$\rho_5(2350)$

$I^G(J^{PC}) = 1^+(5^{--})$

OMITTED FROM SUMMARY TABLE

This entry was previously called $U_1(2400)$. See also the Further States entry. See also $\rho(2150)$, $f_2(2150)$, $\rho_3(2250)$, $f_4(2300)$.

$\rho_5(2350)$ MASS

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

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

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*CHG*	*COMMENT*
• • • We do not use the following data for averages, fits, limits, etc. • • •					
~ 2303	HASAN	94	RVUE		$\overline{p}p \rightarrow \pi\pi$
~ 2300	[1] MARTIN	80B	RVUE		
~ 2250	[1] MARTIN	80C	RVUE		
~ 2500	[2] CARTER	78B	CNTR	0	0.7–2.4 $\overline{p}p \rightarrow K^- K^+$
~ 2480	[3] 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. • • •					
2300±45	[4] ANISOVICH	02	SPEC		0.6–1.9 $p\overline{p} \rightarrow \omega\pi^0$, $\omega\eta\pi^0$, $\pi^+\pi^-$
2295±30	ANISOVICH	00J	SPEC		
~ 2380	[5] CUTTS	78B	CNTR		0.97–3 $\overline{p}p \rightarrow \overline{N}N$
2345±15	[5,6] COUPLAND	77	CNTR	0	0.7–2.4 $\overline{p}p \rightarrow \overline{p}p$
2359± 2	[5,7] ALSPECTOR	73	CNTR		$\overline{p}p$ S channel
2350±10	[8] ABRAMS	70	CNTR		S channel $\overline{N}N$
2360±25	[9] OH	70B	HDBC	−0	$\overline{p}(pn)$, $K^* K 2\pi$

$\pi^- p \rightarrow K^+ K^- n$

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*CHG*	*COMMENT*
• • • We do not use the following data for averages, fits, limits, etc. • • •					
2307±6	ALPER	80	CNTR	0	62 $\pi^- p \rightarrow K^+ K^- n$

[1] $I(J^P) = 1(5^-)$ from simultaneous analysis of $p\overline{p} \rightarrow \pi^-\pi^+$ 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] From the combined analysis of ANISOVICH 00J, ANISOVICH 01D, ANISOVICH 01E, and ANISOVICH 02.

[5] Isospins 0 and 1 not separated.

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

[7] Referred to as U or U region by ALSPECTOR 73.
[8] For $I = 1$ $\overline{N}N$.
[9] 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

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

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

$\overline{p}p \rightarrow \pi\pi$ 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	[10] MARTIN	80B	RVUE		
~ 300	[10] MARTIN	80C	RVUE		
~ 150	[11] CARTER	78B	CNTR	0	0.7–2.4 $\overline{p}p \rightarrow K^- K^+$
~ 210	[12] 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. • • •					
260 ± 75	[13] ANISOVICH	02	SPEC		0.6–1.9 $p\overline{p} \rightarrow \omega\pi^0, \omega\eta\pi^0, \pi^+\pi^-$
235^{+65}_{-40}	ANISOVICH	00J	SPEC		
135^{+150}_{-65}	[14,15] COUPLAND	77	CNTR	0	0.7–2.4 $\overline{p}p \rightarrow \overline{p}p$
165^{+18}_{-8}	[15] ALSPECTOR	73	CNTR		$\overline{p}p$ S channel
< 60	[16] OH	70B	HDBC	−0	$\overline{p}(pn)$, $K^* K 2\pi$
~ 140	ABRAMS	67C	CNTR		S channel $\overline{p}N$

$\pi^- p \rightarrow K^+ K^- n$

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*CHG*	*COMMENT*
• • • We do not use the following data for averages, fits, limits, etc. • • •					
245 ± 20	ALPER	80	CNTR	0	62 $\pi^- p \rightarrow K^+ K^- n$

[10] $I(J^P) = 1(5^-)$ from simultaneous analysis of $p\overline{p} \rightarrow \pi^-\pi^+$ and $\pi^0\pi^0$.
[11] $I = 0(1)$; $J^P = 5^-$ from Barrelet-zero analysis.
[12] $I(J^P) = 1(5^-)$ from amplitude analysis.
[13] From the combined analysis of ANISOVICH 00J, ANISOVICH 01D, ANISOVICH 01E, and ANISOVICH 02.
[14] From a fit to the total elastic cross section.
[15] Isospins 0 and 1 not separated.
[16] 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

ANISOVICH	02	PL B542 8	A.V. Anisovich *et al.*	
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