MCGI)
PROKOSHKIN	95C	PAN 58 853	+Sadovski	(SERP)
		Translated from YAF 58 921.		
KALASHNIK...	94	ZPHY C62 323	Kalashnikova	(ITEP)
IDDIR	88	PL B205 564	+Le Yaouanc, Ono+	(ORSAY, TOKY)
TUAN	88	PL B213 537	+Ferbel, Dalitz	(HAWA, ROCH, OXFTP)
ZIELINSKI	87	ZPHY C34 255		(ROCH)