

Explanation of Tables

Table 1.	Nuclear radii changes and <i>rms</i> nuclear charge radii. (The IS and charge radii changes in the isotopic sequence $^{21-32}\text{Mg}$ are already measured by the Mainz-COLLAPS collaboration (see Ref. [50]) but are as yet not published. For this reason Table 1 include only <i>R</i> -values of stable Mg isotopes as given in Ref. [15].)
<i>Z</i>	Atomic (proton) number of the element
<i>El</i>	Chemical symbol of the element
<i>A</i>	Mass number
<i>N</i>	Neutron number
$\delta\langle r^2 \rangle^{A',A}$	Nuclear radii changes from OIS (column 5). $\delta\langle r^2 \rangle^{A',A} = \lambda^{A',A}$ for $Z \leq 35$; in all cases with $Z \geq 36$ the higher moment (HM) corrections have been taken into account. This is done either by the authors themselves or recalculated using the average values of HM as given by Ref. [14].
$\Delta\delta\langle r^2 \rangle^{A',A}$	Errors of radius changes (column 6). Only statistical errors are presented thus demonstrating the accuracy of optical isotope shift measurements. Some exceptions are explicitly pointed in Table 2.
<i>R</i>	The average <i>rms</i> $R = R_{e\mu KO}$ -values of both procedures of combined analysis [12,13] (column 7). Note that the experimental bases and evaluation procedures underlying these <i>R</i> values are not identical with those for $\delta\langle r^2 \rangle^{A,A'}$; see Chapter 2.
$\Delta_{tot}R$	The total errors of <i>R</i> (column 8) defined by Eq. (4). It includes the uncertainties ΔR of absolute radii, statistical and systematic errors of $\delta\langle r^2 \rangle$ as obtained by the evaluation procedure of Ref. [13] and the deviation between the results of the two procedures (see Section 2). In the case if the latter are dominant, these errors are underlined.
$\Delta_{rel}R$	Relative error of $R_{e\mu KO}$ with respect to the reference isotope for radii changes (Column 9).

Table 2. **Parameters used for extraction of radii changes from OIS**
Note: References given by number are from the reference list to the main text; references given by abbreviations of name and year are from the reference list to Table 2.

<i>F</i>	Electronic factor
<i>N</i>	Normal mass shift
<i>S</i>	Specific mass shift
<i>MS</i>	Mass shift, where $MS = N + S$
Abbreviation related to the electronic factor <i>F</i> and the total mass shift <i>MS</i>	
<i>cal</i>	Atomic theory calculation; for the theoretical method used (see the corresponding papers)
<i>se</i>	Semi-empirical procedure using optical data (e.g., Ref. [5])
$e^-, \mu^-, e\mu$	Calculated via King plot [16] of OIS versus e^-, μ^- or $e\mu$ radii
<i>phen</i>	Estimated using $\delta\langle r^2 \rangle^{N',N}$ of neighboring isotones.
Errors of <i>F</i> and <i>MS</i>	
dF_{cal}, dMS_{cal}	Accepted 10% if not theoretically estimated
dF_{se}	Between 1% [B185, table reference] and 10% (in most cases)
dMS_{se}	For medium mass and heavy elements [He74], where $dMS_{se} = 0.5N$ for s^2 -sp transitions with $S = (0 \pm 0.5)N$, $dMS_{se} = 0.9N$ for s-p transitions with $S = (0.3 \pm 0.9)N$
$dF_{e\mu}, dMS_{e\mu}$	Obtained in the least square fit procedure of King plot.
dF_{phen}, dMS_{phen}	Estimations.

Table 1Nuclear radii changes and rms nuclear charge radii. For the neutron the entry is $\langle r^2 \rangle$ (fm²).

<i>Z</i>	el.	<i>A</i>	<i>N</i>	$\delta\langle r^2 \rangle$ (fm ²)	$\Delta\delta\langle r^2 \rangle$ (fm ²)	<i>R</i> (fm)	$\Delta_{\text{tot}}R$ (fm)	ΔR_{rel}
0	<i>n</i>	1	1			−0.1149	0.0027	
1	H	1	0	0	0	0.8783	0.0086	
		2	1	3.82007	0.00065	2.1421	0.0088	
		3	2			1.7591	0.0363	
2	He	3	1	1.059	0.003	1.9661	0.0030	0.0008
		4	2	0	0	1.6755	0.0028	0
		6	4	1.466	0.034	2.0660	0.0111	0.0082
		8	6	0.911	0.095	1.9239	0.0306	0.0247
3	Li	6	3	0	0	2.5890	0.0390	0
		7	4	−0.731	0.022	2.4440	0.0420	0.0046
		8	5	−1.230	0.032	2.3390	0.0440	0.0070
		9	6	−1.663	0.032	2.2450	0.0460	0.0073
		11	8	−0.543	0.069	2.4820	0.0430	0.0141
4	Be	7	3	0.66	0.05	2.6460	0.0160	0.0094
		9	5	0	0	2.5190	0.0120	0
		10	6	−0.79	0.08	2.3550	0.0170	0.0170
		11	7	−0.28	0.05	2.4630	0.0150	0.0102
5	B	10	5			2.4277	0.0499	
		11	6			2.4060	0.0294	
6	C	12	6			2.4702	0.0022	
		13	7			2.4614	0.0034	
		14	8			2.5025	0.0087	
7	N	14	7			2.5582	0.0070	
		15	8			2.6058	0.0080	
8	O	16	8			2.6991	0.0052	
		17	9			2.6932	0.0075	
		18	10			2.7726	0.0056	
9	F	19	10			2.8976	0.0025	
10	Ne	17	7	0.221	0.029	3.0413	0.0088	0.0048
		18	8	−0.207	0.015	2.9714	0.0076	0.0025
		19	9	0.017	0.019	3.0082	0.0040	0.0032
		20	10	0	0	3.0055	0.0021	0
		21	11	−0.217	0.014	2.9695	0.0033	0.0023
		22	12	−0.322	0.004	2.9525	0.0040	0.0034
		23	13	−0.572	0.034	2.9104	0.0071	0.0057
		24	14	−0.628	0.019	2.9007	0.0078	0.0032
		25	15	−0.431	0.016	2.9316	0.0088	0.0027
		26	16	−0.485	0.018	2.9251	0.0100	0.0030
		28	18	−0.241	0.035	2.9642	0.0134	0.0059
11	Na	20	9	−0.130	0.070	2.9718	0.0420	0.0117
		21	10	0.120	0.050	3.0136	0.0284	0.0083
		22	11	−0.050	0.040	2.9852	0.0169	0.0067
		23	12	0	0	2.9936	0.0021	0
		24	13	−0.120	0.040	2.9735	0.0169	0.0067
		25	14	−0.100	0.030	2.9769	0.0252	0.0050
		26	15	−0.005	0.018	2.9928	0.0331	0.0030
		27	16	0.120	0.040	3.0136	0.0467	0.0067
		28	17	0.280	0.050	3.0400	0.0581	0.0083
		29	18	0.600	0.080	3.0922	0.0723	0.0132
		30	19	0.760	0.120	3.1180	0.0884	0.0197
		31	20	1.090	0.070	3.1704	0.0893	0.0116
12	Mg	24	12			3.0570	0.0016	
		25	13			3.0284	0.0022	
		26	14			3.0337	0.0018	
13	Al	27	14			3.0610	0.0031	
14	Si	28	14			3.1224	0.0024	
		29	15			3.1176	0.0052	
		30	16			3.1336	0.0040	
15	P	31	16			3.1889	0.0019	
16	S	32	16			3.2611	0.0018	
		34	18			3.2847	0.0021	
		36	20			3.2985	0.0024	
17	Cl	35	18			3.3654	0.0191	
		37	20			3.3840	0.0170	
18	Ar	32	14	−0.375	0.038	3.3468	0.0062	0.0056
		33	15	−0.395	0.021	3.3438	0.0058	0.0031
		34	16	−0.251	0.006	3.3654	0.0040	0.0009

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Table 1 (continued)

