NODE=B045

$\Sigma(1775)\ 5/2^-$

$I(J^P) = 1(\frac{5}{2}^-)$ Status: ∗∗∗∗

NODE=B045

Discovered by GALTIERI 63, this resonance plays the same role as cornerstone for isospin-1 analyses in this region as the $\Lambda(1820)F_{05}$ does in the isospin-0 channel.

For most results published before 1974 (they are now obsolete), see our 1982 edition Physics Letters **111B** 1 (1982).

Σ(1775) POLE POSITION

NODE=B045225

REAL PART

NODE=B045RE
NODE=B045RE

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
1760 to 1780 (≈ 1770) OUR ESTIMATE				
1767±4	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel
1767^{+2}_{-2}	[1] KAMANO	15	DPWA	$\overline{K}N$ multichannel
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1759	ZHANG	13A	DPWA	$\overline{K}N$ multichannel

→ UNCHECKED ←

[1] From the preferred solution A in KAMANO 15.

NODE=B045RE;LINKAGE=A

−2×IMAGINARY PART

NODE=B045IM
NODE=B045IM

VALUE (MeV)	*DOCUMENT ID*		*TECN*	*COMMENT*
45 to 65 (≈ 55) OUR ESTIMATE				
122±8	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel
128^{+4}_{-2}	[1] KAMANO	15	DPWA	$\overline{K}N$ multichannel
• • • We do not use the following data for averages, fits, limits, etc. • • •				
118	ZHANG	13A	DPWA	$\overline{K}N$ multichannel

→ UNCHECKED ←

[1] From the preferred solution A in KAMANO 15.

NODE=B045IM;LINKAGE=A

Σ(1775) POLE RESIDUES

NODE=B045250

The normalized residue is the residue divided by $\Gamma_{pole}/2$.

NODE=B045250

Normalized residue in $N\overline{K} \to \Sigma(1775) \to N\overline{K}$

NODE=B045A00
NODE=B045A00

MODULUS	*PHASE* (°)	*DOCUMENT ID*		*TECN*	*COMMENT*
0.44 ±0.09	−17 ± 10	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.371	−32	[1] KAMANO	15	DPWA	$\overline{K}N$ multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045A00;LINKAGE=A

Normalized residue in $N\overline{K} \to \Sigma(1775) \to \Sigma\pi$

NODE=B045A01
NODE=B045A01

MODULUS	*PHASE* (°)	*DOCUMENT ID*		*TECN*	*COMMENT*
0.13 ±0.03	10 ± 12	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.115	−24	[1] KAMANO	15	DPWA	$\overline{K}N$ multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045A01;LINKAGE=A

Normalized residue in $N\overline{K} \to \Sigma(1775) \to \Lambda\pi$

NODE=B045A02
NODE=B045A02

MODULUS	*PHASE* (°)	*DOCUMENT ID*		*TECN*	*COMMENT*
0.47 ±0.10	130 ± 15	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.325	157	[1] KAMANO	15	DPWA	$\overline{K}N$ multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045A02;LINKAGE=A

Normalized residue in $N\overline{K} \to \Sigma(1775) \to \Sigma(1385)\pi$, *D*-wave

NODE=B045A03
NODE=B045A03

MODULUS	*PHASE* (°)	*DOCUMENT ID*		*TECN*	*COMMENT*
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.391	137	[1] KAMANO	15	DPWA	$\overline{K}N$ multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045A03;LINKAGE=A

Normalized residue in $N\overline{K} \to \Sigma(1775) \to \Sigma(1385)\pi$, G-wave

NODE=B045A04
NODE=B045A04

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •					
0.0129	−58	[1] KAMANO	15	DPWA	$\overline{K}N$ multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045A04;LINKAGE=A

Normalized residue in $N\overline{K} \to \Sigma(1775) \to N\overline{K}^*(892)$, S=1/2, D-wave

