This is the completed set of tables of the paper:

Theoretical resolution of the H^- resonance spectrum up to the $n = 4$ threshold, I: States of $^1P^o$, $^1D^o$ and $^1F^o$ symmetries

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TABLE I. Energies and widths of H^- $^1P^o$ Feshbach resonances below the $n = 2$ threshold.

	CI-Close-coupling		CCR		Algebraic Close-Coupling		CESE	
	Venuti and Decleva [42]		Lindroth *et al* [43]		Gien [45]		This work	
State	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$
(1)	0.126049581	1.3669[6]	0.12604985975	1.37[6]	0.12604518	1.386[6]	0.126049837	1.3618[6]
(2)	0.125035391	7.2313[8]	0.125035052	7.4[8]	0.12503492	7.53[8]	0.1250350503	7.28[8]
(3)			0.1250012	2.2[9]	0.1250011892	2.6655[9]	0.12500119344	2.64[9]
(4)					0.125000039758	9.615[11]	0.1250000408	2[11]

TABLE II. Energies and widths of H^- $^1P^o$ Feshbach resonances below the $n = 3$ threshold.

	R-matrix		CCR				CI-Close-coupling		CESE	
	Pathak et al [34]		Ho [86]		Lindroth [87]		Venuti and Decleva [42]		This work	
State	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$
(1)	0.062713	1.255[3]	0.06271675	1.1915[3]	0.06273	1.199[3]	0.06271651	1.19126[3]	0.06271692	1.19006[3]
(2)	0.0585715	9.0[6]	0.0585718	8.99[6]	0.05857	8.8[6]	0.0585697	8.968[6]	0.0585718096	8.9874[6]
(3)	0.056145		0.0561167	2.1[6]	0.05612	2.2[6]	0.05611661	2.136[6]	0.056116399	2.2578[6]
(4)	0.055903	6.65[5]	0.055907	7.0[5]	0.05590	7.096[5]	0.0559045	7.061[5]	0.05590626	7.0948[5]
(5)					0.05566	4[7]	0.05566923	4.611[7]	0.0556630559	3.9548[7]
(6)					0.05558	4[6]	0.05557517	4.067[6]	0.0555763612	4.1854[6]
(7)							0.055577623	1.188[8]	0.0555763099	2.0030[7]
(8)							0.055559828	1.760[8]	0.055559575918	1.5172[8]
(9)							0.055556725	2.444[7]	0.05555679529	2.5698[7]
(10)									0.055556333474	2.901[9]
(11)									0.05555570632	5.88[10]
(12)									0.05555562951	1.5280[7]
(13)									0.055555583	1.1[8]

TABLE III. Energies and widths of H^{-} $^1P^o$ Feshbach resonances below the $n = 4$ threshold.

	R-matrix		CCR				CESE	
	Pathak et al [34]		Ho [86]		Lindroth [87]		This work	
State	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$
(1)	0.0371305	1.245[3]	0.03717945	1.0336[3]	0.03718	1.03[3]	0.0371794	1.034328[3]
(2)	0.034289	1.80[5]	0.03429405	1.83[5]	0.03430	1.84[5]	0.03429397	1.8328[5]
(3)	0.032324	2.25[4]	0.0323525	2.44[4]	0.03235	2.4[4]	0.032350629	2.4152[4]
(4)	0.032192	8.0[6]	0.0321985	7.7[6]	0.03220	7.7[6]	0.032198287	7.9216[6]
(5)	0.0316025		0.031613	5.95[6]	0.03161	6.6[6]	0.031613080	5.958[6]
(6)	0.0315535	4.65[5]	0.031562	3.15[6]	0.03156	2.2[6]	0.03155516	2.716[6]
(7)	0.0313515		0.0314975	6.47[5]	0.03150	6.3[5]	0.03149750	7.550[5]
(8)							0.031349759	8.718[7]
(9)	0.0313115		0.031315	1.2[4]			0.03132298	1.13866[4]
(10)	0.0313045				0.03131	1.5[5]	0.031304250	1.1694[5]
(11)							0.031282674	2.86[7]
(12)							0.0312645831	2.614[7]
(13)							0.0312627480	2.5110[6]
(14)							0.031260682	9.4[8]
(15)							0.0312535114	3.24[8]
(16)							0.03125293164	5.788[7]
(17)							0.0312511519	1.054[8]
(18)							0.03125067253	1.338[7]
(19)							0.03125053534	9.50[9]
(20)							0.0312503765	3.80[9]
(21)							0.0312501542	3.10[8]
(22)							0.031250120	3.4[9]
(23)							0.0312500159	1.34[9]
(24)							0.0312500172	1.8[8]

