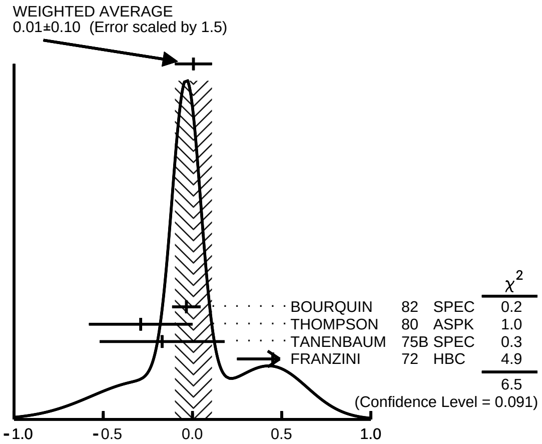
[10] The FRANZINI 72 value includes the events of earlier papers.



g_V/g_A for $\Sigma^- \rightarrow \Lambda e^- \overline{\nu}_e$

g_{WM}/g_A FOR $\Sigma^- \rightarrow \Lambda e^- \overline{\nu}_e$

The values quoted assume the CVC prediction $g_V = 0$.

VALUE	EVTS	DOCUMENT ID	TECN	COMMENT
2.4 ±1.7 OUR AVERAGE				
1.75±3.5	114	THOMPSON 80	ASPK	BNL hyperon beam
3.5 ±4.5	55	TANENBAUM 75B	SPEC	BNL hyperon beam
2.4 ±2.1	186	FRANZINI 72	HBC	

Σ^- REFERENCES

We have omitted some papers that have been superseded by later experiments. The omitted papers may be found in our 1986 edition (Physics Letters **170B**) or in earlier editions.