NODE=B045A05
NODE=B045A05

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.04±0.02	−100 ± 60	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Sigma(1775) \to N\overline{K}^*(892)$, S=3/2, D-wave

NODE=B045A06
NODE=B045A06

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.09±0.06	10 ± 50	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Sigma(1775) \to N\overline{K}^*(892)$, S=3/2, G-wave

NODE=B045A07
NODE=B045A07

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.04±0.02	−100 ± 60	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Sigma(1775) \to \Xi K$

NODE=B045A08
NODE=B045A08

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.02±0.01	−90 ± 35	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Sigma(1775) \to \Lambda(1520)\pi$, P-wave

NODE=B045A09
NODE=B045A09

MODULUS	PHASE (°)	DOCUMENT ID		TECN	COMMENT
0.09±0.03	10 ± 30	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Sigma(1775) \to \Lambda(1520)\pi$, F-wave

NODE=B045A10
NODE=B045A10

VALUE	DOCUMENT ID		TECN	COMMENT
0.01±0.01	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

Normalized residue in $N\overline{K} \to \Sigma(1775) \to \Delta\overline{K}$, D-wave

NODE=B045A11
NODE=B045A11

VALUE	DOCUMENT ID		TECN	COMMENT
0.02±0.02	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

$\Sigma(1775)$ MASS

NODE=B045M

NODE=B045M
→ UNCHECKED ←

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
1770 to 1780 (≈ 1775) OUR ESTIMATE				
1776± 4	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel
1778± 1	ZHANG	13A	DPWA	$\overline{K}N$ multichannel
1778± 5	GOPAL	80	DPWA	$\overline{K}N \to \overline{K}N$
1777± 5	ALSTON-...	78	DPWA	$\overline{K}N \to \overline{K}N$
1775±10	BAILLON	75	IPWA	$\overline{K}N \to \Lambda\pi$
1774±10	VANHORN	75	DPWA	$K^- p \to \Lambda\pi^0$
1772± 6	KANE	74	DPWA	$K^- p \to \Sigma\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
1774± 5	GOPAL	77	DPWA	$\overline{K}N$ multichannel
1772 or 1777	[1] MARTIN	77	DPWA	$\overline{K}N$ multichannel
1765	DEBELLEFON	76	IPWA	$K^- p \to \Lambda\pi^0$

[1] The two MARTIN 77 values are from a T-matrix pole and from a Breit-Wigner fit.

NODE=B045M;LINKAGE=A

$\Sigma(1775)$ WIDTH

NODE=B045W

NODE=B045W
→ UNCHECKED ←

VALUE (MeV)	DOCUMENT ID		TECN	COMMENT
105 to 135 (≈ 120) OUR ESTIMATE				
124± 8	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel
131± 3	ZHANG	13A	DPWA	$\overline{K}N$ multichannel
137±10	GOPAL	80	DPWA	$\overline{K}N \to \overline{K}N$
116±10	ALSTON-...	78	DPWA	$\overline{K}N \to \overline{K}N$
125±15	BAILLON	75	IPWA	$\overline{K}N \to \Lambda\pi$
146±18	VANHORN	75	DPWA	$K^- p \to \Lambda\pi^0$
154±10	KANE	74	DPWA	$K^- p \to \Sigma\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
130±10	GOPAL	77	DPWA	$\overline{K}N$ multichannel
102 or 103	[1] MARTIN	77	DPWA	$\overline{K}N$ multichannel
120	DEBELLEFON	76	IPWA	$K^- p \to \Lambda\pi^0$

[1] The two MARTIN 77 values are from a T-matrix pole and from a Breit-Wigner fit.

