Table I
Nuclear Moments

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This is a compilation of nuclear moments reported at the Conference. It consists of the following columns.

Column 1 ; Nucleus.
Column 2 ; Spin and parity.
Column 3 ; Excitation energy.
Column 4 ; Half-life.
(Values in Column 1–4 are taken from the contributed paper, but if not given in the paper they are taken from "*Table of Isotopes*"; C. M. Lederer *et al.* John Willey. Underlines indicate that the values are newly determined)
Column 5 ; Magnetic dipole moment or electric quadrupole moment. When the experimental result was reported as the g factor it is converted to the magnetic moment unless the spin assignment is ambiguous.
Column 6*; The g factor reported. If uncorrected value of the magnetic moment was reported, it is presented in a solid bracket; [ ].
Column 7*; Remarks. This column shows; the method of measurement, other information obtained besides the nuclear moment, etc. The following abbreviations are used to indicate experimental methods.

IB-DPAD	In-beam time differential perturbed angular distribution
IB-IPAD	In-beam time integral perturbed angular distribution
$\gamma\gamma$-DPAC	γ-γ time differential perturbed angular correlation
$\gamma\gamma$-IPAC	γ-γ time integral perturbed angular correlation
IB-STROB	In-beam stroboscopic resonance
IB-NMR/β	In-beam NMR detected by β-decay asymmetry

IB-NMR/γ	In-beam NMR detected by γ-ray anisotropy
IB-OPUMP	In-beam optical pumping
LT-NO	Low temperature nuclear orientation
LT-NMR/ON	NMR of oriented nuclei at low temperature
REOR	Reorientation effect in Coulomb excitation.

Column 8;* Contributed paper.

* In the table of electric quadrupole moments, remarks and contributed paper are in Col. 6 and 7 respectively.

Magnetic dipole moments

Nucleus	J^π	E^* (keV)	$T_{1/2}$	μ (nm)	g factor or [μ (uncorrected)]	Remarks (Method, other information)	Contribution
^8B	2^+	gnd	0.77s	1.0355(3)	[1.03533(25)]	IB-NMR/β $^6Li(^3He,n)^8B$ $T_{rel}(^8B$ in Pt$)\sim 3.4$s	T. Minamisono *et al.* (II–3)
^{14}N	3^-	5830	12.5ps	$1.5<\lvert\mu\rvert<2.55$	$0.5<\lvert g\rvert<0.85$	IB-IPAD $^{12}C(^3He,p)^{14}N$	Z. Berant *et al.* (II–15)
^{36}K	2	gnd	245ms	0.547(2)		IB-OPUMP/β $^{36}A(p,n)^{36}K$	H. Schweickert *et al.* (II–6)
^{41}Sc	$7/2^-$	gnd	590ms	5.43(2)	[5.4216(26)]	IB-NMR/β $^{40}Ca(d,n)^{41}Sc$ $T_{rel}(^{41}Sc$ in Pt a4 K$) > T_{1/2}$	K. Sugimoto *et al.* (II–4)
^{64}Cu	6^-	1594	20.4ns	+1.06(3)		IB-DPAD $^{63}Cu(d,p)^{64}Cu$	J. Bleck *et al.*
^{66}Cu	6^-	1154	596ns	+1.038(3)		〃 $^{65}Cu(d,p)^{66}Cu$	(III–5)
^{67}Zn	$9/2^+$	605	340ns	−1.094(20)	$g = -0.243(4)$	IB-DPAD $^{64}Ni(\alpha,n)^{67}Zn$	H. Bertschat *et al.*
^{67}Ge	$9/2^+$	734	70ns	−0.945(30)	$g = -0.210(7)$	〃 $^{64}Zn(\alpha,n)^{67}Ge$	(III. d.)
^{72}As	3^+	215	80ns	+1.575(18)	$g = +0.525(6)$	IB-DPAD $^{72}Ge(p,n)^{72}As$	H. Bertschat *et al.* (III–6)
^{75}As	$3/2^-$	265	12ps	+0.93(24)	$g = +0.62(16)$	$\gamma\gamma$-IPAC As in Fe	R. C. Chopra *et al.* (V–1)
^{78}Br	4	181	120μs	$\lvert\mu\rvert = 4.10$	$\lvert g\rvert = 1.025$	IB-NMR/γ $^{78}Se(p,n)^{78}Br$ $T_{rel}(^{78}Br$ in liq. SeTl$) = 100\mu$sec	N. Bräuer *et al.* (II–2)