Z	el.	A	N	$\delta\langle r^2 \rangle$ (fm ²)	$\Delta\delta\langle r^2 \rangle$ (fm ²)	R (fm)	$\Delta_{\text{tot}}R$ (fm)	ΔR_{rel}
19	K	35	17	−0.263	0.026	3.3636	0.0042	0.0038
		36	18	−0.084	0.018	3.3905	0.0023	0.0017
		37	19	−0.081	0.009	3.3908	0.0022	0.0012
		38	20	0	0	3.4028	0.0019	0
		39	21	0.044	0.067	3.4093	0.0031	0.0025
		40	22	0.167	0.009	3.4274	0.0026	0.0013
		41	23	0.151	0.012	3.4251	0.0030	0.0018
		43	25	0.262	0.012	3.4414	0.0041	0.0018
		42	24	0.221	0.014	3.4354	0.0039	0.0020
		44	26	0.289	0.009	3.4454	0.0046	0.0013
		46	28	0.237	0.022	3.4377	0.0044	0.0032
		38	19	−0.058	0.041	3.4264	0.0051	0.0060
		39	20	0	0	3.4349	0.0019	0
		40	21	0.022	0.002	3.4381	0.0028	0.0003
20	Ca	41	22	0.117	0.006	3.4518	0.0055	0.0009
		42	23	0.116	0.015	3.4517	0.0070	0.0022
		43	24	0.143	0.009	3.4556	0.0086	0.0013
		44	25	0.148	0.011	3.4563	0.0101	0.0016
		45	26	0.176	0.013	3.4605	0.0118	0.0019
		46	27	0.143	0.012	3.4558	0.0126	0.0017
		47	28	0.126	0.013	3.4534	0.0138	0.0019
		39	19	−0.127	0.016	3.4595	0.0025	0.0023
		40	20	0	0	3.4776	0.0019	0
		41	21	0.003	0.003	3.4780	0.0019	0.0004
		42	22	0.215	0.005	3.5081	0.0021	0.0007
		43	23	0.125	0.003	3.4954	0.0019	0.0005
		44	24	0.283	0.006	3.5179	0.0021	0.0009
		45	25	0.119	0.006	3.4944	0.0021	0.0008
21	Sc	46	26	0.124	0.005	3.4953	0.0020	0.0007
		47	27	0.005	0.001	3.4783	0.0024	0.0002
		48	28	−0.004	0.006	3.4771	0.0020	0.0009
		50	30	0.276	0.035	3.5168	0.0064	0.0050
		42	21	0.172	0.031	3.5702	0.0238	0.0044
		43	22	0.082	0.014	3.5575	0.0147	0.0020
		44	23	−0.019	0.011	3.5432	0.0016	0.0016
		45	24	0	0	3.5459	0.0025	0
		46	25	−0.154	0.008	3.5243	0.0089	0.0011
		44	22	0.143	0.037	3.6115	0.0051	0.0049
		45	23	0.013	0.017	3.5939	0.0032	0.0024
		46	24	0.110	0.007	3.6070	0.0022	0.0010
		47	25	0.030	0.004	3.5962	0.0019	0.0006
		48	26	0	0	3.5921	0.0017	0
		49	27	−0.139	0.009	3.5733	0.0021	0.0013
22	Ti	50	28	−0.160	0.007	3.5704	0.0022	0.0010
		51	28			3.6002	0.0022	
		50	26	0.099	0.037	3.6588	0.0065	0.0051
		52	28	0	0	3.6452	0.0042	0
		53	29	0.043	0.045	3.6511	0.0075	0.0062
		54	30	0.317	0.045	3.6885	0.0074	0.0061
		50	25	0.046	0.003	3.7120	0.0196	0.0004
		51	26	−0.023	0.045	3.7026	0.0212	0.0061
		52	27	−0.259	0.013	3.6706	0.0128	0.0018
		53	28	−0.292	0.004	3.6662	0.0076	0.0005
		54	29	−0.165	0.007	3.6834	0.0049	0.0009
		55	30	0	0	3.7057	0.0022	0
		56	31	0.066	0.010	3.7146	0.0052	0.0013
		54	28	−0.330	0.001	3.6933	0.0019	0.0001
		56	30	0	0	3.7377	0.0016	0
23	V	57	31	0.108	0.001	3.7532	0.0017	0.0001
		58	32	0.274	0.002	3.7745	0.0014	0.0003
		59	32			3.7875	0.0021	
		58	30	−0.267	0.005	3.7757	0.0020	0.0007
		60	32	0	0	3.8118	0.0016	0
		61	33	0.082	0.007	3.8225	0.0019	0.0010
		62	34	0.211	0.007	3.8399	0.0021	0.0009
		64	36	0.338	0.010	3.8572	0.0023	0.0013
		63	34			3.8823	0.0015	
		65	36			3.9022	0.0014	
		64	34	−0.162	0.002	3.9283	0.0015	0.0003
		66	36	0	0	3.9491	0.0014	0
		67	37	0.032	0.003	3.9530	0.0027	0.0004
		63	34			3.8823	0.0015	
		65	36			3.9022	0.0014	

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Table 1 (continued)

Z	el.	A	N	$\delta(r^2)$ (fm ²)	$\Delta\delta(r^2)$ (fm ²)	R (fm)	$\Delta_{tot}R$ (fm)	ΔR_{rel}
31	Ga	68	38	0.131	0.002	3.9658	0.0014	0.0003
		70	40	0.286	0.003	3.9845	0.0019	0.0004
		69	38			3.9973	0.0017	
		71	40			4.0118	0.0018	
32	Ge	70	38			4.0414	0.0012	
		72	40			4.0576	0.0013	
		73	41			4.0632	0.0014	
		74	42			4.0742	0.0012	
		76	44			4.0811	0.0012	
33	As	75	42			4.0968	0.0020	
34	Se	74	40			4.0700	0.0200	
		76	42			4.1395	0.0016	
		77	43			4.1395	0.0018	
		78	44			4.1406	0.0017	
		80	46			4.1400	0.0018	
		82	48			4.1400	0.0019	
35	Br	79	44			4.1629	0.0021	
		81	46			4.1599	0.0021	
36	Kr	72	36	−0.168	0.018	4.1635	0.0060	0.0022
		74	38	0.030	0.005	4.1870	0.0041	0.0006
		75	39	0.221	0.007	4.2097	0.0041	0.0008
		76	40	0.156	0.004	4.2020	0.0036	0.0005
		77	41	0.209	0.005	4.2082	0.0037	0.0006
		78	42	0.172	0.003	4.2038	0.0033	0.0004
		79	43	0.168	0.004	4.2034	0.0032	0.0005
		80	44	0.114	0.007	4.1970	0.0029	0.0008
		81	45	0.099	0.004	4.1952	0.0026	0.0005
		82	46	0.071	0.003	4.1919	0.0025	0.0004
		83	47	0.031	0.003	4.1871	0.0023	0.0004
		84	48	0.042	0.001	4.1884	0.0022	0.0001
		85	49	0.009	0.004	4.1846	0.0022	0.0004
		86	50	0	0	4.1835	0.0021	0
		87	51	0.125	0.003	4.1984	0.0027	0.0004
		88	52	0.282	0.004	4.2171	0.0043	0.0005
		89	53	0.379	0.004	4.2286	0.0054	0.0005
		90	54	0.495	0.010	4.2423	0.0069	0.0012
		91	55	0.597	0.006	4.2543	0.0081	0.0007
		92	56	0.751	0.005	4.2724	0.0099	0.0006
		93	57	0.811	0.004	4.2794	0.0107	0.0005
		94	58	0.989	0.004	4.3002	0.0129	0.0005
		95	59	1.045	0.003	4.3067	0.0136	0.0004
		96	60	1.217	0.010	4.3267	0.0158	0.0012
37	Rb	76	39	0.2241	0.0270	4.2273	0.0070	0.0032
		77	40	0.2884	0.0069	4.2356	0.0080	0.0008
		78	41	0.3118	0.0023	4.2385	0.0083	0.0004
		79	42	0.2291	0.0023	4.2284	0.0065	0.0003
		80	43	0.2207	0.0068	4.2271	0.0061	0.0008
		81	44	0.1730	0.0022	4.2213	0.0051	0.0003
		82	45	0.1347	0.0065	4.2160	0.0042	0.0008
		83	46	0.0522	0.0015	4.2058	0.0028	0.0002
		84	47	0.0079	0.0032	4.1999	0.0023	0.0004
		85	48	0.0362	0.0022	4.2036	0.0024	0.0003
		86	49	0.0276	0.0031	4.2025	0.0023	0.0004
		87	50	0	0	4.1989	0.0021	0
		88	51	0.1390	0.0078	4.2170	0.0038	0.0010
		89	52	0.3109	0.0031	4.2391	0.0074	0.0004
		90	53	0.4370	0.0080	4.2554	0.0102	0.0010
		91	54	0.5685	0.0035	4.2723	0.0131	0.0007
		92	55	0.7094	0.0080	4.2903	0.0163	0.0010
		93	56	0.9340	0.0035	4.3048	0.0187	0.0010
		94	57	1.0984	0.0056	4.3184	0.0211	0.0011
		95	58	1.1856	0.0074	4.3391	0.0248	0.0014
		96	59	1.7719	0.0062	4.3501	0.0267	0.0015
		97	60	1.8553	0.0150	4.4231	0.0395	0.0023
		98	61	1.8553	0.0150	4.4336	0.0414	0.0024
38	Sr	77	39	0.253	0.012	4.2569	0.0044	0.0014
		78	40	0.247	0.008	4.2561	0.0040	0.0009
		79	41	0.266	0.006	4.2586	0.0039	0.0007
		80	42	0.248	0.007	4.2562	0.0037	0.0008
		81	43	0.236	0.006	4.2547	0.0034	0.0007
		82	44	0.182	0.006	4.2478	0.0030	0.0007
		83	45	0.165	0.004	4.2455	0.0027	0.0005

