$\rho_5(2350)$ $\qquad\qquad I^G(J^{PC}) = 1^+(5^{--})$

OMITTED FROM SUMMARY TABLE
> This entry was previously called $U_1(2400)$.   See also the $\overline{N}N(1100–3600)$ and $X(1900–3600)$ entries.   See also $\rho(2150)$, $f_2(2150)$, $\rho_3(2250)$, $f_4(2300)$.

$\rho_5(2350)$ MASS

$\pi^- p \to \omega\pi^0 n$

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
2330±35	ALDE	95	GAM2	38 $\pi^- p \to \omega\pi^0 n$

$\overline{p}p \to \pi\pi$ or $\overline{K}K$

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
∼ 2303	HASAN	94	RVUE		$\overline{p}p \to \pi\pi$
∼ 2300	[1] MARTIN	80B	RVUE		
∼ 2250	[1] MARTIN	80C	RVUE		
∼ 2500	[2] CARTER	78B	CNTR	0	0.7–2.4 $\overline{p}p \to K^-K^+$
∼ 2480	[3] CARTER	77	CNTR	0	0.7–2.4 $\overline{p}p \to \pi\pi$

S-CHANNEL $\overline{N}N$

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
∼ 2380	[4] CUTTS	78B	CNTR		0.97–3 $\overline{p}p \to \overline{N}N$
2345±15	[4,5] COUPLAND	77	CNTR	0	0.7–2.4 $\overline{p}p \to \overline{p}p$
2359± 2	[4,6] ALSPECTOR	73	CNTR		$\overline{p}p$ S channel
2350±10	[7] ABRAMS	70	CNTR		S channel $\overline{N}N$
2360±25	[8] OH	70B	HDBC	−0	$\overline{p}(pn), K^*K2\pi$

[1] $I(J^P) = 1(5^-)$ from simultaneous analysis of $p\overline{p} \to \pi^-\pi^+$ and $\pi^0\pi^0$.
[2] $I = 0(1)$; $J^P = 5^-$ from Barrelet-zero analysis.
[3] $I(J^P) = 1(5^-)$ from amplitude analysis.
[4] Isospins 0 and 1 not separated.
[5] From a fit to the total elastic cross section.
[6] Referred to as U or U region by ALSPECTOR 73.
[7] For $I = 1$ $\overline{N}N$.
[8] No evidence for this bump seen in the $\overline{p}p$ data of CHAPMAN 71B. Narrow state not confirmed by OH 73 with more data.

$\rho_5(2350)$ WIDTH

$\pi^- p \to \omega\pi^0 n$

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
400±100	ALDE	95	GAM2	38 $\pi^- p \to \omega\pi^0 n$

$\overline{p}p \rightarrow \pi\pi$ or $\overline{K}K$

VALUE (MeV)		DOCUMENT ID		TECN	CHG	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •						
~ 169		HASAN	94	RVUE		$\overline{p}p \rightarrow \pi\pi$
~ 250	[9]	MARTIN	80B	RVUE		
~ 300	[9]	MARTIN	80C	RVUE		
~ 150	[10]	CARTER	78B	CNTR	0	0.7–2.4 $\overline{p}p \rightarrow$ $K^- K^+$
~ 210	[11]	CARTER	77	CNTR	0	0.7–2.4 $\overline{p}p \rightarrow$ $\pi\pi$

S-CHANNEL $\overline{N}N$

VALUE (MeV)		DOCUMENT ID		TECN	CHG	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •						
$135^{+150}_{-\ 65}$	[12,13]	COUPLAND	77	CNTR	0	0.7–2.4 $\overline{p}p \rightarrow \overline{p}p$
$165^{+\ 18}_{-\ 8}$	[13]	ALSPECTOR	73	CNTR		$\overline{p}p$ S channel
< 60	[14]	OH	70B	HDBC	-0	$\overline{p}(pn)$, $K^* K 2\pi$
~ 140		ABRAMS	67C	CNTR		S channel $\overline{p}N$

[9] $I(J^P) = 1(5^-)$ from simultaneous analysis of $p\overline{p} \rightarrow \pi^-\pi^+$ and $\pi^0\pi^0$.

[10] $I = 0(1)$; $J^P = 5^-$ from Barrelet-zero analysis.

[11] $I(J^P) = 1(5^-)$ from amplitude analysis.

[12] From a fit to the total elastic cross section.

[13] Isospins 0 and 1 not separated.

[14] No evidence for this bump seen in the $\overline{p}p$ data of CHAPMAN 71B. Narrow state not confirmed by OH 73 with more data.

$\rho_5(2350)$ REFERENCES

ALDE	95	ZPHY C66 379	+Binon, Bricman+	(GAMS Collab.) JP
HASAN	94	PL B334 215	+Bugg	(LOQM)
MARTIN	80B	NP B176 355	+Morgan	(LOUC, RHEL) JP
MARTIN	80C	NP B169 216	+Pennington	(DURH) JP
CARTER	78B	NP B141 467		(LOQM)
CUTTS	78B	PR D17 16	+Good, Grannis, Green, Lee+	(STON, WISC)
CARTER	77	PL 67B 117	+Coupland, Eisenhandler, Astbury+	(LOQM, RHEL) JP
COUPLAND	77	PL 71B 460	+Eisenhandler, Gibson, Astbury+	(LOQM, RHEL)
ALSPECTOR	73	PRL 30 511	+Cohen, Cvijanovich+	(RUTG, UPNJ)
OH	73	NP B51 57	+Eastman, MingMa, Parker, Smith+	(MSU)
CHAPMAN	71B	PR D4 1275	+Green, Lys, Murphy, Ring+	(MICH)
ABRAMS	70	PR D1 1917	+Cool, Giacomelli, Kycia, Leontic, Li+	(BNL)
OH	70B	PRL 24 1257	+Parker, Eastman, Smith, Sprafka, Ma	(MSU)
ABRAMS	67C	PRL 18 1209	+Cool, Giacomelli, Kycia, Leontic, Li+	(BNL)

——— OTHER RELATED PAPERS ———

CASO	70	LNC 3 707	+Conte, Tomasini+	(GENO, HAMB, MILA, SACL)
BRICMAN	69	PL 29B 451	+Ferro-Luzzi, Bizard+	(CERN, CAEN, SACL)