Nucleus	J^π	E^* (keV)	$T_{1/2}$	μ (nm)	g factor or [μ (uncorrected)]	Remarks (Method, other information)	Contribution
^{86}Sr	8^+	2958	460ns	−1.93(12)	$g = -0.241(15)$	IB-DPAD $^{88}Sr(p,p2n)^{86}Sr$	O. Hashimoto *et al.* (III–7)
^{91}Zr	$(15/2^-)$		29ns		$g = 0.71(1)$	IB-DPAD $^{88}Sr(\alpha,n)^{91}Zr$	C. V. K. Baba *et al.*
^{91}Nb	$17/2^-$	2378	10ns	10.63(34)	$g = 1.25(4)$	〃 $^{89}Y(\alpha,2n)^{91}Nb$	(III–8)
^{94}Mo	8^+	2953	98ns	10.54(16)	$g = +1.317(20)$	IB-DPAD $^{92}Zr(\alpha,2n)^{94}Mo$	T. Faestermann *et al.* (III–9)
^{103}Rh	$3/2^-$	298	6ps	0.71(21)	$g = 0.47(14)$	IB-PAD in gas	T. R. Miller *et al.*
	$5/2^-$	360	60ps	0.95(33)	$g = 0.38(13)$	with plunger method	(II. c.)
					$g(3/2^-)/g(5/2^-) = 1.22(18)$		
^{107}Ag	$3/2^-$	325	6ps	0.62(21)	$g = 0.41(14)$	〃	
	$5/2^-$	423	34ps	0.88(20)	$g = 0.35(13)$		
					$g(3/2^-)/g(5/2^-) = 1.16(29)$		
^{109}Ag	$3/2^-$	309	6ps	0.68(23)	$g = 0.45(15)$	〃	
	$5/2^-$	414	33ps	0.68(23)	$g = 0.27\ (9)$		
					$g(3/2^-)/g(5/2^-) = 1.66(33)$		
^{114}Sn	(7^-)	3091	726ns		$g = -0.081(3)$	IB-DPAD $^{112}Cd(\alpha,2n)^{114}Sn$	M. Borsaru *et al.*
					$g(uncorr) = -0.0812(25)$		(III–10)
^{118}Sn	7^-	2580	230ns	−0.69(8)	$g = -0.099(11)$	$^{116}Cd(\alpha,2n)^{118}Sn$	
^{122}Sb	3^+	61	1.8μs	2.964(12)	$g = +0.988(4)$	IB-STROB $^{122}Sn(p,n)^{122}Sb$	P. Heubes *et al.* (III–11)
^{123}Te	$11/2^-$	248	117d	−1.00(5)		LT-NO	L. Vanneste *et al.*
^{125}Te	$11/2^-$	145	58d	−0.93(5)		〃	(V–5)
^{127}Te	$11/2^-$	89	109d	−0.91(5)		〃	
^{129}Te	$11/2^-$	106	34d	−1.15(5)		〃	
^{127}Te	$3/2^+$	gnd	9.4h	0.66(5)		LT-NO	R. E. Silverans *et al.*
^{129}Te	$3/2^+$	gnd	69m	0.67(5)		〃	(V–4)
^{131}Cs		133	9.3ns		$g = 0.74(3)$	$\gamma\gamma$-DPAC	A. Aoki *et al.* (V–7)