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Table 1 (continued)

Z	el.	A	N	$\delta\langle r^2 \rangle$ (fm ²)	$\Delta\delta\langle r^2 \rangle$ (fm ²)	R (fm)	$\Delta_{rel}R$ (fm)	ΔR_{rel}
		84	46	0.118	0.003	4.2394	0.0024	0.0004
		85	47	0.049	0.003	4.2304	0.0021	0.0004
		86	48	0.051	0.002	4.2307	0.0020	0.0002
		87	49	0.007	0.002	4.2249	0.0019	0.0002
		88	50	0	0	4.2240	0.0018	0
		89	51	0.126	0.001	4.2407	0.0023	0.0001
		90	52	0.282	0.004	4.2611	0.0037	0.0005
		91	53	0.381	0.003	4.2740	0.0046	0.0004
		92	54	0.522	0.005	4.2924	0.0064	0.0006
		93	55	0.601	0.004	4.3026	0.0075	0.0005
		94	56	0.728	0.006	4.3191	0.0091	0.0007
		95	57	0.817	0.005	4.3305	0.0102	0.0006
		96	58	0.986	0.006	4.3522	0.0125	0.0007
		97	59	1.067	0.007	4.3625	0.0135	0.0009
		98	60	1.656	0.006	4.4377	0.0214	0.0008
		99	61	1.750	0.008	4.4495	0.0226	0.0011
		100	62	1.867	0.015	4.4640	0.0240	0.0019
39	Y	86	47	0.071	0.003	4.2513	0.0023	0.0008
		87	48	0.058	0.002	4.2498	0.0022	0.0007
		88	49	0.009	0.001	4.2441	0.0021	0.0001
		89	50	0	0	4.2430	0.0021	0
		90	51	0.123	0.001	4.2573	0.0026	0.0014
		92	53	0.393	0.001	4.2887	0.0050	0.0045
		93	54	0.537	0.002	4.3052	0.0065	0.0061
		94	55	0.614	0.001	4.3142	0.0074	0.0070
		95	56	0.738	0.002	4.3284	0.0087	0.0083
		96	57	0.840	0.001	4.3402	0.0099	0.0095
		97	58	0.996	0.002	4.3580	0.0116	0.0112
		98	59	1.110	0.001	4.3711	0.0129	0.0124
40	Zr	99	60	1.943	0.001	4.4658	0.0223	0.0213
		100	61	1.985	0.001	4.4705	0.0228	0.0218
		101	62	2.127	0.001	4.4863	0.0244	0.0232
		102	63	2.173	0.002	4.4911	0.0249	0.0237
		87	47	0.059	0.005	4.2789	0.0030	0.0006
		88	48	0.061	0.005	4.2787	0.0025	0.0006
		89	49	0.006	0.005	4.2706	0.0010	0.0006
		90	50	0	0	4.2694	0.0010	0
		91	51	0.132	0.003	4.2845	0.0013	0.0011
		92	52	0.314	0.004	4.3057	0.0013	0.0025
		94	54	0.546	0.003	4.3320	0.0013	0.0032
		96	56	0.72	0.006	4.3512	0.0015	0.0034
41	Nb	97	57	0.835	0.005	4.3792	0.0136	0.0006
		98	58	1.002	0.005	4.4012	0.0164	0.0006
		99	59	1.113	0.004	4.4156	0.0181	0.0006
		100	60	1.669	0.004	4.4891	0.0289	0.0006
		101	61	1.847	0.005	4.5119	0.0318	0.0007
		102	62	1.983	0.005	4.5292	0.0340	0.0008
		90	49	−0.301	0.004	4.2891	0.0040	0.0004
		91	50	−0.312	0.001	4.2878	0.0040	0.0001
		92	51	−0.185	0.002	4.3026	0.0043	0.0003
		93	52	0	0	4.3240	0.0017	0
		99	58	0.716	0.009	4.4062	0.0125	0.0010
		101	60	1.419	0.002	4.4861	0.0203	0.0002
42	Mo	103	62	1.630	0.002	4.5097	0.0227	0.0002
		90	48	0.113	0.001	4.3265	0.0016	0.0001
		91	49	0.033	0.002	4.3182	0.0012	0.0001
		92	50	0	0	4.3151	0.0012	0
		94	52	0.334	0.001	4.3529	0.0013	0.0001
		95	53	0.421	0.001	4.3628	0.0018	0.0001
		96	54	0.617	0.001	4.3847	0.0015	0.0001
		97	55	0.644	0.001	4.3880	0.0015	0.0001
		98	56	0.834	0.001	4.4091	0.0018	0.0001
		100	58	1.177	0.001	4.4468	0.0025	0.0001
		102	60	1.585	0.003	4.4914	0.0038	0.0001
		103	61	1.798	0.003	4.5145	0.0046	0.0002
44	Ru	104	62	1.893	0.002	4.5249	0.0051	0.0002
		105	63	2.021	0.003	4.5389	0.0057	0.0003
		106	64	2.113	0.003	4.5490	0.0058	0.0003
		108	66	2.213	0.003	4.5602	0.0067	0.0003
		96	52	−1.069	0.003	4.3908	0.0047	0.0003
		98	54	−0.772	0.005	4.4229	0.0055	0.0005
		99	55	−0.68	0.004	4.4338	0.0042	0.0004
		100	56	−0.506	0.003	4.4531	0.0031	0.0004

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Table 1 (continued)

Z	el.	A	N	$\delta(r^2)$ (fm ²)	$\Delta\delta(r^2)$ (fm ²)	R (fm)	$\Delta_{\text{tot}}R$ (fm)	ΔR_{rel}
45	Rh	101	57	−0.444	0.005	4.4606	0.0020	0.0006
		102	58	−0.263	0.004	4.4809	0.0018	0.0005
		104	60	0	0	4.5098	0.0020	0
		103	58			4.4945	0.0023	
46	Pd	102	56	−0.675	0.003	4.4827	0.0044	0.0003
		104	58	−0.445	0.002	4.5078	0.0027	0.0002
		105	59	−0.377	0.002	4.5150	0.0030	0.0002
		106	60	−0.227	0.001	4.5318	0.0029	0.0001
		108	62	0	0	4.5563	0.0027	0
		110	64	0.205	0.001	4.5782	0.0030	0.0001
47	Ag	101	54	−0.670	0.003	4.4799	0.0088	0.0003
		103	56	−0.482	0.002	4.5036	0.0065	0.0002
		104	57	−0.416	0.002	4.5119	0.0058	0.0002
		105	58	−0.296	0.002	4.5269	0.0045	0.0002
		107	60	−0.148	0.001	4.5454	0.0031	0.0001
		109	62	0	0	4.5638	0.0025	0
48	Cd	102	54	−1.010	0.045	4.4810	0.0122	0.0050
		103	55	−0.901	0.027	4.4951	0.0105	0.0030
		104	56	−0.765	0.048	4.5122	0.0083	0.0053
		105	57	−0.692	0.034	4.5216	0.0070	0.0038
		106	58	−0.576	0.008	4.5383	0.0036	0.0009
		107	59	−0.495	0.030	4.5466	0.0039	0.0033
		108	60	−0.412	0.011	4.5577	0.0031	0.0012
		109	61	−0.387	0.039	4.5601	0.0035	0.0043
		110	62	−0.252	0.005	4.5765	0.0026	0.0005
		111	63	−0.130	0.013	4.5845	0.0058	0.0014
		112	64	−0.103	0.003	4.5944	0.0024	0.0003
		113	65	−0.008	0.004	4.6012	0.0028	0.0004
		114	66	0	0	4.6087	0.0023	0
		115	67	0.024	0.046	4.6114	0.0046	0.0050
		116	68	0.088	0.003	4.6203	0.0059	0.0003
		117	69	0.083	0.018	4.6136	0.0025	0.0020
		118	70	0.129	0.022	4.6246	0.0060	0.0024
		120	72	0.174	0.043	4.6300	0.0069	0.0046
49	In	104	55	−0.866	0.015	4.5184	0.0117	0.0017
		105	56	−0.754	0.014	4.5311	0.0103	0.0015
		106	57	−0.698	0.012	4.5375	0.0095	0.0013
		107	58	−0.592	0.010	4.5494	0.0082	0.0011
		108	59	−0.524	0.005	4.5571	0.0071	0.0006
		109	60	−0.422	0.007	4.5685	0.0061	0.0008
		110	61	−0.371	0.008	4.5742	0.0056	0.0009
		111	62	−0.270	0.005	4.5856	0.0044	0.0005
		112	63	−0.224	0.006	4.5907	0.0041	0.0007
		113	64	−0.1317	0.0003	4.6010	0.0031	0.0001
		114	65	−0.090	0.002	4.6056	0.0029	0.0002
		115	66	0	0	4.6156	0.0026	0
		116	67	0.049	0.001	4.6211	0.0027	0.0001
		117	68	0.122	0.004	4.6292	0.0032	0.0004
		118	69	0.162	0.002	4.6335	0.0033	0.0002
		119	70	0.226	0.004	4.6407	0.0040	0.0004
		120	71	0.259	0.002	4.6443	0.0042	0.0002
		121	72	0.315	0.003	4.6505	0.0047	0.0003
		122	73	0.342	0.004	4.6534	0.0051	0.0004
		123	74	0.396	0.003	4.6594	0.0056	0.0003
		124	75	0.424	0.004	4.6625	0.0060	0.0007
		125	76	0.465	0.005	4.6670	0.0064	0.0005
		126	77	0.494	0.007	4.6702	0.0068	0.0008
		127	78	0.523	0.007	4.6733	0.0071	0.0008
50	Sn	108	58	−0.825	0.003	4.5605	0.0029	0.0003
		109	59	−0.764	0.006	4.5679	0.0027	0.0007
		110	60	−0.666	0.002	4.5785	0.0025	0.0002
		111	61	−0.612	0.005	4.5836	0.0024	0.0005
		112	62	−0.520	0.005	4.5948	0.0022	0.0005
		113	63	−0.458	0.001	4.6015	0.0021	0.0001
		114	64	−0.3838	0.0001	4.6099	0.0020	0.0001
		115	65	−0.3360	0.0001	4.6148	0.0019	0.0001
		116	66	−0.2471	0.0001	4.6250	0.0019	0.0001
		117	67	−0.1971	0.0001	4.6302	0.0019	0.0001
		118	68	−0.1174	0.0001	4.6393	0.0019	0.0001
		119	69	−0.0724	0.0001	4.6438	0.0020	0.0001
		120	70	0	0	4.6519	0.0021	0
		121	71	0.045	0.001	4.6566	0.0021	0.0001
		122	72	0.1055	0.0001	4.6634	0.0022	0.0001

