TABLE I: Relative differences of the B^+, Al^+, and In^+ calculated energy levels and NIST data (in %). CI, CI+MBPT, and CI+all-order data are listed in columns labeled "CI", "MBPT", and "All", respectively. Experimental energy levels are listed for reference in cm^{-1}. Two-electron binding energy is listed in the first row. All other levels are counted from the ground state.

	B^+					Al^+					In^+			
Level	Expt.	CI	MBPT	All	Level	Expt.	CI	MBPT	All	Level	Expt.	CI	MBPT	All
$2s^2\ ^1S_0$	508818	0.2	0.007	-0.001	$3s^2\ ^1S_0$	381308	1.2	0.043	0.006	$5s^2\ ^1S_0$	378299	5.8	-1.1	-0.25
$2p^2\ ^3P_0$	98911	-1.0	-0.114	-0.005	$3p^2\ ^1D_2$	85481	2.3	0.071	-0.022	$5s6s\ ^3S_1$	93923	8.8	-1.5	-0.42
$2p^2\ ^3P_1$	98920	-1.0	-0.116	-0.007	$3s4s\ ^3S_1$	91275	1.4	0.068	0.015	$5s6s\ ^1S_0$	97030	8.1	-1.5	-0.48
$2p^2\ ^3P_2$	98933	-1.1	-0.124	-0.015	$3p^2\ ^3P_0$	94085	1.6	0.036	0.008	$5p^2\ ^1D_2$	97628	10.5	-2.3	-0.66
$2p^2\ ^1D_2$	102363	-0.8	-0.188	-0.113	$3p^2\ ^3P_1$	94147	1.6	0.032	0.004	$5p^2\ ^3P_0$	101608	7.0	-1.8	-0.42
$2p^2\ ^1S_0$	127661	-0.5	-0.264	-0.223	$3p^2\ ^3P_2$	94269	1.6	0.024	-0.004	$5s5d\ ^3D_1$	102088	8.6	-1.4	-0.30
$2s3s\ ^3S_1$	129774	0.2	0.010	0.014	$3s4s\ ^1S_0$	95351	1.4	0.053	0.003	$5s5d\ ^3D_2$	102174	8.6	-1.4	-0.30
$2s3s\ ^1S_0$	137622	-0.2	-0.116	-0.093	$3s3d\ ^3D_3$	95549	1.4	-0.002	-0.026	$5s5d\ ^3D_3$	102308	8.6	-1.4	-0.31
$2s3d\ ^3D_1$	150650	0.2	-0.005	-0.004	$3s3d\ ^3D_2$	95551	1.4	-0.002	-0.026	$5p^2\ ^3P_1$	103249	7.2	-1.9	-0.44
$2s3d\ ^3D_2$	150650	0.2	-0.006	-0.004	$3s3d\ ^3D_1$	95551	1.4	-0.001	-0.025	$5p^2\ ^3P_2$	105565	7.3	-1.9	-0.45
$2s3d\ ^3D_3$	150650	0.2	-0.006	-0.005										
$2s2p\ ^3P_0$	37336	-0.7	-0.028	0.043	$3s3p\ ^3P_0$	37393	3.1	0.151	0.007	$5s5p\ ^3P_0$	42276	13.2	-3.7	-1.08
$2s2p\ ^3P_1$	37342	-0.7	-0.040	0.037	$3s3p\ ^3P_1$	37454	3.1	0.140	0.008	$5s5p\ ^3P_1$	43351	13.0	-3.6	-0.97
$2s2p\ ^3P_2$	37358	-0.8	-0.054	0.020	$3s3p\ ^3P_2$	37578	3.1	0.120	-0.017	$5s5p\ ^3P_2$	45830	13.0	-3.6	-1.06
$2s2p\ ^1P_1$	73397	-1.3	-0.395	-0.272	$3s3p\ ^1P_1$	59852	0.4	-0.175	-0.141	$5s5p\ ^1P_1$	63038	4.2	-0.4	-0.09
$2s3p\ ^3P_0$	143989	0.1	0.004	0.009	$3s4p\ ^3P_0$	105428	1.4	0.068	0.020	$5s6p\ ^3P_0$	107662	8.1	-1.4	-0.34
$2s3p\ ^3P_2$	143990	0.1	0.003	0.008	$3s4p\ ^3P_1$	105442	1.4	0.067	0.020	$5s6p\ ^3P_1$	107842	8.0	-1.4	-0.34
$2s3p\ ^3P_1$	143993	0.1	0.002	0.008	$3s4p\ ^3P_2$	105471	1.4	0.065	0.018	$5s6p\ ^3P_2$	108430	8.0	-1.4	-0.35
$2s3p\ ^1P_1$	144103	0.04	-0.016	-0.004	$3s4p\ ^1P_1$	106921	1.3	0.046	0.007	$5s6p\ ^1P_1$	109780	7.4	-1.3	-0.35

TABLE II: Contributions to the $ns^2\ ^1S_0$ and $nsnp\ ^3P_0$ polarizabilities α_0 of B^+, Al^+, and In^+ in a_3^0. Absolute values of the corresponding reduced electric-dipole matrix elements are listed in column labeled "D" in $a_0 e$. Final polarizability values are listed in rows labeled "Total".

Ion	State	Contr.	D	α_0
B^+	$2s^2\ ^1S_0$	$2s^2\ ^1S_0 - 2s2p\ ^1P_1$	2.118	8.918
		$2s^2\ ^1S_0 - 2s3p\ ^1P_1$	0.320	0.104
		Other		0.582
		Core		0.020
		vc		0.000
		Total		9.624
B^+	$2s2p\ ^3P_0$	$2s2p\ ^3P_0 - 2p^2\ ^3P_1$	1.354	3.216
		$2s2p\ ^3P_0 - 2s3s\ ^3S_1$	0.476	0.754
		$2s2p\ ^3P_0 - 2s3d\ ^3D_1$	1.175	1.517
		Other		2.267
		Core		0.020
		vc		-0.001
		Total		7.772
Al^+	$3s^2\ ^1S_0$	$3s^2\ ^1S_0 - 3s3p\ ^1P_1$	3.113	23.661
		$3s^2\ ^1S_0 - 3s4p\ ^1P_1$	0.045	0.003
		Other		0.138
		Core		0.265
		vc		-0.019
		Total		24.048
Al^+	$3s3p\ ^3P_0$	$3s3p\ ^3P_0 - 3s4s\ ^3S_1$	0.900	2.197
		$3s3p\ ^3P_0 - 3p^2\ ^3P_0$	1.836	8.687
		$3s3p\ ^3P_0 - 3s3d\ ^3D_1$	2.236	12.568
		Other		0.836
		Core		0.265
		vc		-0.010
		Total		24.543
In^+	$5s^2\ ^1S_0$	$5s^2\ ^1S_0 - 5s5p\ ^1P_1$	2.977	20.554
		$5s^2\ ^1S_0 - 5s6p\ ^1P_1$	0.123	0.020
		Othe		0.261
		Core		3.220
		vc		-0.041
		Total		24.014
In^+	$5s5p\ ^3P_0$	$5s5p\ ^3P_0 - 5s6d\ ^3S_1$	1.015	2.921
		$5s5p\ ^3P_0 - 5s5d\ ^3D_1$	2.189	11.755
		$5s5p\ ^3P_0 - 5p^2\ ^3P_1$	1.664	6.649
		Other		1.645
		Core		3.220
		vc		-0.170
		Total		26.019