Nucleus	J^π	E^* (keV)	$T_{1/2}$	μ (nm)	g factor or [μ (uncorrected)]	Remarks (Method, other information)	Contribution
^{166}Er	4^+	265	120ps	1.20(7)	$g = 0.299(17)$	$\gamma\gamma$-IPAC	T. Miyokawa *et al.* (V. d.)
^{182}W	2^-	1289	1.12ns	1.70	$g = 0.85(11)$	$\gamma\gamma$-IPAC	T. Seo *et al.*
	3^-	1374			$g\tau = 0.072(9)$ns	〃	(V–10)
^{183}Re	$5/2^+$	gnd	71d	2.88(12)		LT-NO Re in Fe	L. Vanneste *et al.*
^{184}Re	3^-	gnd	38d	2.67(16)		〃	(V–6)
	8^+	188	169d	2.77(14)		〃	
^{192}Pt	2^+	316	27ps	+0.550(32)	$g = +0.275(16)$	$\gamma\gamma$-IPAC	R. Rougny *et al.*
	$2^{+\prime}$	612	30ps	+0.618(88)	$g = +0.309(44)$	〃	(V. e.)
^{194}Pt	2^+	329	35ps	+0.596(36)	$g = +0.298(18)$	〃	
	$2^{+\prime}$	622	35ps	+0.562(94)	$g = +0.281(47)$	〃	
^{196}Pt	2^+	356	30ps	+0.646(40)	$g = +0.323(20)$	〃	
^{196}Au	12^-	596	9.7h	5.35(20)	[5.24(20)]	LT-NO Au in Fe or Ni	F. Bacon *et al.*
^{198}Au	12^-		49h	5.55(34)	[5.40(34)]	〃	(III. i.)
^{200}Au	12^-		18.7h	6.10(10)	[5.90(4)]	NMR/ON Au in Ni	
^{183}Hg	1/2	gnd	8.8s	0.513(9)		ISOLDE-OPUMP/β	J. Bonn *et al.*
^{185}Hg	1/2	gnd	50s	0.499(4)		Pb(p,3pxn)Hg	(IV. c.)
^{187}Hg	3/2	gnd	2.4m	−0.580(6)		〃	
^{199}Hg	$1/2^-$	gnd		0.4979		Off-line optical method	
^{201}Hg	$3/2^-$	gnd		−0.5513		〃	
^{205}Hg	$1/2^-$	gnd	5.5m	0.5911(5)		ISOLDE-OPUMP/β	
^{202}Tl	7^+	950	560μs	0.896(42)	$g = 0.128(6)$	IB-DPAD w. pulsed field Hg(p,3n)Tl, liq. Hg target	O. Hashimoto *et al.* (III–14)
^{206}Pb	12^+	4027	200ns	−1.86(5)	$g = -0.155(4)$	IB-DPAD $^{204}Hg(\alpha,2n)^{206}Pb$ Liq. Hg target	K. Nakai *et al.* (III–16)
^{207}Pb	$5/2^-$	570	110ps	0.79(3)		$\gamma\gamma$-IPAC w. $H_{ext} = 100$KG	F. J. Schroeder *et al.*
^{208}Pb	3^-	2615	21ps	1.89(29)		〃 〃	(III–15)

Nucleus	J^π	E^* (keV)	$T_{1/2}$	μ (nm)	g factor or [μ (uncorrected)]	Remarks (Method, other information)	Contribution
^{210}Bi	1^-	gnd	5d	$\mu<0$		LT-NO BiMn	K. Nagamine *et al.* (II. d.)
^{204}Po	8^+	≈1650	140ns	7.24(32)	g = 0.905(40)	IB-STROB $^{204}Pb(^3He,3n)^{204}Po$	S. Nagamiya *et al.* (III–21)
^{206}Po	8^+	≈1590	212ns	7.24(15)	g = 0.905(18)	〃 $^{206}Pb(^3He,3n)^{206}Po$	
^{208}Po	8^+	≈1530	380ns	7.29(8)	g = 0.911(10)	〃 $^{208}Pb(^3He,3n)^{208}Po$	
^{209}Po	$17/2^-$	1473	100ns	7.62(13)	g = 0.897(15)	〃 $^{207}Pb(\alpha,2n)^{209}Po$	
^{210}Po	8^+	1557	110ns	7.21(11)	g = 0.901(13)	〃 $^{208}Pb(\alpha,2n)^{210}Po$	
^{204}Po	8^+	≈1650	140ns	8.32(64)	g = 1.04(8)	IB-DPAD $^{204}Pb(\alpha,4n)^{204}Po$	N. Bräuer *et al.*
^{206}Po	8^+	≈1590	212ns	7.60(32)	g = 0.95(4)	〃 $^{204}Pb(\alpha,2n)^{206}Po$	(III–19)
^{207}Po	$13/2^+$	1130	47μs	−0.930(13)	g = −0.143(2) g(uncorrected) = −0.1427(15)	IB-DPAD $^{206}Pb(\alpha,3n)^{207}Po$	B. Focke *et al.* (III–20)
^{210}Po	8^+ 6^+	1558 1473	110ns 41ns	7.27(9) 5.58(12)	g = 0.909(11) g = 0.93(2)	IB-DPAD $^{208}Pb(\alpha,2n)^{210}Po$ $(g(6^+)-g(8^+))/g(8^+) = +2.2(7)\%$	C. V. K. Baba *et al.* (III. h.)
^{210}Po	13^-	4372	93ns	7.10(16)	g = 0.546(12)	IB-DPAD $^{208}Pb(\alpha,2n)^{210}Po$	Y. Yamazaki *et al.* (III–23)
^{211}Po	$(15/2^-)$	1065	16ns		g = −0.05(2)	IB-DPAD $^{208}Pb(\alpha,n)^{211}Po$	T. Faestermann *et al.* (III–24)
^{211}At	$21/2^-$	1416	50ns	9.42(17)	g = +0.897(16) g(uncorr) = +0.901(16)	IB-DPAD $^{209}Bi(\alpha,2n)^{211}At$	H. Ingwersen *et al.* (III–25)
^{211}At	$29/2^+$	2641	70ns	14.9(6)	g = 1.03(4)	IB-DPAD $^{209}Bi(\alpha,2n)^{211}At$	J. Christiansen *et al.* (III–26)