GUREV	93	JETPL 57 400	Gur'ev, Denisov, Zhelamkov, Ivanov+	(PNPI)
		Translated from ZETFP 57 389.		
GALL	88	PRL 60 186	+Austin+	(BOST, MIT, WILL, CIT, CMU, WYOM)
HERTZOG	88	PR D37 1142	+Eckhause+	(WILL, BOST, MIT, CIT, CMU, WYOM)
HSUEH	88	PR D38 2056	+	(CHIC, ELMT, FNAL, IOWA, ISU, PNPI, YALE)
ZAPALAC	86	PRL 57 1526	+	(EFI, ELMT, FNAL, IOWA, ISU, PNPI, YALE)
HSUEH	85	PRL 54 2399	+Muller+	(CHIC, ELMT, FNAL, ISU, PNPI, YALE)
WAH	85	PRL 55 2551	+Cardello, Cooper, Teig+	(FNAL, IOWA, ISU)
BOURQUIN	83B	ZPHY C21 27	+	(BRIS, GEVA, HEIDP, LALO, RL, STRB)
BOURQUIN	83C	ZPHY C21 17	+	(BRIS, GEVA, HEIDP, LALO, RL, STRB)
DECK	83	PR D28 1	+Beretvas, Devlin, Luk+	(RUTG, WISC, MICH, MINN)
BOURQUIN	82	ZPHY C12 307	+Brown+	(BRIS, GEVA, HEIDP, LALO, RL, STRB)
MARRAFFINO	80	PR D21 2501	+Reucroft, Roos, Waters+	(VAND, MPIM)
THOMPSON	80	PR D21 25	+Cleland, Cooper, Dris, Engels+	(PITT, BNL)
HANSL	78	NP B132 45	+Manz, Matt, Reucroft, Settles+	(MPIM, VAND)
DECAMP	77	PL 66B 295	+Badier, Bland, Chollet, Gaillard+	(LALO, EPOL)
CONFORTO	76	NP B105 189	+Gopal, Kalmus, Litchfield, Ross+	(RHEL, LOIC)
DUGAN	75	NP A254 396	+Asano, Chen, Cheng, Hu, Lidofsky+	(COLU, YALE)
TANENBAUM	75B	PR D12 1871	+Hungerbuhler+	(YALE, FNAL, BNL)
EBENHOH	74	ZPHY 266 367	+Eisele, Engelmann, Filthuth, Hepp+	(HEIDT)
TANENBAUM	74	PRL 33 175	+Hungerbuhler+	(YALE, FNAL, BNL)
EBENHOH	73	ZPHY 264 413	+Eisele, Filthuth, Hepp, Leitner, Thouw+	(HEIDT)
SECHI-ZORN	73	PR D8 12	+Snow	(UMD)
BOHM	72	NP B48 1	+	(BERL, KIDR, BRUX, IASD, DUUC, LOUC+)
FRANZINI	72	PR D6 2417	+	(COLU, HEID, UMD, STON)
ROBERTSON	72	Thesis		(IIT)
BAKKER	71	LNC 1 37	+Hoogland, Kluyver, Massard+	(SABRE Collab.)
COLE	71	PR D4 631	+Lee-Franzini, Loveless, Baltay+	(STON, COLU)
Also	69	Nevis 175 Thesis	Norton	(COLU)
TOVEE	71	NP B33 493	+	(LOUC, KIDR, BERL, BRUX, DUUC, WARS)
BERLEY	70B	PR D1 2015	+Yamin, Hertzbach, Kofler+	(BNL, MASA, YALE)
BOGERT	70	PR D2 6	+Lucas, Taft, Willis, Berley+	(BNL, MASA, YALE)
EISELE	70	ZPHY 238 372	+Filthuth, Hepp, Presser, Zech	(HEID)
PDG	70	RMP 42 No. 1	Barbaro-Galtieri, Derenzo, Price+	(LRL, BRAN, CERN+)
ANG	69	ZPHY 223 103	+Eisele, Engelmann, Filthuth+	(HEID)
ANG	69B	ZPHY 228 151	+Ebenhoh, Eisele, Engelmann, Filthuth+	(HEID)
BAGGETT	69	PRL 23 249	+Kehoe, Snow	(UMD)
BALTAY	69	PRL 22 615	+Franzini, Newman, Norton+	(COLU, STON)
BANGERTER	69	UCRL 19244 Thesis		(LRL)
BANGERTER	69B	PR 187 1821	+Alston-Garnjost, Galtieri, Gershwin+	(LRL)
BARLOUTAUD	69	NP B14 153	+DeBellefon, Granet+	(SACL, CERN, HEID)
EISELE	69	ZPHY 221 1	+Engelmann, Filthuth, Fohlisch, Hepp+	(HEID)
BIERMAN	68	PRL 20 1459	+Kounosu, Nauenberg+	(PRIN)
HEPP	68	ZPHY 214 71	+Schleich	(HEID)
WHITESIDE	68	NC 54A 537	+Gollub	(OBER)
BARASH	67	PRL 19 181	+Day, Glasser, Kehoe, Knop+	(UMD)
CHANG	66	PR 151 1081		(COLU)
BAZIN	65B	PR 140B 1358	+Plano, Schmidt+	(PRIN, RUTG, COLU)
DOSCH	65	PL 14 239	+Engelmann, Filthuth, Hepp, Kluge+	(HEID)
Also	66	PR 151 1081	Chang	(COLU)
SCHMIDT	65	PR 140B 1328		(COLU)
BURNSTEIN	64	PRL 13 66	+Day, Kehoe, Zorn, Snow	(UMD)
COURANT	64	PR 136B 1791	+Filthuth+	(CERN, HEID, UMD, NRL, BNL)
BARKAS	63	PRL 11 26	+Dyer, Heckman	(LRL)
HUMPHREY	62	PR 127 1305	+Ross	(LRL)

$\Sigma(1385)\ P_{13}$

$I(J^P) = 1(\frac{3}{2}^+)$ Status: ∗∗∗∗

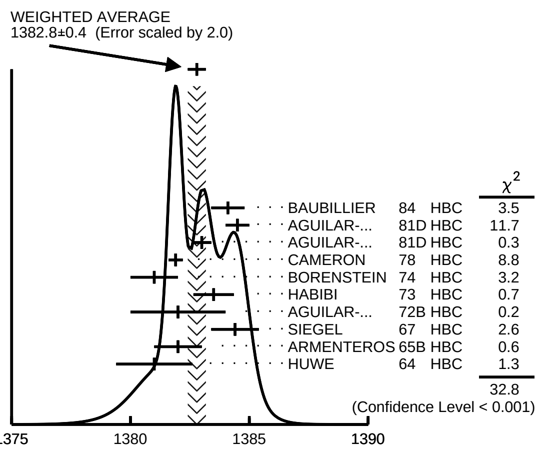
Discovered by ALSTON 60. Early measurements of the mass and width for combined charge states have been omitted. They may be found in our 1984 edition Reviews of Modern Physics **56** No. 2 Pt. II (1984).