NODE=B045W;LINKAGE=A

Σ(1775) DECAY MODES

NODE=B045215;NODE=B045

	Mode	Fraction (Γ_i/Γ)	
Γ_1	$N\overline{K}$	37–43%	DESIG=1;OUR EST
Γ_2	$\Lambda\pi$	14–20%	DESIG=2;OUR EST
Γ_3	$\Sigma\pi$	2–5%	DESIG=5;OUR EST
Γ_4	$\Sigma(1385)\pi$	8–12%	DESIG=4;OUR EST
Γ_5	$\Sigma(1385)\pi$, D-wave		DESIG=6
Γ_6	$\Sigma(1385)\pi$, G-wave		DESIG=11
Γ_7	$\Lambda(1520)\pi$, P-wave	17–23%	DESIG=3;OUR EST
Γ_8	$\Sigma\pi\pi$		DESIG=7
Γ_9	$\Delta(1232)\overline{K}$, D-wave		DESIG=8
Γ_{10}	$N\overline{K}^*(892)$, S=1/2		DESIG=9
Γ_{11}	$N\overline{K}^*(892)$, S=1/2, D-wave		DESIG=14
Γ_{12}	$N\overline{K}^*(892)$, S=3/2, D-wave		DESIG=10
Γ_{13}	$N\overline{K}^*(892)$, S=3/2, G-wave		DESIG=12

Σ(1775) BRANCHING RATIOS

NODE=B045220

See "Sign conventions for resonance couplings" in the Note on Λ and Σ Resonances. Also, the errors quoted do not include uncertainties due to the parametrization used in the partial-wave analyses and are thus too small.

NODE=B045220

$\Gamma(N\overline{K})/\Gamma_{total}$ — Γ_1/Γ

NODE=B045R1
NODE=B045R1

VALUE	DOCUMENT ID		TECN	COMMENT
0.37 to 0.43 OUR ESTIMATE				
0.43 ±0.09	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel
0.40 ±0.01	ZHANG	13A	DPWA	$\overline{K}N$ multichannel
0.40 ±0.02	GOPAL	80	DPWA	$\overline{K}N \to \overline{K}N$
0.37 ±0.03	ALSTON-...	78	DPWA	$\overline{K}N \to \overline{K}N$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.402	[1] KAMANO	15	DPWA	Multichannel
0.41 ±0.03	GOPAL	77	DPWA	See GOPAL 80
0.37 or 0.36	[2] MARTIN	77	DPWA	$\overline{K}N$ multichannel

→ UNCHECKED ←

[1] From the preferred solution A in KAMANO 15.

NODE=B045R1;LINKAGE=A

[2] The two MARTIN 77 values are from a T-matrix pole and from a Breit-Wigner fit.

NODE=B045;LINKAGE=A

$\Gamma(\Lambda\pi)/\Gamma_{total}$ — Γ_2/Γ

NODE=B045R04
NODE=B045R04

VALUE	DOCUMENT ID		TECN	COMMENT
0.49 ±0.10	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.244	[1] KAMANO	15	DPWA	$\overline{K}N$ multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045R04;LINKAGE=A

$\Gamma(\Lambda\pi)/\Gamma(N\overline{K})$ — Γ_2/Γ_1

NODE=B045R6
NODE=B045R6

VALUE	DOCUMENT ID		TECN	COMMENT
0.33±0.05	UHLIG	67	HBC	$K^- p$ 0.9 GeV/c

$\Gamma(\Sigma\pi)/\Gamma_{total}$ — Γ_3/Γ

NODE=B045R00
NODE=B045R00

VALUE	DOCUMENT ID		TECN	COMMENT
0.035±0.010	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.042	[1] KAMANO	15	DPWA	$\overline{K}N$ multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045R00;LINKAGE=A

$\Gamma(\Sigma(1385)\pi)/\Gamma(N\overline{K})$ — Γ_4/Γ_1

NODE=B045R8
NODE=B045R8

VALUE	DOCUMENT ID		TECN	COMMENT
0.25±0.09	UHLIG	67	HBC	$K^- p$ 0.9 GeV/c

$\Gamma(\Sigma(1385)\pi, D\text{-wave})/\Gamma_{total}$ — Γ_5/Γ

NODE=B045R10
NODE=B045R10

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.309	[1] KAMANO	15	DPWA	Multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045R10;LINKAGE=A