Eelectric quadrupole moments

Nucleus	J^π	E^* (keV)	$T_{1/2}$	Q (barn)	Remarks (Method, other information)	Contribution
^{12}B	1^+	gnd	20ms	$eqQ(^{12}B \text{ in Ta})<0$	IB-NMR/β, Q splitting *m*-substates population	M. Hori *et al.* (II–5)
^{13}B	$3/2^-$	gnd	19ms	$Q(^{12}B)/Q(^{13}B) = 0.358(8)$	IB-NMR/β, Q splitting in Mg single crystal	R. C. Haskell *et al.* (II–7)
^{19}F	$5/2^+$	197	87ns	$eqQ(^{19}F \text{ in Zn})>0$	IB-DPAD $\lvert q\rvert = 0.31(8) \times 10^{18}$ V/cm^2	R. Brenn *et al.* (II–11)
^{20}F	2^+	gnd	11.2s	$\lvert Q\rvert = 0.064(20)$ $\lvert Q(^{20}F)/Q(^{19}F, 197\text{keV})\rvert = 0.58(2)$	Pol. n-NMR/β, Q splitting in MgF_2	H. Ackermann *et al.* (III. c.)
^{50}Cr	2^+	783		0.304(91)	REOR ^{32}S $\sigma(\theta)$ rel. (p or recoil-γ) coincidence	C. W. Towsley *et al.* (V–15)
^{52}Cr	2^+	1434		−0.09(13)	REOR ^{12}C, ^{16}O, ^{32}S on thick target Relative intensity to ^{50}Cr	
^{54}Cr	2^+	835		−0.12(10)	〃 〃 〃 〃	
^{53}Cr	$3/2^-$	gnd		+0.04(6)	REOR ^{32}S $\sigma(\theta)$ rel. (p-γ) coincidence	R. G. Kerr *et al.* (II. g.)
$^{67,69,71}Ge$				$Q(^{67}Ge,9/2^+): Q(^{69}Ge,9/2^+): Q(^{71}Ge,5/2^-) = 1.22 : 1 : 0.219$	IB-DPAD Zn or Ga single crystal $T \lesssim T(\text{melt})$, $T_{rel} > 8\mu s$ $\eta(\text{Zn; hcp}) = 0$, $\eta(\text{Ga; O-rhomb}) = 0.697$	H. Haas *et al.* (III. e.)
^{71}Ge	$9/2^+$	198	20ms	$\lvert Q\rvert = 0.28(10)$	IB-DPAD $T_{rel}(T)$, Ga(p,n)Ge T_{rel} in liq. Ga	D. Riegel *et al.* (II–13)
^{111}Cd	$5/2^+$	247	84ns	(0.54(2))	$\gamma\gamma$-DPAD in In, assuming $q(\text{Cd in In}) = q(\text{In in In})$. $q(T)$ investigated	D. Brandt *et al.* (II–12)
^{115}Sn	$11/2^-$	726	160μs	$\lvert Q\rvert = 0.8(3)$	IB-DPAD $T_{rel}(T)$, In(p,n)Sn T_{rel} in liq. In	D. Riegel *et al.* (II–13)