TABLE IV. Energies and widths of H$^-$ $^1D^o$ and $^1F^o$ Feshbach resonances below the $n = 3$ threshold.

	R-matrix				CCR				CESE	
	Pathak *et al* [34]		Odgers *et al* [35]		Bhatia and Ho [57]		Ho [56]		This work	
State	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$
$^1D^o(1)$	0.0594095	2.755[4]	0.05943	2.645[4]	0.059431007	2.49901[4]			0.059430923	2.4991[4]
(2)									0.0555997787	2.6768[6]
(3)									0.055556101835	3.3034[8]
$^1F^o(1)$	0.056558	5.5[6]	0.056875				0.0565588	5.02[6]	0.0565587519	5.0068[6]
(2)									0.05565771162	5.5402[7]
(3)									0.05556643170	5.972[8]
(4)									0.055556720982	6.408[9]
(5)									0.0555556809	6.8[10]

TABLE V. Energies and widths of H$^-$ $^1D^o$ and $^1F^o$ Feshbach resonances below the $n = 4$ threshold.

	R-matrix		Variational Close-Coupling		CCR		CESE	
	Pathak *et al* [34]		Callaway [49]		Ho and Callaway [55]		This work	
State	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$	$-E(a.u.)$	$\Gamma(a.u.)$
$^1D^o(1)$	0.036498	1.175[3]	0.03635	1.25[3]	0.03652	1.2[3]	0.0365292	1.2286[3]
(2)	0.032067	2.16[4]					0.03209299	2.50202[4]
(3)	0.031709	7.0[6]					0.03171549133	7.42094[6]
(4)	0.0314025	4.55[5]					0.031416853	5.4614[5]
(5)							0.0312835667	1.12238[5]
(6)							0.03127688546	4.9388[7]
(7)							0.0312567786	2.276[6]
(8)							0.03125144201	2.6238[8]
(9)							0.03125137195	4.6184[7]
(10)							0.0312502777	9.378[8]
(11)							0.03125007408	2.10[9]
$^1F^o(1)$	0.035098	6.55[4]	0.03515	6.5[4]	0.035125	6.5[4]	0.03511423	6.550[4]
(2)	0.0334555	1.80[5]					0.033461482	2.042[5]
(3)	0.031846	6.5[6]					0.03184856	7.578[6]
(4)	0.031661	4.85[5]					0.03170402	7.946[5]
(5)					0.03147	5[4]	0.0314357	3.880[4]
(6)							0.031418432	2.052[6]
(7)							0.031317286	1.4470[5]
(8)							0.031297999	5.820[7]
(9)							0.0312746	2.06[5]
(10)							0.0312637636	1.874[7]
(11)							0.031260405	2.424[6]
(12)							0.0312539447	4.90[8]
(13)							0.0312515877	3.660[7]
(14)							0.03125113086	1.376[8]
(15)							0.0312503239	4.72[9]
(16)							0.0312502433	5.562[8]
(17)							0.031250024	2.2[8]

