

TABLE I. Numerators and denominators of the coefficients of the expansion of the BBR shifts $\delta E_a^{(E)'} , \delta E_a^{(P)'} ,$ and $\delta E_a^{(D)}$ in powers of the ratio $k_B T/c$ as defined by Eqs. (39), (44) and (46) of the main text. The values of $a_n^{(P)}$ and $b_n^{(P)}$ are specific to s-states ($l_a = 0$).

n	$a_n^{(E)}$	$b_n^{(E)}$	$a_n^{(P)}$	$b_n^{(P)}$	$a_n^{(D)}$	$b_n^{(D)}$	n	$a_n^{(E)}$	$b_n^{(E)}$	$a_n^{(P)}$	$b_n^{(P)}$	$a_n^{(D)}$	$b_n^{(D)}$
1	2	1	0	1	0	1	26	2	32487	-106	62181	50	637
2	2	3	1	3	2	1	27	-4	72981	55	34986	-104	1377
3	-4	45	7	6	-8	9	28	1	20405	-38	26129	27	371
4	1	35	-6	25	3	5	29	-4	90915	59	43725	-112	1595
5	-4	315	11	105	-16	35	30	2	50445	-122	97185	58	855
6	2	297	-26	441	10	27	31	-4	111569	21	17936	-120	1829
7	-4	1001	5	132	-24	77	32	1	30744	-130	118767	31	488
8	1	390	-34	1287	7	26	33	-4	135135	67	65331	-128	2079
9	-4	2295	19	975	-32	135	34	2	74035	-46	47775	66	1105
10	2	1615	-14	935	18	85	35	-4	161805	71	78390	-136	2345
11	-4	4389	23	1938	-40	209	36	1	44091	-146	171051	35	621
12	1	1449	-50	5187	11	63	37	-4	191771	25	31027	-144	2627
13	-4	7475	9	1127	-48	299	38	2	104025	-154	202137	74	1387
14	2	4725	-58	8625	26	175	39	-4	225225	79	109500	-152	2925
15	-4	11745	31	5400	-56	405	40	1	60830	-54	78925	39	770
16	1	3596	-22	4437	15	116	41	-4	262359	83	127743	-160	3239
17	-4	17391	35	8091	-64	527	42	2	141183	-170	275157	82	1701
18	2	10395	-74	19437	34	297	43	-4	303365	29	49302	-168	3569
19	-4	24605	13	3850	-72	665	44	1	81345	-178	317475	43	935
20	1	7215	-82	27195	19	185	45	-4	348435	91	170085	-176	3915
21	-4	33579	43	15873	-80	819	46	2	186277	-62	121307	90	2047
22	2	19393	-30	12259	42	451	47	-4	397761	95	194376	-184	4277
23	-4	44505	47	21156	-88	989	48	1	106020	-194	414687	47	1116
24	1	12690	-98	48375	23	270	49	-4	451535	33	73625	-192	4655
25	-4	57575	17	9165	-96	1175	50	2	240075	-202	469965	98	2425