We average only the most significant determinations. We do not average results from inclusive experiments with large backgrounds or results which are not accompanied by some discussion of experimental resolution. Nevertheless systematic differences between experiments remain. (See the ideograms in the Listings below.) These differences could arise from interference effects that change with production mechanism and/or beam momentum. They can also be accounted for in part by differences in the parametrizations employed. (See BORENSTEIN 74 for a discussion on this point.) Thus BORENSTEIN 74 uses a Breit-Wigner with energy-independent width, since a *P*-wave was found to give unsatisfactory fits. CAMERON 78 uses the same form. On the other hand HOLMGREN 77 obtains a good fit to their $\Lambda\pi$ spectrum with a *P*-wave Breit-Wigner, but includes the partial width for the $\Sigma\pi$ decay mode in the parametrization. AGUILAR-BENITEZ 81D gives masses and widths for five different Breit-Wigner shapes. The results vary considerably. Only the best-fit *S*-wave results are given here.

$\Sigma(1385)$ MASSES

$\Sigma(1385)^+$ MASS

VALUE (MeV)	EVTS	DOCUMENT ID	TECN	COMMENT
1382.8±0.4 OUR AVERAGE		Error includes scale factor of 2.0.		See the ideogram below.
1384.1±0.7	1897	BAUBILLIER 84	HBC	$K^- p$ 8.25 GeV/c
1384.5±0.5	5256	AGUILAR-... 81D	HBC	$K^- p \rightarrow \Lambda\pi\pi$ 4.2 GeV/c
1383.0±0.4	9361	AGUILAR-... 81D	HBC	$K^- p \rightarrow \Lambda 3\pi$ 4.2 GeV/c
1381.9±0.3	6900	CAMERON 78	HBC	$K^- p$ 0.96–1.36 GeV/c
1381 ±1	6846	BORENSTEIN 74	HBC	$K^- p$ 2.18 GeV/c
1383.5±0.85	2300	HABIBI 73	HBC	$K^- p \rightarrow \Lambda\pi\pi$
1382 ±2	400	AGUILAR-... 72B	HBC	$K^- p \rightarrow \Lambda\pi$'s
1384.4±1.0	1260	SIEGEL 67	HBC	$K^- p$ 2.1 GeV/c
1382 ±1	750	ARMENTEROS 65B	HBC	$K^- p$ 0.9–1.2 GeV/c
1381.0±1.6	859	HUWE 64	HBC	$K^- p$ 1.22 GeV/c
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1385.1±1.2	600	BAKER 80	HYBR	$\pi^+ p$ 7 GeV/c
1383.2±1.0	750	BAKER 80	HYBR	$K^- p$ 7 GeV/c
1381 ±2	7k	[1] BAUBILLIER 79B	HBC	$K^- p$ 8.25 GeV/c
1391 ±2	2k	CAUTIS 79	HYBR	$\pi^+ p/K^- p$ 11.5 GeV
1390 ±2	100	[1] SUGAHARA 79B	HBC	$\pi^- p$ 6 GeV/c
1385 ±3	22k	[1,2] BARREIRO 77B	HBC	$K^- p$ 4.2 GeV/c
1385 ±1	2594	HOLMGREN 77	HBC	See AGUILAR 81D
1380 ±2		[1] BARDADIN-... 75	HBC	$K^- p$ 14.3 GeV/c
1382 ±1	3740	[3] BERTHON 74	HBC	$K^- p$ 1263–1843 MeV/c
1390 ±6	46	AGUILAR-... 70B	HBC	$K^- p \rightarrow \Sigma\pi$'s 4 GeV/$c$
1383 ±8	62	[4] BIRMINGHAM 66	HBC	$K^- p$ 3.5 GeV/c
1378 ±5	135	LONDON 66	HBC	$K^- p$ 2.24 GeV/c
1384.3±1.9	250	[4] SMITH 65	HBC	$K^- p$ 1.8 GeV/c
1382.6±2.1	250	[4] SMITH 65	HBC	$K^- p$ 1.95 GeV/c
1375.0±3.9	170	COOPER 64	HBC	$K^- p$ 1.45 GeV/c
1376.0±3.9	154	[4] ELY 61	HLBC	$K^- p$ 1.11 GeV/c



$\Sigma(1385)^+$ mass (MeV)