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Table 1 (continued)

Z	el.	A	N	$\delta\langle r^2 \rangle$ (fm ²)	$\Delta\delta\langle r^2 \rangle$ (fm ²)	R (fm)	$\Delta_{\text{rel}}R$ (fm)	ΔR_{rel}
		123	73	0.140	0.001	4.6665	0.0023	0.0001
		124	74	0.2008	0.0001	4.6735	0.0023	0.0001
		125	75	0.235	0.003	4.6765	0.0026	0.0003
		126	76	0.290	0.003	4.6833	0.0043	0.0003
		127	77	0.322	0.003	4.6867	0.0048	0.0003
		128	78	0.372	0.004	4.6921	0.0054	0.0004
		129	79	0.384	0.003	4.6934	0.0058	0.0003
		130	80	0.464	0.003	4.7019	0.0066	0.0003
		131	81	0.520	0.004	4.7078	0.0073	0.0004
		132	82	0.534	0.002	4.7093	0.0076	0.0002
		121	70			4.6802	0.0026	
		123	72			4.6879	0.0025	
52	Te	116	64	−0.563	0.027	4.6847	0.0128	0.0094
		118	66	−0.457	0.027	4.6956	0.0105	0.0075
		120	68	−0.377	0.006	4.7038	0.0088	0.0070
		122	70	−0.305	0.010	4.7095	0.0031	0.0053
		123	71	−0.289	0.011	4.7117	0.0035	0.0048
		124	72	−0.227	0.009	4.7183	0.0029	0.0039
		125	73	−0.208	0.011	4.7204	0.0030	0.0033
		126	74	−0.153	0.009	4.7266	0.0032	0.0025
		128	76	−0.077	0.004	4.7346	0.0029	0.0012
		130	78	0	0	4.7423	0.0025	0
		132	80	0.076	0.016	4.7500	0.0031	0.0017
		134	82	0.144	0.016	4.7569	0.0041	0.0032
		136	84	0.389	0.019	4.7815	0.0089	0.0071
		127	74			4.7500	0.0081	
		116	62	−0.599	0.009	4.7211	0.0096	0.0009
		118	64	−0.460	0.007	4.7387	0.0070	0.0007
54	Xe	120	66	−0.363	0.007	4.7509	0.0063	0.0007
		122	68	−0.299	0.006	4.7590	0.0059	0.0006
		124	70	−0.242	0.005	4.7661	0.0055	0.0005
		126	72	−0.193	0.007	4.7722	0.0052	0.0007
		127	73	−0.181	0.020	4.7747	0.0038	0.0021
		128	74	−0.152	0.004	4.7774	0.0050	0.0004
		129	75	−0.151	0.001	4.7775	0.0050	0.0003
		130	76	−0.117	0.003	4.7818	0.0049	0.0003
		131	77	−0.125	0.001	4.7808	0.0049	0.0002
		132	78	−0.0844	0.0017	4.7859	0.0048	0.0002
		133	79	−0.106	0.005	4.7831	0.0048	0.0005
		134	80	−0.0518	0.0013	4.7899	0.0047	0.0001
		136	82	0	0	4.7964	0.0047	0
		137	83	0.105	0.003	4.8094	0.0049	0.0003
		138	84	0.254	0.003	4.8279	0.0079	0.0003
		139	85	0.359	0.006	4.8409	0.0100	0.0006
		140	86	0.486	0.002	4.8566	0.0125	0.0002
		141	87	0.591	0.004	4.8694	0.0147	0.0004
		142	88	0.710	0.009	4.8841	0.0169	0.0009
		143	89	0.794	0.004	4.8942	0.0187	0.0004
		144	90	0.908	0.005	4.9082	0.0208	0.0005
		146	92	1.100	0.005	4.9315	0.0245	0.0005
55	Cs	118	63	−0.2044	0.0021	4.7832	0.0092	0.0002
		119	64	−0.1411	0.0062	4.7896	0.0089	0.0006
		120	65	−0.1229	0.0015	4.7915	0.0075	0.0002
		121	66	−0.2650	0.0009	4.7769	0.0078	0.0001
		122	67	−0.2618	0.0016	4.7773	0.0070	0.0002
		123	68	−0.2156	0.0006	4.7820	0.0070	0.0001
		124	69	−0.2083	0.0012	4.7828	0.0062	0.0001
		125	70	−0.1574	0.0006	4.7880	0.0062	0.0001
		126	71	−0.1645	0.0009	4.7872	0.0056	0.0001
		127	72	−0.1022	0.0007	4.7936	0.0055	0.0001
		128	73	−0.1173	0.0004	4.7921	0.0052	0.0001
		129	74	−0.0582	0.0011	4.7981	0.0050	0.0001
		130	75	−0.0482	0.0010	4.7992	0.0049	0.0001
		131	76	−0.0146	0.0007	4.8026	0.0047	0.0001
		132	77	−0.0383	0.0006	4.8002	0.0046	0.0001
		133	78	0	0	4.8041	0.0046	0
		134	79	−0.0100	0.0011	4.8031	0.0046	0.0001
		135	80	0.0259	0.0009	4.8067	0.0047	0.0001
		136	81	0.0174	0.0015	4.8059	0.0052	0.0002
		137	82	0.0852	0.0011	4.8128	0.0050	0.0001
		138	83	0.2099	0.0008	4.8255	0.0050	0.0001
		139	84	0.3739	0.0012	4.8422	0.0069	0.0001
		140	85	0.5051	0.0013	4.8554	0.0088	0.0001

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Table 1 (continued)

