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TABLE OF EXPERIMENTAL (ABSOLUTE) VALUES OF THE MOMENTS
OF GROUND AND EXCITED NUCLEAR STATES

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The purpose of this work is to bring together and keep up to date a file with as much data as possible on the moments of ground and excited nuclear states, so as to save the time of experimentalists and indicate a number of problems still to be solved. The file also contains the results of old work, since they have been recalculated in different compilations on the basis of different assumptions, which has created the impression that one is dealing with independent measurements. The necessity of such a detailed approach also follows from the fact that the compilations published in recent years have contained either information about nuclei obtained by some single method [1] or material collected for only a group of nuclei [2, 3] - or have contained virtually no Soviet results [4].

In the table are presented experimental (absolute) values of nuclear moments. The values published outside the Soviet Union before 1972 are taken mainly from Refs [2, 4-13]. In the case of Soviet sources, Refs [14 and 15] were used in part. Most of the data from Soviet journals is included in such a system for the first time.

The structure of the file can be understood from the following table, which contains ten columns:

1-3	Isotope
4	Level energy, in MeV
5	Level lifetime
6	Designation of quantity represented:
	I level spin,
MU	magnetic dipole moment in units of nuclear magnetons (in the table all MUs are corrected for diamagnetic effect),
Q	observed nuclear quadrupole moment, in e · barn,
MU3	nuclear octapole magnetic moment, $\mu_3 = \Omega$, in nuclear moments · barn,
M7	magnetic moment, in nuclear moments · barn ³ ,
G	g-factor of state.

- 7-8 Value of quantity and associated error, in units of the last sign
- 9 Measurement method and comments concerning corrections made (not made)
- 10 Reference to original or compilation

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38	SR	86	1.0772		I	2		AC	62YA0068
38	SR	86	2.232		I	4		AC	62YA0068
38	SR	86	2.995		I	3		AC	62YAC068
38	SR	86	3.003		I	(3)		AC	62YA0068
38	SR	86	3.644		I	3		AC	73BE0048
44	RU	101	0		I	5/2		ESR	52GR0951
44	RU	101	0		I	5/2		O	55MU0919
44	RU	101	0		MU	-0.69	15	O	55MU0919
44	RU	101	0		MU	-0.68	3	O	65LI0553
44	RU	101	0		MU	-0.68	3	MO	66KIO990
44	RU	101	0		MU	0.698	24	IMPACT	74MU0634
44	RU	101	0.127	5.5(-10) S	I	(3/2)			66AU0367
44	RU	101	0.127	5.5(-10) S	MU	-0.311	26	IPAC	66AU0367
82	PB	208	2.6145	2.1(-11) S	I	3		AC	65LI0553
82	PB	208	2.6145	2.1(-11) S	MU	1.89	29	IPAC	72H00034
82	PB	208	2.6145	2.1(-11) S	Q	-1.0	4	RC	69BA1205
82	PB	202	2.6145	2.1(-11) S	Q	-1.3	6	CE	75GU0225