TABLE VI. The orbital basis set used in the present computation of ${}^1P^o$, ${}^1D^o$ and ${}^1F^o$ resonances. The number of localized radial STO's, N_{loc}, and the number of complex rotated rarial STO's, N_{rot}, for each orbital symmetry, l, are given. The STOs are chosen systematically for groups of states so as to have their average r fall in a more or less regular way inside the range defined by $< r >_{min}$ and $< r >_{max}$.

	s		p		d		f		g		h		i	k	$< r >_{min}$	$< r >_{max}$
	N_{loc}	N_{rot}	N_{loc}	N_{rot}	N_{loc}	N_{rot}	N_{loc}	N_{rot}	N_{loc}	N_{rot}	N_{loc}	N_{rot}	N_{loc}	N_{loc}		
${}^1P^o$	33	35	33	34	33	33	31	32	29		27		25		1.2	6600
${}^1D^o$			31	34	31	33	31	32	29		27		25		2.0	4300
${}^1F^o$	30	33	30	32	30	31	30	30	28	29	26	28	24	22	1.6	4500

TABLE VII. The basis set expansion for the CESE computation of ${}^1P^o$, ${}^1D^o$ and ${}^1F^o$ resonances. For a given total symmetry, the number of radial terms within the angular contribution ll' is given.

	sp	pd	df	fg	gh	hi	sf	pg	dh	fi	gk	Total
${}^1P^o$	998	822	675	576	511	435						4017
${}^1D^o$		869	768	689	601	519						3446
${}^1F^o$		701	606	534	456		756	621	520	468	395	5057

TABLE VIII. ${}^1P^o$ *shape* resonance above the $n = 2$ H threshold. The real, E, and imaginary, $-\frac{1}{2}\Gamma$, parts of complex energy, the energy position with respect to the $n = 2$ H threshold ($-0.125 a.u.$), δE, and with respect to the H^- ground state, ΔE, and the width, Γ, are given. Our results are compared with the experimental [88,89,29] and theoretical ones obtained from the CCR [90,87,85], $\mathcal{L}^2$-Feshbach [41], close-coupling [48], and R-matrix [34,36] methods.

Reference	$-E(a.u.)$	$\frac{1}{2}\Gamma(10^{-4}a.u.)$	$\delta E(10^{-5}a.u.)$	$\Delta E(eV)$	$\Gamma(meV)$
present	0.124387	3.55	61.3	10.9697	19.3
[90]	0.124351	2.60	64.9	10.9707	14.1
[87]	0.12437		63.	10.9702	18.5
[85]	0.12436	3.45	64.	10.9705	18.8
[41]	0.12424		76.	10.9737	22.6
[48]	0.124395	3.68	60.5	10.9695	20.0
[34]	0.124328	5.8	67.2	10.9713	32
[36]	0.124242	3.425	75.8	10.9737	18.6
Experiment					
[88]				10.971	21.2(11)
[89]				10.974(3)	20(1)
[89]				10.970(3)	30(1)
[29]				10.971(3)[a]	22(3)

[a]The result of Williams [29] is $10.217(3)eV$ above the $1s$ H ground level, this result has been shifted to the $1s^2$ H^- position by the electron affinity $0.7544eV$.

TABLE IX. Results of the present CESE (complex eigenvalue Schrödinger equation) calculations for H^- resonances of $^1P^o$ symmetry below the $n = 2$ threshold. E: total energy in $a.u.$ (For H^-, $1a.u. = 27.211396 \times \frac{M}{M+1} = 27.19658eV$). Γ: total width. $\epsilon_m \equiv E_{th} - E_m$: the energy distance from threshold. $R_\epsilon \equiv \epsilon_{m-1}/\epsilon_m$, $R_\Gamma \equiv \Gamma_{m-1}/\Gamma_m$.