Z	el.	A	N	$\delta(r^2)$ (fm ²)	$\Delta\delta(r^2)$ (fm ²)	R (fm)	$\Delta_{\text{tot}}R$ (fm)	ΔR_{rel}
56	Ba	141	86	0.6389	0.0015	4.8689	0.0108	0.0002
		142	87	0.7732	0.0007	4.8825	0.0132	0.0001
		143	88	0.9127	0.0005	4.8965	0.0151	0.0002
		144	89	1.0030	0.0007	4.9055	0.0161	0.0002
		145	90	1.1362	0.0010	4.9188	0.0191	0.0003
		146	91	1.2293	0.0021	4.9281	0.0193	0.0003
		120	64	−0.267	0.010	4.8092	0.0058	0.0010
		121	65	−0.189	0.012	4.8176	0.0052	0.0012
		122	66	−0.212	0.002	4.8153	0.0054	0.0002
		123	67	−0.228	0.002	4.8135	0.0055	0.0002
		124	68	−0.1819	0.0003	4.8185	0.0052	0.0001
		125	69	−0.189	0.002	4.8177	0.0052	0.0002
		126	70	−0.1479	0.0002	4.8221	0.0050	0.0001
		127	71	−0.1641	0.0010	4.8204	0.0051	0.0001
		128	72	−0.1160	0.0003	4.8255	0.0048	0.0001
		129	73	−0.1219	0.0004	4.8248	0.0049	0.0001
		130	74	−0.0895	0.0002	4.8283	0.0047	0.0001
		131	75	−0.0960	0.0003	4.8276	0.0048	0.0001
		132	76	−0.0700	0.0001	4.8303	0.0047	0.0001
		133	77	−0.0873	0.0002	4.8286	0.0047	0.0001
		134	78	−0.0547	0.0001	4.8322	0.0047	0.0001
		135	79	−0.0812	0.0003	4.8294	0.0047	0.0001
		136	80	−0.0422	0.0002	4.8334	0.0046	0.0001
		137	81	−0.0609	0.0002	4.8314	0.0047	0.0001
		138	82	0	0	4.8378	0.0046	0
		139	83	0.129	0.001	4.8513	0.0049	0.0001
		140	84	0.292	0.001	4.8684	0.0059	0.0001
		141	85	0.410	0.001	4.8807	0.0069	0.0001
		142	86	0.550	0.001	4.8953	0.0083	0.0001
		143	87	0.679	0.002	4.9087	0.0096	0.0002
		144	88	0.823	0.003	4.9236	0.0112	0.0003
		145	89	0.928	0.002	4.9345	0.0123	0.0002
		146	90	1.058	0.003	4.9479	0.0138	0.0003
		148	92	1.304	0.006	4.9731	0.0167	0.0006
57	La	135	78	−0.061	0.006	4.8488	0.0060	0.0006
		137	80	−0.048	0.001	4.8496	0.0053	0.0001
		138	81	−0.067	0.001	4.8473	0.0051	0.0001
		139	82	0	0	4.8550	0.0049	0
58	Ce	136	78	−0.031	0.002	4.8739	0.0018	0.0002
		138	80	−0.033	0.002	4.8737	0.0018	0.0002
		140	82	0	0	4.8771	0.0018	0
		142	84	0.281	0.002	4.9063	0.0020	0.0002
		144	86	0.513	0.002	4.9303	0.0024	0.0002
		146	88	0.793	0.002	4.9590	0.0028	0.0002
		148	90	1.089	0.002	4.9893	0.0035	0.0002
59	Pr	141	82			4.8919	0.0050	
60	Nd	132	72	0.050	0.030	4.9174	0.0026	0.0031
		134	74	0.005	0.021	4.9128	0.0026	0.0021
		135	75	−0.037	0.033	4.9086	0.0026	0.0034
		136	76	−0.012	0.027	4.9111	0.0026	0.0027
		137	77	−0.043	0.016	4.9080	0.0026	0.0016
		138	78	−0.006	0.021	4.9123	0.0026	0.0021
		139	79	−0.047	0.014	4.9076	0.0025	0.0014
		140	80	−0.022	0.027	4.9101	0.0026	0.0027
		141	81	−0.066	0.014	4.9057	0.0026	0.0014
		142	82	0	0	4.9123	0.0025	0
		143	83	0.130	0.005	4.9254	0.0026	0.0005
		144	84	0.296	0.003	4.9421	0.0027	0.0003
		145	85	0.410	0.005	4.9535	0.0028	0.0005
		146	86	0.571	0.004	4.9696	0.0030	0.0004
		148	88	0.876	0.004	4.9999	0.0036	0.0004
		150	90	1.282	0.005	5.0400	0.0044	0.0005
62	Sm	138	76	0.067	0.015	4.9599	0.0034	0.0015
		139	77	0.027	0.014	4.9556	0.0034	0.0014
		140	78	0.037	0.015	4.9565	0.0034	0.0015
		141	79	0.030	0.023	4.9517	0.0034	0.0023
		142	80	−0.007	0.013	4.9518	0.0034	0.0013
		143	81	−0.043	0.015	4.9479	0.0034	0.0015
		144	82	0	0	4.9524	0.0034	0
		145	83	0.1167	0.0016	4.9651	0.0034	0.0005
		146	84	0.2732	0.0008	4.9808	0.0035	0.0010
		147	85	0.3669	0.0004	4.9892	0.0035	0.0016
		148	86	0.5199	0.0004	5.0042	0.0034	0.0021

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Table 1 (continued)

Z	el.	A	N	$\delta\langle r^2 \rangle$ (fm ²)	$\Delta\delta\langle r^2 \rangle$ (fm ²)	R (fm)	$\Delta_{\text{rel}}R$ (fm)	ΔR_{rel}
63	Eu	149	87	0.6125	0.0004	5.0134	0.0035	0.0024
		150	88	0.8240	0.0004	5.0387	0.0048	0.0031
		151	89	0.9800	0.0008	5.0550	0.0057	0.0038
		152	90	1.2493	0.0003	5.0819	0.0060	0.0038
		153	91	1.3490	0.0005	5.0925	0.0068	0.0002
		154	92	1.4806	0.0004	5.1053	0.0067	0.0040
		137	74	0.099	0.043	4.9762	0.0095	0.0046
		138	75	0.115	0.042	4.9779	0.0094	0.0045
		139	76	0.081	0.046	4.9760	0.0093	0.0048
		140	77	0.0295	0.0021	4.9695	0.0091	0.0017
		141	78	0.0323	0.0011	4.9697	0.0091	0.0013
		142	79	−0.056	0.003	4.9607	0.0091	0.0010
		143	80	−0.027	0.001	4.9636	0.0091	0.0007
		144	81	−0.051	0.002	4.9612	0.0091	0.0004
		145	82	0	0	4.9663	0.0091	0
		146	83	0.1248	0.0019	4.9789	0.0092	0.0004
		147	84	0.2718	0.001	4.9938	0.0094	0.0006
		148	85	0.3787	0.0017	5.0045	0.0097	0.0010
		149	86	0.5338	0.001	5.0202	0.0103	0.0013
		150	87	0.6278	0.0013	5.0296	0.0108	0.0016
		151	88	0.8538	0.0011	5.0522	0.0046	0.0018
		152	89	1.3989	0.0034	5.1064	0.0066	0.0021
		153	90	1.4554	0.0017	5.1115	0.0062	0.0024
		154	91	1.588	0.006	5.1239	0.0079	0.0006
		155	92	1.567	0.008	5.1221	0.0069	0.0008
		156	93	1.612	0.008	5.1264	0.0071	0.0009
		157	94	1.702	0.007	5.1351	0.0075	0.0010
		158	95	1.765	0.008	5.1413	0.0078	0.0011
		159	96	1.852	0.008	5.1498	0.0084	0.0012
64	Gd	145	81	−1.915	0.029	4.9786	0.0077	0.0029
		146	82	−1.914	0.015	4.9801	0.0140	0.0015
		148	84	−1.617	0.015	5.0080	0.0171	0.0015
		150	86	−1.358	0.015	5.0342	0.0159	0.0015
		152	88	−1.01	0.001	5.0774	0.0048	0.0001
		154	90	−0.5338	0.0003	5.1223	0.0040	0.0001
		155	91	−0.4309	0.0002	5.1319	0.0041	0.0001
		156	92	−0.3229	0.0002	5.1420	0.0042	0.0001
		157	93	−0.2918	0.0001	5.1449	0.0042	0.0001
		158	94	−0.1643	0.0001	5.1569	0.0043	0.0001
		160	96	0	0	5.1734	0.0044	0
65	Tb	147	82	−1.393	0.012	4.9201	0.1508	0.0032
		148	83	−1.304	0.011	4.9291	0.1507	0.0030
		149	84	−1.175	0.009	4.9427	0.1506	0.0027
		150	85	−1.100	0.009	4.9499	0.1505	0.0025
		151	86	−0.969	0.008	4.9630	0.1504	0.0022
		152	87	−0.909	0.008	4.9689	0.1504	0.0021
		153	88	−0.655	0.008	4.9950	0.1502	0.0016
		154	89	−0.272	0.018	5.0333	0.1501	0.0019
		155	90	−0.215	0.009	5.0391	0.1500	0.0010
		157	92	−0.116	0.008	5.0489	0.1500	0.0009
		159	94	0	0	5.0600	0.1500	0
66	Dy	146	80	−0.018	0.002	5.0438	0.2389	0.0002
		148	82	0	0	5.0455	0.2389	0
		149	83	0.119	0.013	5.0567	0.2394	0.0012
		150	84	0.268	0.026	5.0706	0.2413	0.0026
		151	85	0.370	0.037	5.0801	0.2435	0.0036
		152	86	0.530	0.053	5.0950	0.2482	0.0051
		153	87	0.621	0.062	5.1035	0.2516	0.0060
		154	88	0.844	0.084	5.1241	0.2618	0.0082
		155	89	1.077	0.108	5.1457	0.2751	0.0103
		156	90	1.257	0.126	5.1622	0.2869	0.0123
		157	91	1.352	0.135	5.1709	0.2936	0.0133
		158	92	1.468	0.147	5.1815	0.3023	0.0144
		159	93	1.478	0.148	5.1825	0.3031	0.0144
		160	94	1.616	0.162	5.1951	0.3139	0.0155
		161	95	1.647	0.165	5.1962	0.0459	0.0159
		162	96	1.753	0.175	5.2074	0.0172	0.0169
		163	97	1.806	0.181	5.2099	0.0120	0.0169
		164	98	1.901	0.190	5.2218	0.0106	0.0179
67	Ho	151	84	−1.709	0.008	5.0398	0.0354	0.0008
		152	85	−1.486	0.006	5.0614	0.0343	0.0006
		153	86	−1.324	0.005	5.0760	0.0339	0.0005
		154	87	−1.234	0.003	5.0856	0.0333	0.0003

