$K\overline{K}$ AND $K\overline{K}\pi$ MODES

The data in this block is included in the average printed for a previous datablock.

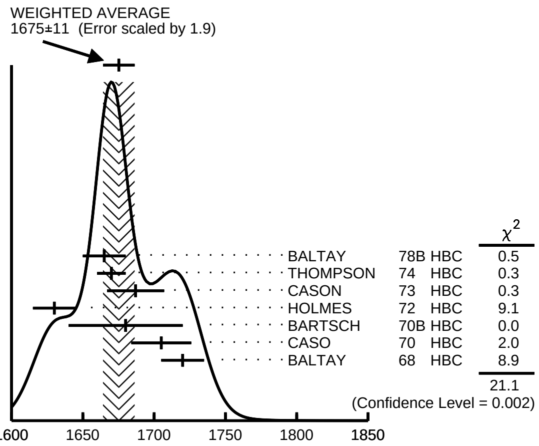
VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	COMMENT
1696 ± 4 OUR AVERAGE						
1699.0± 5.0		ALPER	80	CNTR	0	62 $\pi^- p \to K^+ K^- n$
1698 ±12	6k	[5,6] MARTIN	78D	SPEC		10 $\pi p \to K^0_S K^- p$
1692 ± 6		BLUM	75	ASPK	0	18.4 $\pi^- p \to n K^+ K^-$
1690.0±16.0		ADERHOLZ	69	HBC	+	8 $\pi^+ p \to K\overline{K}\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
1694.0± 8.0		[7] COSTA...	80	OMEG		10 $\pi^- p \to K^+ K^- n$

[5] From a fit to $J^P = 3^-$ partial wave.
[6] Systematic error on mass scale subtracted.
[7] They cannot distinguish between $\rho_3(1690)$ and $\omega_3(1670)$.

$(4\pi)^\pm$ MODE

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	COMMENT
1675 ±11 OUR AVERAGE Error includes scale factor of 1.9. See the ideogram below.						
1665.0±15.0	177	BALTAY	78B	HBC	+	15 $\pi^+ p \to p 4\pi$
1670 ±10		THOMPSON	74	HBC	+	13 $\pi^+ p$
1687 ±20		CASON	73	HBC	−	8,18.5 $\pi^- p$
1630 ±15		HOLMES	72	HBC	+	10–12 $K^+ p$
1680.0±40.0	144	BARTSCH	70B	HBC	+	8 $\pi^+ p \to N 4\pi$
1705.0±21.0		CASO	70	HBC	−	11.2 $\pi^- p \to n \rho 2\pi$
1720 ±15		BALTAY	68	HBC	+	7, 8.5 $\pi^+ p$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
1694 ± 6		[8] EVANGELISTA	81	OMEG	−	12 $\pi^- p \to p 4\pi$
1718 ±10		[9] EVANGELISTA	81	OMEG	−	12 $\pi^- p \to p 4\pi$
1673 ± 9		[10] EVANGELISTA	81	OMEG	−	12 $\pi^- p \to p 4\pi$
1733 ± 9	66	[11] KLIGER	74	HBC	−	4.5 $\pi^- p \to p 4\pi$
1685 ±14		[11] CASON	73	HBC	−	8,18.5 $\pi^- p$
1689.0±20.0	102	[11] BARTSCH	70B	HBC	+	8 $\pi^+ p \to N 2\rho$

[8] From $\rho^- \rho^0$ mode, not independent of the other two EVANGELISTA 81 entries.
[9] From $a_2(1320)^- \pi^0$ mode, not independent of the other two EVANGELISTA 81 entries.
[10] From $a_2(1320)^0 \pi^-$ mode, not independent of the other two EVANGELISTA 81 entries.
[11] From $\rho^\pm \rho^0$ mode.



$\rho_3(1690)$ mass, $(4\pi)^\pm$ mode (MeV)

$\omega\pi$ MODE

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
1681 ± 6 OUR AVERAGE					
1690 ±20	ALDE	92C	GAM2		38,100 $\pi^- p \to \omega\pi^0 n$
1690 ±15	EVANGELISTA	81	OMEG	−	12 $\pi^- p \to \omega\pi p$
1666.0±14.0	GESSAROLI	77	HBC		11 $\pi^- p \to \omega\pi p$
1686 ± 9	THOMPSON	74	HBC	+	13 $\pi^+ p$
1654 ±24	BARNHAM	70	HBC	+	10 $K^+ p \to \omega\pi X$

$\eta\pi^+\pi^-$ MODE

(For difficulties with MMS experiments, see the $a_2(1320)$ mini-review in the 1973 edition.)