State	$-E(a.u.)$	$\epsilon(10^{-9}a.u.)$	$\frac{\Gamma}{2}(10^{-10}a.u.)$	R_ϵ	R_Γ
1	0.126049837	1049837.	6809.		
2	0.1250350503	35050.30	364.	29.952	18.706
3	0.12500119344	1193.44	13.2	29.369	27.576
4	0.1250000408	40.80	0.1	29.251	[a]
The value of the ratio given by the G-D model is [17]				29.334	

[a] Because of the extreme diffuseness of this state function and of the corresponding small number for Γ, the value for R_Γ did not have the same level of accuracy and therefore it is excluded from the list.

TABLE X. As in Table IX, for $^1P^o$ H^- resonances below the $n = 3$ threshold. Two series are established, labeled A and B. Note the existence of overlapping resonances: A3 and B4.

				A		B	
State	$-E(a.u.)$	$\epsilon(10^{-8}a.u.)$	$\frac{\Gamma}{2}(10^{-8}a.u.)$	R_ϵ	R_Γ	R_ϵ	R_Γ
1 A1	0.06271692	716136.	59503.				
2 B1	0.0585718096	301625.40	449.37				
3 B2	0.056116399	56084.3	112.89			5.378	3.981
4 A2	0.05590626	35070.	3547.4	20.420	16.774		
5 B3	0.0556630559	10750.03	19.774			5.217	5.709
6 A3	0.0555763612	2080.56	209.27	16.856	16.951		
7 B4	0.0555763099	2075.43	10.015			5.180	1.974
8 B5	0.055559575918	402.0362	0.7586			5.162	13.202
9 A4	0.05555679529	123.973	12.849	16.782	16.287		
10 B6	0.055556333474	77.7918	0.1451			5.168	5.228
11 B7	0.05555570632	15.076	0.0294			5.160	4.935
12 A5	0.05555562951	7.395	0.7640	16.763	16.818		
13 B8	0.055555583	2.7	0.55			5.493	[a]
The values of the ratio given by the G-D model are [17]				16.752		5.164	

[a] See footnote of Table IX.

TABLE XI. As in Tables IX and X, for $^1P^o$ H^- resonances below the $n = 4$ threshold. Note the appearance of the state D, which does not belong to any of the three series, (A, B and C), which are predicted by the G-D model. This resonance overlaps with the neighboring ones, B4 and A4.

				A		B		C	
State	$-E(a.u.)$	$\epsilon(10^{-6}a.u.)$	$\frac{\Gamma}{2}(10^{-8}a.u.)$	R_ϵ	R_Γ	R_ϵ	R_Γ	R_ϵ	R_Γ
1 A1	0.0371794	5929.4	51716.4						
2 B1	0.03429397	3043.97	916.4						
3 A2	0.032350629	1100.629	12076.	5.387	4.283				
4 B2	0.032198287	948.287	396.08			3.210	2.314		
5 C1	0.031613080	363.080	297.9						
6 B3	0.03155516	305.16	135.8			3.108	2.917		
7 A3	0.03149750	247.50	3275.	4.447	3.687				
8 B4	0.031349759	99.759	43.59			3.059	3.115		
9 D	0.03132298	72.98	5693.3						
10 A4	0.031304250	54.250	584.7	4.562	5.601				
11 B5	0.031282674	32.674	14.3			3.053	3.048		
12 C2	0.0312645831	14.5831	13.07					24.897	22.79
13 A5	0.0312627480	12.7480	125.55	4.256	4.657				
14 B6	0.031260682	10.682	4.7			3.059	3.043		
15 B7	0.0312535114	3.5114	1.62			3.042	2.901		
16 A6	0.03125293164	2.93164	28.94	4.348	4.338				
17 B8	0.0312511519	1.1519	0.527			3.048	3.074		
18 A7	0.03125067253	0.67253	6.69	4.359	4.326				
19 C3	0.03125053534	0.53534	0.475					27.241	27.516
20 B9	0.0312503765	0.3765	0.190			3.059	2.774		
21 A8	0.0312501542	0.1542	1.55	4.361	4.316				
22 B10	0.031250120	0.120	0.17			3.138	[a]		
23 C4	0.0312500159	0.0159	0.067					[a]	[a]
24 A9	0.0312500172	0.0172	0.9	[a]	[a]				
The values of the ratio given by the G-D model are [17]				4.360		3.047		27.299	

[a] See footnote of Table IX.