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Table 1 (continued)

Z	el.	A	N	$\delta(r^2)$ (fm ²)	$\Delta\delta(r^2)$ (fm ²)	R (fm)	$\Delta_{\text{tot}}R$ (fm)	ΔR_{rel}
		155	88	−1.003	0.003	5.1076	0.0326	0.0003
		156	89	−0.881	0.003	5.1156	0.0326	0.0003
		157	90	−0.518	0.002	5.1535	0.0316	0.0002
		158	91	−0.48	0.004	5.1571	0.0316	0.0004
		159	92	−0.37	0.002	5.1675	0.0314	0.0002
		160	93	−0.384	0.003	5.1662	0.0315	0.0003
		161	94	−0.253	0.002	5.1785	0.0313	0.0002
		162	95	−0.219	0.008	5.1817	0.0313	0.0008
		163	96	−0.123	0.006	5.1907	0.0313	0.0006
		165	98	0	0	5.2022	0.0312	0
		150	82	−2.114	0.013	5.0548	0.0254	0.0030
		152	84	−1.846	0.013	5.0843	0.0257	0.0027
		154	86	−1.584	0.002	5.1129	0.0268	0.0021
		156	88	−1.307	0.001	5.1429	0.0285	0.0018
		158	90	−1.001	0.001	5.1761	0.0312	0.0015
		160	92	−0.738	0.001	5.2045	0.0336	0.0012
		162	94	−0.551	0.001	5.2246	0.0040	0.0010
68	Er	164	96	−0.392	0.001	5.2389	0.0035	0.0007
		166	98	−0.263	0.001	5.2516	0.0031	0.0005
		167	99	−0.218	0.001	5.2560	0.0031	0.0004
		168	100	−0.132	0.001	5.2644	0.0035	0.0002
		170	102	0	0	5.2789	0.0041	0
		153	84	−1.708	0.033	5.0643	0.0190	0.0030
		154	85	−1.609	0.015	5.0755	0.0166	0.0019
		156	87	−1.359	0.009	5.0976	0.0135	0.0006
		157	88	−1.157	0.005	5.1140	0.0074	0.0008
		158	89	−1.058	0.006	5.1235	0.0069	0.0007
		159	90	−0.898	0.003	5.1392	0.0060	0.0004
		160	91	−0.783	0.003	5.1504	0.0055	0.0004
		161	92	−0.667	0.002	5.1616	0.0050	0.0003
		162	93	−0.567	0.003	5.1713	0.0048	0.0005
		163	94	−0.427	0.002	5.1849	0.0042	0.0002
		164	95	−0.368	0.003	5.1906	0.0042	0.0006
69	Tm	165	96	−0.265	0.002	5.2004	0.0038	0.0002
		166	97	−0.221	0.003	5.2046	0.0038	0.0003
		167	98	−0.134	0.002	5.2129	0.0036	0.0003
		168	99	−0.092	0.004	5.2170	0.0036	0.0004
		169	100	0	0	5.2256	0.0035	0
		170	101	0.048	0.001	5.2303	0.0036	0.0005
		171	102	0.139	0.005	5.2388	0.0037	0.0006
		172	103	0.164	0.022	5.2411	0.0052	0.0030
		152	82	−2.746	0.004	5.0423	<u>0.0146</u>	0.0028
		154	84	−2.335	0.005	5.0875	0.0105	0.0026
		155	85	−2.181	0.007	5.1040	0.0110	0.0010
		156	86	−2.015	0.002	5.1219	0.0103	0.0023
		157	87	−1.908	0.009	5.1324	0.0100	0.0035
		158	88	−1.737	0.001	5.1498	0.0088	0.0006
		159	89	−1.618	0.009	5.1629	0.0084	0.0022
		160	90	−1.462	0.001	5.1781	0.0076	0.0004
70	Yb	161	91	−1.353	0.001	5.1889	0.0072	0.0003
		162	92	−1.191	0.001	5.2054	0.0067	0.0003
		163	93	−1.089	0.001	5.2157	0.0064	0.0002
		164	94	−0.942	0.001	5.2307	0.0060	0.0003
		165	95	−0.8473	0.0003	5.2399	0.0058	0.0002
		166	96	−0.7220	0.0004	5.2525	0.0057	0.0001
		167	97	−0.6252	0.0003	5.2621	0.0056	0.0001
		168	98	−0.5406	0.0003	5.2702	0.0056	0.0001
		169	99	−0.4692	0.0003	5.2771	0.0056	0.0007
		170	100	−0.3845	0.0001	5.2853	0.0056	0.0001
		171	101	−0.3273	0.0001	5.2906	0.0057	0.0001
		172	102	−0.2366	0.0001	5.2995	0.0058	0.0002
		173	103	−0.1810	0.0001	5.3046	0.0059	0.0002
		174	104	−0.1159	0.0001	5.3108	0.0060	0.0003
		175	105	−0.0827	0.0074	5.3135	0.0061	0.0002
		176	106	0	0	5.3215	0.0062	0
71	Lu	161	90	−1.5083	0.0013	5.2293	0.0320	0.0003
		162	91	−1.3966	0.0012	5.2398	0.0317	0.0003
		163	92	−1.2174	0.0012	5.2567	0.0312	0.0003
		164	93	−1.1006	0.0012	5.2677	0.0310	0.0002
		165	94	−0.9372	0.0007	5.2830	0.0307	0.0002
		166	95	−0.7851	0.0008	5.2972	0.0305	0.0001
		167	96	−0.6397	0.0007	5.3108	0.0303	0.0001
		168	97	−0.5124	0.0010	5.3227	0.0302	0.0001

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Table 1 (continued)