Nucleus	J^π	E^* (keV)	$T_{1/2}$	Q (barn)	Remarks (Method, other information)	Contribution
^{124}Te	2^+	603		{−0.50(10) Interference > 0 {−0.27(10) 〃 < 0	REOR ^4He, ^{16}O Scatt. particle by SSD	A. M. Kleinfeld *et al.* (V–16)
^{126}Te	2^+	667		{−0.20(9) 〃 > 0 {+0.00(9) 〃 < 0	〃	
^{128}Te	2^+	743		{−0.07(9) 〃 > 0 {+0.12(9) 〃 < 0	〃	
^{130}Ba	2^+	356		{+0.37(18) corrected {+0.23(18) uncorrected	REOR ^{40}Ca, ^{32}S (p or recoil-γ) coincidence	C. W. Towsley *et al.* (V–17)
^{134}Ba	2^+	605		{+0.15(14) corr. {+0.06(14) uncorr.	Asymptotic rotor model was used for the higher state corrections.	
^{136}Ba	2^+	818		{+0.43(52) corr. {+0.34(52) uncorr.		
^{140}Ce	4^+	2083	3.4ns	0.202(26)	$\gamma\gamma$-DPAC $^{140}La(\beta^-)^{140}Ce$ $(La_2(NO_3)_6Mg_2(NO_3)_6 24H_2O)$	B. Klemme *et al.* (III–12)
^{148}Sm	2^+	551		−0.97(27)	REOR ^4He, ^{16}O, ^{32}S on thick natural target,	D. Cline *et al.*
^{150}Sm	2^+	334		−1.31(19)	Relative γ intensity to ^{152}Sm	(V–18)
^{150}Sm	2^+	334		$Q_0 > 0$ $(Q < 0)$	REOR Precession due to the reorientation effect.	L. Grodzins *et al.* (II–16)
^{165}Ho	$7/2^-$	gnd		$\beta = 0.307(30)$ $(Q_0 = 7.3(7))$	(p,p) or (α,α) with pol. target	T. R. Fisher *et al.* (II–19)
^{170}Er	2^+	79		1.95(26)	REOR ^{81}Br, low energy beam	R. G. Kerr *et al.* (II. g.)
^{175}Lu	$7/2^+$	gnd		3.74(5) from (5g–4f) 3.35(2) 〃 (4f–3d)	μ X-ray	W. Dey *et al.* (VII–5)
^{175}Lu	$7/2^+$	gnd		3.70 from (5g–4f)	π X-ray	W. Dey *et al.* (VII–6)
$^{178,180}Hf$	2^+			$e^2qQ(^{178}Hf)/e^2qQ(^{180}Hf) = 1.05(3)$	Mössbauer effect HfB_2	P. Boolchand *et al.* (VII–1)

Nucleus	J^π	E^* (keV)	$T_{1/2}$	Q (barn)	Remarks (Method, other information)	Contribution
^{194}Pt	2^+	329		$Q_0<0$ $(Q>0)$	REOR Precession due to the reorientation effect.	L. Grodzins *et al.* (II–16)
^{187}Hg	3/2	gnd	2.4m	−0.3(1.1)	ISOLDE-OPUMP/β Pb(p,3pxn)Hg	J. Bonn *et al.* (IV. c.)
^{199}Hg	$13/2^+$	gnd	43m	2.0(1.3)	ISOLDE-OPUMP/γ 〃	
^{201}Hg	$3/2^-$	gnd		+0.50	Off-line optical method 〃	
^{208}Pb	3^-	2615		−1.1(4) if $Q(2^+,Pb^{206}) = 0$ −0.9(4) 〃 〃 $= Q_r$	REOR ^{12}C,^{20}Ne,^{32}S,^{40}Ar $\gamma(\theta; 3^- \to 0^+,208)/\gamma(\theta,2^+ \to 0^+,206)$	A. R. Barnett *et al.* (V. g.)
^{210}Bi	1^-	gnd		$Q>0$	LT-NO BiMn	K. Nagamine *et al.* (II. d.)
^{235}U	$7/2^-$	gnd		4.55(9)	μ X-ray	W. Dey *et al.* (VII–5)