TABLE XII. As in Tables IX – XI, for ${}^1D^o$ H^- resonances below the $n = 3$ threshold.

State	$-E(a.u.)$	$\epsilon(10^{-9}a.u.)$	$\frac{\Gamma}{2}(10^{-9}a.u.)$	R_ϵ	R_Γ
1	0.059430923	3875367.	124955.		
2	0.0555997787	44223.1	1338.4	87.632	93.361
3	0.055556101835	546.28	16.517	80.953	81.032
The value of the ratio given by the G-D model is [17]				80.552	

TABLE XIII. As in Tables IX – XII, for $^1D^o$ H^- resonances below the $n = 4$ threshold. Note the existence of overlapping resonances: B3 and A6.

				A		B	
State	$-E(a.u.)$	$\epsilon(10^{-6}a.u.)$	$\frac{\Gamma}{2}(10^{-6}a.u.)$	R_ϵ	R_Γ	R_ϵ	R_Γ
1 A1	0.0365292	5279.2	614.3				
2 A2	0.03209299	842.99	125.101	6.262	4.910		
3 B1	0.03171549133	465.49133	3.71047				
4 A3	0.031416853	166.853	27.307	5.052	4.581		
5 A4	0.0312835667	33.5667	5.6119	4.971	4.866		
6 B2	0.03127688546	26.88546	0.24694			17.314	15.026
7 A5	0.0312567786	6.7786	1.138	4.952	4.931		
8 B3	0.03125144201	1.44201	0.013119			18.644	18.823
9 A6	0.03125137195	1.37195	0.23092	4.941	4.928		
10 A7	0.0312502777	0.2777	0.04689	4.940	4.925		
11 B4	0.03125007408	0.07408	0.00105			19.466	[a]
The values of the ratio given by the G-D model are [17]				4.940		18.777	

[a] See footnote of Table IX.

TABLE XIV . As in Tables IX – XIII, for ${}^1F^o$ H^- resonances below the $n = 3$ threshold.

State	$-E(a.u.)$	$\epsilon(10^{-10}a.u.)$	$\frac{\Gamma}{2}(10^{-10}a.u.)$	R_ϵ	R_Γ
1	0.0565587519	10031963.	25034.		
2	0.05565771162	1021560.6	2770.1	9.820	9.037
3	0.05556643170	108761.4	298.6	9.393	9.277
4	0.055556720982	11654.26	32.04	9.332	9.320
5	0.0555556809	1253.	3.4	9.298	9.424
The value of the ratio given by the G-D model is [17]				9.323	

TABLE XV. As in Tables IX – XIV, for ${}^1F^o$ H^- resonances below the $n = 4$ threshold. Note the existence of overlapping resonances: C1 and B3.

				A		B		C	
State	$-E(a.u.)$	$\epsilon(10^{-6}a.u.)$	$\frac{\Gamma}{2}(10^{-6}a.u.)$	R_ϵ	R_Γ	R_ϵ	R_Γ	R_ϵ	R_Γ
1 A1	0.03511423	3864.23	327.5						
2 B1	0.033461482	2211.482	10.21						
3 B2	0.03184856	598.56	3.789			3.695	2.695		
4 A2	0.03170402	454.02	39.73	8.511	8.243				
5 C1	0.0314357	185.7	194.0						
6 B3	0.031418432	168.432	1.026			3.554	3.693		
7 A3	0.031317286	67.286	7.235	6.748	5.491				
8 B4	0.031297999	47.999	0.2910			3.509	3.526		
9 C2	0.0312746	24.6	10.3					7.549	18.835
10 B5	0.0312637636	13.7636	0.0937			3.487	3.106		
11 A4	0.031260405	10.405	1.212	6.467	5.969				
12 B6	0.0312539447	3.9447	0.0245			3.489	3.824		
13 A5	0.0312515877	1.5877	0.1830	6.554	6.623				
14 B7	0.03125113086	1.13086	0.00688			3.488	3.561		
15 B8	0.0312503239	0.3239	0.00236			3.491	2.915		
16 A6	0.0312502433	0.2433	0.02781	6.526	6.580				
17 B9	0.031250024	0.024	0.011			[a]	[a]		
The values of the ratio given by the G-D model are [17]				6.496		3.485		8.516[8]	