Z	el.	A	N	$\delta\langle r^2 \rangle$ (fm ²)	$\Delta\delta\langle r^2 \rangle$ (fm ²)	R (fm)	$\Delta_{\text{rel}}R$ (fm)	ΔR_{rel}
72	Hf	169	98	−0.4443	0.0006	5.3290	0.0302	0.0001
		170	99	−0.3644	0.0006	5.3364	0.0302	0.0001
		171	100	−0.2863	0.0007	5.3436	0.0302	0.0001
		172	101	−0.2323	0.0007	5.3486	0.0302	0.0001
		173	102	−0.1340	0.0010	5.3577	0.0303	0.0001
		174	103	−0.0718	0.0006	5.3634	0.0303	0.0001
		175	104	0	0	5.3700	0.0304	0
		176	105	0.0425	0.0010	5.3739	0.0304	0.0002
		177	106	0.1248	0.0009	5.3815	0.0305	0.0002
		178	107	0.1714	0.0010	5.3857	0.0306	0.0002
		179	108	0.2357	0.0010	5.3917	0.0307	0.0002
		170	98	−0.494	0.009	5.2898	0.0055	0.0009
		171	99	−0.366	0.005	5.3041	0.0049	0.0008
		172	100	−0.322	0.006	5.3065	0.0043	0.0007
		173	101	−0.244	0.004	5.3140	0.0038	0.0005
		174	102	−0.180	0.003	5.3201	0.0035	0.0004
		175	103	−0.091	0.002	5.3191	0.0036	0.0010
		176	104	−0.091	0.001	5.3286	0.0032	0.0002
		177	105	−0.065	0.001	5.3309	0.0031	0.0001
		178	106	0	0	5.3371	0.0031	0
73	Ta	179	107	0.039	0.002	5.3408	0.0031	0.0001
		180	108	0.040	0.005	5.3470	0.0032	0.0002
		182	110	0.176	0.005	5.3516	0.0036	0.0005
		181	108			5.3507	0.0034	
		180	106	−0.169	0.006	5.3491	0.0022	0.0017
74	W	182	108	−0.099	0.005	5.3559	0.0017	0.0010
		183	109	−0.047	0.006	5.3611	0.0020	0.0007
		184	110	0	0	5.3658	0.0023	0
		186	112	0.086	0.004	5.3743	0.0026	0.0009
75	Re	185	110	0	0	5.3596	0.0172	0
		187	112	0.110	0.010	5.3698	0.0173	0.0009
76	Os	184	108	−0.320	0.018	5.3823	0.0022	0.0017
		186	110	−0.231	0.015	5.3909	0.0017	0.0014
		187	111	−0.205	0.016	5.3933	0.0018	0.0015
		188	112	−0.144	0.011	5.3993	0.0011	0.0010
		189	113	−0.119	0.012	5.4016	0.0012	0.0011
		190	114	−0.068	0.006	5.4062	0.0013	0.0006
		192	116	0	0	5.4126	0.0015	0
77	Ir	182	105	−0.283	0.006	5.3705	0.1061	0.0007
		183	106	−0.203	0.004	5.3780	0.1061	0.0005
		184	107	−0.176	0.003	5.3805	0.1061	0.0004
		185	108	−0.123	0.003	5.3854	0.1061	0.0003
		186	109	−0.073	0.004	5.3900	0.1061	0.0004
		187	110	−0.168	0.003	5.3812	0.1061	0.0004
		188	111	−0.140	0.004	5.3838	0.1061	0.0004
		189	112	−0.076	0.002	5.3898	0.1061	0.0002
		191	114	0	0	5.3968	0.1061	0
		193	116	0.069	0.001	5.4032	0.1061	0.0001
78	Pt	178	100	−0.529	0.016	5.3728	0.0066	0.0015
		179	101	−0.335	0.021	5.3915	0.0050	0.0019
		180	102	−0.360	0.011	5.3891	0.0049	0.0010
		181	103	−0.251	0.015	5.3996	0.0041	0.0014
		182	104	−0.279	0.010	5.3969	0.0041	0.0009
		183	105	−0.196	0.020	5.4038	0.0036	0.0019
		184	106	−0.240	0.018	5.4015	0.0036	0.0017
		185	107	−0.090	0.005	5.4148	0.0028	0.0005
		186	108	−0.213	0.004	5.4037	0.0036	0.0004
		187	109	−0.188	0.004	5.4063	0.0037	0.0004
		188	110	−0.193	0.003	5.4053	0.0034	0.0003
		189	111	−0.187	0.005	5.4060	0.0035	0.0005
		190	112	−0.137	0.002	5.4108	0.0030	0.0002
		191	113	−0.142	0.004	5.4102	0.0031	0.0004
		192	114	−0.073	0.002	5.4169	0.0028	0.0002
		193	115	−0.047	0.006	5.4191	0.0027	0.0006
		194	116	0	0	5.4236	0.0025	0
		195	117	0.036	0.002	5.4270	0.0026	0.0002
		196	118	0.075	0.002	5.4307	0.0027	0.0002
		198	120	0.154	0.002	5.4383	0.0032	0.0002
79	Au	183	104	−0.140	0.009	5.4247	0.0043	0.0008
		184	105	−0.077	0.007	5.4306	0.0041	0.0011
		185	106	−0.088	0.004	5.4296	0.0041	0.0008
		186	107	−0.024	0.008	5.4354	0.0039	0.0007

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Table 1 (continued)

Z	el.	A	N	$\delta(r^2)$ (fm ²)	$\Delta\delta(r^2)$ (fm ²)	R (fm)	$\Delta_{\text{tot}} R$ (fm)	ΔR_{rel}
80	Hg	187	108	−0.382	0.005	5.4018	0.0058	0.0008
		188	109	−0.352	0.006	5.4049	0.0055	0.0008
		189	110	−0.313	0.004	5.4084	0.0052	0.0006
		190	111	−0.284	0.005	5.4109	0.0049	0.0006
		191	112	−0.245	0.001	5.4147	0.0046	0.0004
		192	113	−0.211	0.002	5.4179	0.0044	0.0003
		193	114	−0.164	0.001	5.4221	0.0042	0.0002
		194	115	−0.131	0.001	5.4252	0.0040	0.0002
		195	116	−0.079	0.004	5.4298	0.0040	0.0006
		196	117	−0.043	0.005	5.4332	0.0039	0.0004
		197	118	0	0	5.4371	0.0038	0
		198	119	0.031	0.002	5.4400	0.0038	0.0002
		199	120	0.090	0.001	5.4454	0.0039	0.0001
		181	101	−0.114	0.004	5.4364	0.0032	0.0004
		182	102	−0.693	0.021	5.3833	0.0052	0.0020
		183	103	−0.070	0.004	5.4405	0.0031	0.0004
		184	104	−0.550	0.002	5.3949	0.0047	0.0002
		185	105	−0.077	0.001	5.4397	0.0031	0.0001
		186	106	−0.477	0.001	5.4017	0.0043	0.0001
		187	107	−0.447	0.002	5.4046	0.0042	0.0002
		188	108	−0.404	0.001	5.4085	0.0040	0.0001
		189	109	−0.387	0.002	5.4100	0.0040	0.0002
		190	110	−0.326	0.001	5.4158	0.0037	0.0001
		191	111	−0.313	0.004	5.4171	0.0037	0.0004
		192	112	−0.246	0.001	5.4232	0.0035	0.0001
		193	113	−0.242	0.009	5.4238	0.0035	0.0008
		194	114	−0.164	0.001	5.4309	0.0033	0.0001
		195	115	−0.126	0.005	5.4345	0.0032	0.0005
		196	116	−0.0825	0.0001	5.4385	0.0031	0.0001
		197	117	−0.054	0.003	5.4412	0.0031	0.0003
		198	118	0	0	5.4463	0.0031	0
		199	119	0.0130	0.0001	5.4474	0.0031	0.0002
		200	120	0.0942	0.0001	5.4551	0.0031	0.0003
		201	121	0.1258	0.0001	5.4581	0.0032	0.0003
		202	122	0.1981	0.0001	5.4648	0.0033	0.0003
		203	123	0.231	0.004	5.4679	0.0035	0.0003
		204	124	0.3001	0.0001	5.4744	0.0036	0.0003
		205	125	0.333	0.002	5.4776	0.0038	0.0003
		206	126	0.397	0.002	5.4837	0.0040	0.0003
81	Tl	188	107	−0.7708	0.0005	5.4017	0.0072	0.0013
		190	109	−0.6693	0.0003	5.4121	0.0056	0.0013
		191	110	−0.6201	0.0007	5.4169	0.0048	0.0003
		192	111	−0.5967	0.0003	5.4191	0.0051	0.0012
		193	112	−0.542	0.011	5.4243	0.0042	0.0008
		194	113	−0.5261	0.0005	5.4259	0.0046	0.0010
		195	114	−0.457	0.007	5.4325	0.0039	0.0006
		196	115	−0.4546	0.0005	5.4327	0.0042	0.0009
		197	116	−0.391	0.001	5.4388	0.0036	0.0002
		198	117	−0.383	0.007	5.4396	0.0036	0.0006
		199	118	−0.296	0.007	5.4479	0.0031	0.0006
		200	119	−0.283	0.007	5.4491	0.0031	0.0006
		201	120	−0.197	0.001	5.4573	0.0029	0.0004
		202	121	−0.174	0.007	5.4595	0.0027	0.0006
		203	122	−0.0978	0.0001	5.4666	0.0027	0.0002
		204	123	−0.060	0.007	5.4704	0.0028	0.0006
		205	124	0	0	5.4759	0.0026	0
		207	126	0.0993	0.0002	5.4853	0.0027	0.0002
		208	127	0.185	0.013	5.4946	0.0028	0.0012
82	Pb	182	100	−1.311	0.013	5.3788	0.0035	0.0012
		183	101	−1.225	0.008	5.3869	0.0030	0.0007
		184	102	−1.160	0.005	5.3930	0.0029	0.0005
		185	103	−1.103	0.008	5.3984	0.0028	0.0007
		186	104	−1.057	0.005	5.4027	0.0027	0.0005
		187	105	−1.002	0.006	5.4079	0.0026	0.0006
		188	106	−0.938	0.006	5.4139	0.0025	0.0006
		189	107	−0.898	0.008	5.4177	0.0024	0.0007
		190	108	−0.851	0.002	5.4222	0.0023	0.0005
		191	109	−0.845	0.004	5.4229	0.0026	0.0011
		192	110	−0.766	0.005	5.4300	0.0025	0.0011
		193	111	−0.756	0.003	5.4310	0.0023	0.0007
		194	112	−0.689	0.004	5.4372	0.0023	0.0009
		195	113	−0.671	0.004	5.4389	0.0045	0.0011
		196	114	−0.611	0.005	5.4444	0.0024	0.0014
		197	115	−0.609	0.003	5.4446	0.0024	0.0014

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Table 1 (continued)