$\Gamma(\Sigma(1385)\pi\text{, }G\text{-wave})/\Gamma_{\text{total}}$ — Γ_6/Γ

NODE=B045R06
NODE=B045R06

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
not seen	[1] KAMANO	15	DPWA	Multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045R06;LINKAGE=A

$\Gamma(\Lambda(1520)\pi\text{, }P\text{-wave})/\Gamma_{\text{total}}$ — Γ_7/Γ

NODE=B045R05
NODE=B045R05

VALUE	DOCUMENT ID		TECN	COMMENT
0.02 ± 0.01	SARANTSEV	19	DPWA	$\overline{K}N$ multichannel

$\Gamma(\Lambda(1520)\pi\text{, }P\text{-wave})/\Gamma(N\overline{K})$ — Γ_7/Γ_1

NODE=B045R7
NODE=B045R7

VALUE	DOCUMENT ID		TECN	COMMENT
0.28 ± 0.05	UHLIG	67	HBC	$K^- p$ 0.9 GeV/c

$\Gamma(\Sigma\pi\pi)/\Gamma_{\text{total}}$ — Γ_8/Γ

NODE=B045R9
NODE=B045R9

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.12	[1] ARMENTEROS	68C	HDBC	$K^- N \to \Sigma\pi\pi$

[1] For about 3/4 of this, the $\Sigma\pi$ system has $I=0$ and is almost entirely $\Lambda(1520)$. For the rest, the $\Sigma\pi$ has $I=1$, which is about what is expected from the known $\Sigma(1775) \to \Sigma(1385)\pi$ rate, as seen in $\Lambda\pi\pi$.

NODE=B045;LINKAGE=E

$\Gamma(N\overline{K}^*(892)\text{, }S\text{=1/2, }D\text{-wave})/\Gamma_{\text{total}}$ — Γ_{11}/Γ

NODE=B045R11
NODE=B045R11

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
not seen	[1] KAMANO	15	DPWA	Multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045R11;LINKAGE=A

$\Gamma(N\overline{K}^*(892)\text{, }S\text{=3/2, }D\text{-wave})/\Gamma_{\text{total}}$ — Γ_{12}/Γ

NODE=B045R08
NODE=B045R08

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.003	[1] KAMANO	15	DPWA	Multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045R08;LINKAGE=A

$\Gamma(N\overline{K}^*(892)\text{, }S\text{=3/2, }G\text{-wave})/\Gamma_{\text{total}}$ — Γ_{13}/Γ

NODE=B045R09
NODE=B045R09

VALUE	DOCUMENT ID		TECN	COMMENT
• • • We do not use the following data for averages, fits, limits, etc. • • •				
not seen	[1] KAMANO	15	DPWA	Multichannel

[1] From the preferred solution A in KAMANO 15.

NODE=B045R09;LINKAGE=A

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\overline{K} \to \Sigma(1775) \to \Lambda\pi$ — $(\Gamma_1\Gamma_2)^{1/2}/\Gamma$

NODE=B045R2
NODE=B045R2

VALUE	DOCUMENT ID		TECN	COMMENT
$-0.31\ \pm0.01$	ZHANG	13A	DPWA	Multichannel
$-0.28\ \pm0.03$	GOPAL	77	DPWA	$\overline{K}N$ multichannel
$-0.25\ \pm0.02$	BAILLON	75	IPWA	$\overline{K}N \to \Lambda\pi$
$-0.28\ ^{+0.04}_{-0.05}$	VANHORN	75	DPWA	$K^- p \to \Lambda\pi^0$
-0.259 ± 0.048	DEVENISH	74B		Fixed-t dispersion rel.
• • • We do not use the following data for averages, fits, limits, etc. • • •				
-0.29 or -0.28	[1] MARTIN	77	DPWA	$\overline{K}N$ multichannel
-0.30	DEBELLEFON	76	IPWA	$K^- p \to \Lambda\pi^0$

[1] The two MARTIN 77 values are from a T-matrix pole and from a Breit-Wigner fit.