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
1680 ±15	FUKUI	88	SPEC	0	8.95 $\pi^- p \to \eta\pi^+\pi^- n$
• • • We do not use the following data for averages, fits, limits, etc. • • •					
1700.0±47.0	[12] ANDERSON	69	MMS	−	16 $\pi^- p$ backward
1632 ±15	[12,13] FOCACCI	66	MMS	−	7–12 $\pi^- p \to p$MM
1700 ±15	[12,13] FOCACCI	66	MMS	−	7–12 $\pi^- p \to p$MM
1748 ±15	[12,13] FOCACCI	66	MMS	−	7–12 $\pi^- p \to p$MM

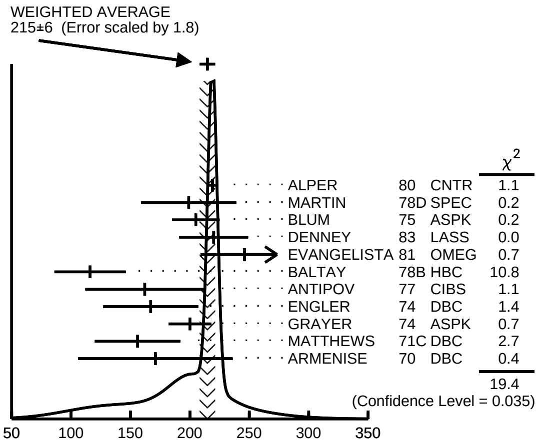
[12] Seen in 2.5–3 GeV/c $\overline{p}p$. $2\pi^+ 2\pi^-$, with 0, 1, 2 $\pi^+\pi^-$ pairs in ρ band not seen by OREN 74 (2.3 GeV/c $\overline{p}p$) with more statistics. (Jan. 1976)
[13] Not seen by BOWEN 72.

$\rho_3(1690)$ WIDTH

We include only high statistics experiments in the average for the 2π, $K\overline{K}$, $K\overline{K}\pi$ modes.

2π, $K\overline{K}$, AND $K\overline{K}\pi$ MODES

VALUE (MeV)	DOCUMENT ID
215±20 OUR ESTIMATE	This is only an educated guess; the error given is larger than the error on the average of the published values.
215± 6 OUR AVERAGE	Includes data from the 2 datablocks that follow this one. Error includes scale factor of 1.8. See the ideogram below.



$\rho_3(1690)$ width, 2π, $K\overline{K}$, and $K\overline{K}\pi$ modes (MeV)

2π MODE

The data in this block is included in the average printed for a previous datablock.

VALUE (MeV)	EVTS	DOCUMENT ID		TECN	CHG	COMMENT
186 ±14 OUR AVERAGE Error includes scale factor of 1.3. See the ideogram below.						
220 ±29		DENNEY	83	LASS		10 $\pi^+ N$
246 ±37		EVANGELISTA	81	OMEG	−	12 $\pi^- p \to 2\pi p$
116.0±30.0	476	BALTAY	78B	HBC	0	15 $\pi^+ p \to \pi^+\pi^- n$
162.0±50.0	175	[14] ANTIPOV	77	CIBS	0	25 $\pi^- p \to p 3\pi$
167 ±40	600	ENGLER	74	DBC	0	6 $\pi^+ n \to \pi^+\pi^- p$
200 ±18		[15] GRAYER	74	ASPK	0	17 $\pi^- p \to \pi^+\pi^- n$
156 ±36		MATTHEWS	71C	DBC	0	7 $\pi^+ N$
171.0±65.0		ARMENISE	70	DBC	0	9 $\pi^+ d$
• • • We do not use the following data for averages, fits, limits, etc. • • •						
322.0±35.0		[16] CORDEN	79	OMEG		12–15 $\pi^- p \to n 2\pi$
240 ±30		[15,17] ESTABROOKS	75	RVUE		17 $\pi^- p \to \pi^+\pi^- n$
180.0±30.0	122	BARTSCH	70B	HBC	+	8 $\pi^+ p \to N 2\pi$
267 $^{+72}_{-46}$		STUNTEBECK	70	HDBC	0	8 $\pi^- p$, 5.4 $\pi^+ d$
188 ±49		ARMENISE	68	DBC	0	5.1 $\pi^+ d$
180.0±40.0		GOLDBERG	65	HBC	0	6 $\pi^+ d$, 8 $\pi^- p$

[14] Width errors enlarged by us to $4\Gamma/\sqrt{N}$; see the note with the $K^*(892)$ mass.
[15] Uses same data as HYAMS 75 and BECKER 79.
[16] From a phase shift solution containing a $f'_2(1525)$ width two times larger than the $K\overline{K}$ result.
[17] From phase-shift analysis. Error takes account of spread of different phase-shift solutions.