Z	el.	A	N	$\delta\langle r^2 \rangle$ (fm ²)	$\Delta\delta\langle r^2 \rangle$ (fm ²)	R (fm)	$\Delta_{\text{tot}}R$ (fm)	ΔR_{rel}
83	Bi	198	116	−0.5258	0.0002	5.4524	0.0022	0.0012
		199	117	−0.5206	0.0005	5.4529	0.0022	0.0012
		200	118	−0.4322	0.0002	5.4611	0.0020	0.0010
		201	119	−0.4127	0.0003	5.4629	0.0019	0.0009
		202	120	−0.3307	0.0002	5.4705	0.0017	0.0007
		203	121	−0.3071	0.0003	5.4727	0.0017	0.0007
		204	122	−0.2249	0.0001	5.4803	0.0014	0.0005
		205	123	−0.1983	0.0002	5.4828	0.0015	0.0005
		206	124	−0.1189	0.0001	5.4902	0.0014	0.0003
		207	125	−0.0743	0.0001	5.4943	0.0014	0.0002
		208	126	0	0	5.5012	0.0013	0
		209	127	0.0945	0.0005	5.5100	0.0014	0.0003
		210	128	0.2125	0.0002	5.5208	0.0016	0.0007
		211	129	0.3020	0.0003	5.5290	0.0017	0.0007
		212	130	0.4178	0.0016	5.5396	0.0019	0.0003
		214	132	0.6150	0.0011	5.5577	0.0023	0.0002
		202	119	−0.408	0.002	5.4840	0.0069	0.0002
		203	120	−0.330	0.002	5.4911	0.0058	0.0002
		204	121	−0.305	0.003	5.4934	0.0055	0.0003
		205	122	−0.224	0.001	5.5008	0.0044	0.0001
		206	123	−0.196	0.001	5.5034	0.0040	0.0001
		207	124	−0.119	0.002	5.5103	0.0032	0.0002
84	Po	208	125	−0.071	0.002	5.5147	0.0028	0.0002
		209	126	0	0	5.5211	0.0026	0
		210	127	0.099	0.003	5.5300	0.0030	0.0003
		212	129	0.307	0.004	5.5489	0.0054	0.0004
		213	130	0.416	0.001	5.5586	0.0069	0.0001
		192	108	−0.403	0.019	5.5220	0.0178	0.0017
		194	110	−0.462	0.016	5.5167	0.0178	0.0014
		196	112	−0.496	0.013	5.5136	0.0178	0.0012
		198	114	−0.485	0.017	5.5146	0.0178	0.0015
		200	116	−0.426	0.014	5.5199	0.0178	0.0013
		202	118	−0.336	0.015	5.5281	0.0177	0.0014
		204	120	−0.229	0.014	5.5378	0.0177	0.0013
		205	121	−0.216	0.014	5.5389	0.0177	0.0013
		206	122	−0.116	0.014	5.5480	0.0177	0.0013
		207	123	−0.092	0.014	5.5501	0.0177	0.0013
		208	124	0	0	5.5584	0.0176	0
		209	125	0.049	0.012	5.5628	0.0176	0.0011
		210	126	0.134	0.010	5.5704	0.0176	0.0009
		216	132	0.867	0.014	5.6359	0.0174	0.0012
		218	134	1.092	0.015	5.6558	0.0173	0.0013
86	Rn	202	116	−0.4382	0.0004	5.5521	0.0181	0.0001
		204	118	−0.3860	0.0003	5.5568	0.0180	0.0001
		205	119	−0.3849	0.0003	5.5569	0.0180	0.0001
		206	120	−0.3058	0.0003	5.5640	0.0178	0.0001
		207	121	−0.2926	0.0002	5.5652	0.0178	0.0001
		208	122	−0.2125	0.0002	5.5725	0.0177	0.00004
		209	123	−0.1917	0.0001	5.5743	0.0177	0.00003
		210	124	−0.1143	0.0001	5.5813	0.0177	0.00002
		211	125	−0.0735	0.0001	5.5850	0.0176	0.00001
		212	126	0	0	5.5915	0.0176	0
		218	132	0.7000	0.0003	5.6540	0.0187	0.0001
		219	133	0.8212	0.0003	5.6648	0.0191	0.0001
		220	134	0.9151	0.0003	5.6731	0.0194	0.0002
		221	135	1.0320	0.0004	5.6834	0.0199	0.0002
		222	136	1.1236	0.0004	5.6915	0.0203	0.0002
		207	120	−0.21794	0.00016	5.5720	0.0176	0.00004
		208	121	−0.20804	0.00012	5.5729	0.0176	0.00003
		209	122	−0.13043	0.00008	5.5799	0.0176	0.00002
		210	123	−0.10831	0.00004	5.5818	0.0176	0.00002
		211	124	−0.03757	0.00004	5.5882	0.0176	0.00001
87	Fr	212	125	0	0	5.5915	0.0176	0
		213	126	0.06829	0.00008	5.5977	0.0176	0.00001
		220	133	0.86725	0.00045	5.6688	0.0177	0.0001
		221	134	0.98269	0.00033	5.6790	0.0177	0.0002
		222	135	1.09543	0.00012	5.6890	0.0177	0.0002
		223	136	1.16507	0.00008	5.6951	0.0178	0.0002
		224	137	1.28937	0.00004	5.7061	0.0178	0.0002
		225	138	1.34862	0.00022	5.7112	0.0178	0.0002
		226	139	1.43700	0.00004	5.7190	0.0178	0.0002
		227	140	1.60249	0.00008	5.7335	0.0179	0.0002

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Table 1 (continued)

Z	el.	A	N	$\delta\langle r^2 \rangle$ (fm ²)	$\Delta\delta\langle r^2 \rangle$ (fm ²)	R (fm)	$\Delta_{\text{tot}} R$ (fm)	ΔR_{rel}
88	Ra	228	141	1.67522	0.00020	5.7399	0.0179	0.0003
		208	120	−0.2560	0.0002	5.5850	0.0183	0.0024
		209	121	−0.2530	0.0002	5.5853	0.0182	0.0022
		210	122	−0.1820	0.0002	5.5917	0.0180	0.0017
		211	123	−0.1680	0.0001	5.5929	0.0179	0.0015
		212	124	−0.0990	0.0001	5.5991	0.0177	0.0009
		213	125	−0.0660	0.0001	5.6020	0.0177	0.0006
		214	126	0	0	5.6079	0.0177	0
		220	132	0.6790	0.0002	5.6683	0.0215	0.0062
		221	133	0.8050	0.0002	5.6795	0.0228	0.0073
		222	134	0.8950	0.0002	5.6874	0.0239	0.0081
		223	135	1.0070	0.0003	5.6973	0.0253	0.0091
		224	136	1.0900	0.0003	5.7046	0.0263	0.0098
		225	137	1.2080	0.0003	5.7150	0.0279	0.0108
		226	138	1.2770	0.0003	5.7211	0.0288	0.0115
		227	139	1.3650	0.0004	5.7283	0.0300	0.0123
		228	140	1.4590	0.0004	5.7370	0.0315	0.0131
		229	141	1.5560	0.0005	5.7455	0.0329	0.0140
		230	142	1.6670	0.0005	5.7551	0.0346	0.0150
		232	144	1.8540	0.0005	5.7714	0.0375	0.0166
90	Th	227	137	−0.508	0.003	5.7404	0.0165	0.0062
		228	138	−0.413	0.001	5.7488	0.0152	0.0049
		229	139	−0.334	0.001	5.7557	0.0143	0.0040
		230	140	−0.2050	0.0004	5.7670	0.0131	0.0025
		232	142	0	0	5.7848	0.0124	0
92	U	233	141	−0.435	0.001	5.8203	0.0049	0.0043
		234	142	−0.334	0.001	5.8291	0.0052	0.0033
		235	143	−0.2803	0.0002	5.8337	0.0041	0.0027
		236	144	−0.1676	0.0002	5.8431	0.0038	0.0016
		238	146	0	0	5.8571	0.0033	0
94	Pu	238	144	−0.082	0.004	5.8535	0.0378	0.0012
		239	145	0	0	5.8601	0.0378	0
		240	146	0.122	0.003	5.8701	0.0379	0.0016
		241	147	0.179	0.004	5.8748	0.0379	0.0019
		242	148	0.273	0.004	5.8823	0.0380	0.0024
		244	150	0.426	0.008	5.8948	0.0382	0.0032
95	Am	241	146	−0.142	0.008	5.8928	0.0042	0.0012
		243	148	0	0	5.9048	0.0035	0
96	Cm	242	146	−0.168	0.056	5.8285	0.0192	0.0049
		244	148	0	0	5.8429	0.0181	0
		245	149	0.054	0.011	5.8475	0.0182	0.0010
		246	150	0.156	0.022	5.8562	0.0184	0.0020
		248	152	0.303	0.054	5.8687	0.0193	0.0040