NODE=B045R2;LINKAGE=A

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{\text{total}}$ in $N\overline{K} \to \Sigma(1775) \to \Sigma\pi$ — $(\Gamma_1\Gamma_3)^{1/2}/\Gamma$

NODE=B045R5
NODE=B045R5

VALUE	DOCUMENT ID		TECN	COMMENT
$+0.08\pm0.01$	ZHANG	13A	DPWA	Multichannel
$+0.13\pm0.02$	GOPAL	77	DPWA	$\overline{K}N$ multichannel
0.09 ± 0.01	KANE	74	DPWA	$K^- p \to \Sigma\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
$+0.08$ or $+0.08$	[1] MARTIN	77	DPWA	$\overline{K}N$ multichannel

[1] The two MARTIN 77 values are from a T-matrix pole and from a Breit-Wigner fit.

NODE=B045R5;LINKAGE=A

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{total}$ in $N\overline{K} \to \Sigma(1775) \to \Sigma(1385)\pi$, D-wave $(\Gamma_1\Gamma_5)^{1/2}/\Gamma$

NODE=B045R4
NODE=B045R4

VALUE	DOCUMENT ID		TECN	COMMENT
-0.12 ± 0.01	ZHANG	13A	DPWA	Multichannel
-0.184 ± 0.011	[1] CAMERON	78	DPWA	$K^- p \to \Sigma(1385)\pi$
$+0.20 \pm 0.02$	PREVOST	74	DPWA	$K^- N \to \Sigma(1385)\pi$
• • • We do not use the following data for averages, fits, limits, etc. • • •				
0.32 ± 0.06	SIMS	68	DBC	$K^- N \to \Lambda\pi\pi$
0.24 ± 0.03	ARMENTEROS	67C	HBC	$K^- p \to \Lambda\pi\pi$

[1] The CAMERON 78 upper limit on G-wave decay is 0.03.

NODE=B045;LINKAGE=F

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{total}$ in $N\overline{K} \to \Sigma(1775) \to \Lambda(1520)\pi$, P-wave $(\Gamma_1\Gamma_7)^{1/2}/\Gamma$

NODE=B045R3
NODE=B045R3

VALUE	DOCUMENT ID		TECN	COMMENT
-0.06 ± 0.01	ZHANG	13A	DPWA	Multichannel
-0.305 ± 0.010	[1] CAMERON	77	DPWA	$K^- p \to \Lambda(1520)\pi^0$
0.31 ± 0.02	BARLETTA	72	DPWA	$K^- p \to \Lambda(1520)\pi^0$
0.27 ± 0.03	ARMENTEROS	65C	HBC	$K^- p \to \Lambda(1520)\pi^0$

[1] This rate combines P-wave- and F-wave decays. The CAMERON 77 results for the separate P-wave- and F-wave decays are -0.303 ± 0.010 and -0.037 ± 0.014. The published signs have been changed here to be in accord with the baryon-first convention.

NODE=B045;LINKAGE=C

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{total}$ in $N\overline{K} \to \Sigma(1775) \to \Delta(1232)\overline{K}$, D-wave $(\Gamma_1\Gamma_9)^{1/2}/\Gamma$

NODE=B045R01
NODE=B045R01

VALUE	DOCUMENT ID		TECN	COMMENT
$+0.06 \pm 0.03$	ZHANG	13A	DPWA	Multichannel

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{total}$ in $N\overline{K} \to \Sigma(1775) \to N\overline{K}^*(892)$, S=1/2 $(\Gamma_1\Gamma_{10})^{1/2}/\Gamma$

NODE=B045R02
NODE=B045R02

VALUE	DOCUMENT ID		TECN	COMMENT
$+0.04 \pm 0.01$	ZHANG	13A	DPWA	Multichannel

$(\Gamma_i\Gamma_f)^{1/2}/\Gamma_{total}$ in $N\overline{K} \to \Sigma(1775) \to N\overline{K}^*(892)$, S=3/2, D-wave $(\Gamma_1\Gamma_{12})^{1/2}/\Gamma$

