$f_2(2150)$

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

OMITTED FROM SUMMARY TABLE

This entry was previously called T_0.

$f_2(2150)$ MASS

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

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
~ 2226	HASAN	94	RVUE	$\overline{p}p \to \pi\pi$
~ 2170	[1] MARTIN	80B	RVUE	
~ 2150	[1] MARTIN	80C	RVUE	
~ 2150	[2] DULUDE	78B	OSPK	1–2 $\overline{p}p \to \pi^0\pi^0$

[1] $I(J^P) = 0(2^+)$ from simultaneous analysis of $p\overline{p} \to \pi^-\pi^+$ and $\pi^0\pi^0$.
[2] $I^G(J^P) = 0^+(2^+)$ from partial-wave amplitude analysis.

S-CHANNEL $\overline{p}p$ or $\overline{N}N$

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
~ 2190	[3] CUTTS	78B	CNTR		0.97–3 $\overline{p}p \to \overline{N}N$
2155±15	[3,4] COUPLAND	77	CNTR	0	0.7–2.4 $\overline{p}p \to \overline{p}p$
2193± 2	[3,5] ALSPECTOR	73	CNTR		$\overline{p}p$ S channel

[3] Isospins 0 and 1 not separated.
[4] From a fit to the total elastic cross section.
[5] Referred to as T or T region by ALSPECTOR 73.

$\eta\eta$ MODE

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
2175±20	PROKOSHKIN	95D	GAM4	300 $\pi^- N \to \pi^- N 2\eta$, 450 $pp \to pp2\eta$
2130±35	SINGOVSKI	94	GAM4	450 $pp \to pp2\eta$
2104±20	ARMSTRONG	93C	SPEC	$\overline{p}p \to \pi^0\eta\eta \to 6\gamma$

$f_2(2150)$ WIDTH

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

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
250 OUR ESTIMATE				
• • • We do not use the following data for averages, fits, limits, etc. • • •				
~ 226	HASAN	94	RVUE	$\overline{p}p \to \pi\pi$
~ 250	[6] MARTIN	80B	RVUE	
~ 250	[6] MARTIN	80C	RVUE	
~ 250	[7] DULUDE	78B	OSPK	1–2 $\overline{p}p \to \pi^0\pi^0$

[6] $I(J^P) = 0(2^+)$ from simultaneous analysis of $p\overline{p} \to \pi^-\pi^+$ and $\pi^0\pi^0$.
[7] $I^G(J^P) = 0^+(2^+)$ from partial-wave amplitude analysis.

S-CHANNEL $\overline{p}p$ or $\overline{N}N$

VALUE (MeV)	DOCUMENT ID		TECN	CHG	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
135±75	[8,9] COUPLAND	77	CNTR	0	0.7–2.4 $\overline{p}p \to \overline{p}p$
98± 8	[9] ALSPECTOR	73	CNTR		$\overline{p}p$ S channel

[8] From a fit to the total elastic cross section.
[9] Isospins 0 and 1 not separated.

$\eta\eta$ MODE

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
150±35	PROKOSHKIN	95D	GAM4	300 $\pi^- N \to \pi^- N 2\eta$, 450 $pp \to pp2\eta$
130±30	SINGOVSKI	94	GAM4	450 $pp \to pp2\eta$
203±10	ARMSTRONG	93C	SPEC	$\overline{p}p \to \pi^0\eta\eta \to 6\gamma$

$f_2(2150)$ DECAY MODES

	Mode
Γ_1	$\pi\pi$
Γ_2	$\eta\eta$
Γ_3	$K\overline{K}$

$f_2(2150)$ BRANCHING RATIOS

$\Gamma(K\overline{K})/\Gamma(\eta\eta)$ Γ_3/Γ_2

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.1	95	[10] PROKOSHKIN 95D	GAM4	300 $\pi^- N \to \pi^- N 2\eta$, 450 $pp \to pp 2\eta$

[10] Using data from ARMSTRONG 89D.

$\Gamma(\pi\pi)/\Gamma(\eta\eta)$ Γ_1/Γ_2

VALUE	CL%	DOCUMENT ID	TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
<0.33	95	[11] PROKOSHKIN 95D	GAM4	300 $\pi^- N \to \pi^- N 2\eta$, 450 $pp \to pp 2\eta$

[11] Derived from a $\pi^0\pi^0/\eta\eta$ limit.

$f_2(2150)$ REFERENCES

PROKOSHKIN	95D	SPD 40 495 Translated from DANS 344 469.		(SERP) IGJPC
HASAN	94	PL B334 215	+Bugg	(LOQM)
SINGOVSKI	94	NC 107 1911		(SERP)
ARMSTRONG	93C	PL B307 394	+Bettoni+	(FNAL, FERR, GENO, UCI, NWES+)
ARMSTRONG	89D	PL B227 186	+Benayoun	(ATHU, BARI, BIRM, CERN, CDEF)
MARTIN	80B	NP B176 355	+Morgan	(LOUC, RHEL) JP
MARTIN	80C	NP B169 216	+Pennington	(DURH) JP
CUTTS	78B	PR D17 16	+Good, Grannis, Green, Lee+	(STON, WISC)
DULUDE	78B	PL 79B 335	+Lanou, Massimo, Peaslee+	(BROW, MIT, BARI) JP
COUPLAND	77	PL 71B 460	+Eisenhandler, Gibson, Astbury+	(LOQM, RHEL)
ALSPECTOR	73	PRL 30 511	+Cohen, Cvijanovich+	(RUTG, UPNJ)

OTHER RELATED PAPERS

FIELDS	71	PRL 27 1749	+Cooper, Rhines, Allison	(ANL, OXF)
YOH	71	PRL 26 922	+Barish, Caroll, Lobkowicz+	(CIT, BNL, ROCH)