NODE=B045R03
NODE=B045R03

VALUE	DOCUMENT ID		TECN	COMMENT
$+0.04 \pm 0.01$	ZHANG	13A	DPWA	Multichannel

$\Sigma(1775)$ REFERENCES

NODE=B045

SARANTSEV	19	EPJ A55 180	A.V. Sarantsev *et al.*	(BONN, PNPI)	REFID=59986
KAMANO	15	PR C92 025205	H. Kamano *et al.*	(ANL, OSAK)	REFID=57507
ZHANG	13A	PR C88 035205	H. Zhang *et al.*	(KSU)	REFID=55441
PDG	82	PL 111B 1	M. Roos *et al.*	(HELS, CIT, CERN)	REFID=41167
GOPAL	80	Toronto Conf. 159	G.P. Gopal	(RHEL) IJP	REFID=31755
ALSTON-...	78	PR D18 182	M. Alston-Garnjost *et al.*	(LBL, MTHO+) IJP	REFID=31751
Also		PRL 38 1007	M. Alston-Garnjost *et al.*	(LBL, MTHO+) IJP	REFID=31752
CAMERON	78	NP B143 189	W. Cameron *et al.*	(RHEL, LOIC) IJP	REFID=31837
CAMERON	77	NP B131 399	W. Cameron *et al.*	(RHEL, LOIC) IJP	REFID=31749
GOPAL	77	NP B119 362	G.P. Gopal *et al.*	(LOIC, RHEL) IJP	REFID=31750
MARTIN	77	NP B127 349	B.R. Martin, M.K. Pidcock, R.G. Moorhouse	(LOUC+) IJP	REFID=31762
Also		NP B126 266	B.R. Martin, M.K. Pidcock	(LOUC)	REFID=31763
Also		NP B126 285	B.R. Martin, M.K. Pidcock	(LOUC) IJP	REFID=31764
DEBELLEFON	76	NP B109 129	A. de Bellefon, A. Berthon	(CDEF) IJP	REFID=32158
BAILLON	75	NP B94 39	P.H. Baillon, P.J. Litchfield	(CERN, RHEL) IJP	REFID=32089
VANHORN	75	NP B87 145	A.J. van Horn	(LBL) IJP	REFID=32093
Also		NP B87 157	A.J. van Horn	(LBL) IJP	REFID=32094
DEVENISH	74B	NP B81 330	R.C.E. Devenish, C.D. Froggatt, B.R. Martin	(DESY+)	REFID=30036
KANE	74	LBL-2452	D.F. Kane	(LBL) IJP	REFID=31759
PREVOST	74	NP B69 246	J. Prevost *et al.*	(SACL, CERN, HEID)	REFID=31785
BARLETTA	72	NP B40 45	W.A. Barletta	(EFI) IJP	REFID=32262
Also		PRL 17 841	S. Fenster *et al.*	(CHIC, ANL, CERN) IJP	REFID=32244
ARMENTEROS	68C	NP B8 216	R. Armenteros *et al.*	(CERN, HEID, SACL) I	REFID=31797
SIMS	68	PRL 21 1413	W.H. Sims *et al.*	(FSU, TUFTS, BRAN)	REFID=32137
ARMENTEROS	67C	ZPHY 202 486	R. Armenteros *et al.*	(CERN, HEID, SACL)	REFID=31865
UHLIG	67	PR 155 1448	R.P. Uhlig *et al.*	(UMD, NRL)	REFID=31730
ARMENTEROS	65C	PL 19 338	R. Armenteros *et al.*	(CERN, HEID, SACL) IJP	REFID=31725
GALTIERI	63	PL 6 296	A. Galtieri, A. Hussain, R. Tripp	(LRL) IJ	REFID=31722