[a] See footnote of Table IX.

TABLE XVI. Wavefunction characteristics for the $^1P^o$ H$^-$ resonances lying below the $n = 2$ threshold. $< r_{out} >$ is the estimate for the size of each state due to the outer electron, computed as the average of the distance of the outer electron from the center of mass (in *a.u.*). $R_{<r>}$ is the ratio of consecutive values of $< r_{out} >$. The notation $[x]$ means 10^{-x}.

State	$< r_{out} >$	$R_{<r>}$	sp	pd	df	fg	gh	hi
1	33.80		0.910	0.090	0.7[4]	0.8[6]	0.5[7]	0.4[8]
2	186.1	5.509	0.885	0.115	0.2[5]	0.2[7]	0.2[8]	0.2[9]
3	1013	5.443	0.881	0.119	0.7[7]	0.8[9]	0.7[10]	0.7[11]
4	5518	5.447	0.880	0.120	0.2[8]	0.3[10]	0.2[11]	0.2[12]

TABLE XVII. As in Table XVI for H^{-} $^1P^o$ resonances below the $n = 3$ threshold. Two series of states are established, labeled by A and B. Note the enormous size of the outer orbital of the last few states, in accordance with the Gailitis-Damburg model of dipole resonances.

State	$< r_{out} >$	$R_{<r>}$	sp	pd	df	fg	gh	hi
1 A1	20.85		0.446	0.519	0.036	0.4[4]	0.1[5]	0.2[6]
4 A2	72.61	3.48	0.361	0.565	0.074	0.9[4]	0.3[6]	0.2[7]
7 A3	281.7	3.88	0.329	0.582	0.090	0.5[5]	0.2[7]	0.1[8]
9 A4	1169	4.15	0.338	0.573	0.089	0.3[6]	0.1[8]	0.6[10]
12 A5	4781	4.09	0.331	0.576	0.093	0.2[7]	0.6[10]	0.4[11]
2 B1	37.58		0.725	0.262	0.013	0.3[4]	0.1[6]	0.6[8]
3 B2	88.23	2.35	0.701	0.283	0.016	0.9[5]	0.3[7]	0.1[8]
5 B3	204.9	2.32	0.680	0.299	0.021	0.2[5]	0.6[8]	0.2[9]
6 B4	476.2	2.32	0.682	0.298	0.022	0.3[6]	0.7[9]	0.3[10]
8 B5	1074	2.26	0.663	0.311	0.026	0.7[7]	0.2[9]	0.9[11]
10 B6	2446	2.28	0.660	0.313	0.027	0.1[7]	0.4[10]	0.2[11]
11 B7	5562	2.27	0.664	0.311	0.025	0.3[8]	0.8[11]	0.4[12]
13 B8	11499	2.07	0.659	0.317	0.025	0.6[9]	0.2[11]	0.7[13]

TABLE XVIII. As in Table XVI for H^- $^1P^o$ resonances below the $n = 4$ threshold. The D state does not belong to any of the three series predicted by the G-D model.

State	$< r_{out} >$	$R_{<r>}$	*sp*	*pd*	*df*	*fg*	*gh*	*hi*
1 A1	35.20		0.289	0.563	0.144	0.5[2]	0.7[5]	0.5[7]
3 A2	71.74	2.038	0.249	0.551	0.190	0.011	0.4[4]	0.6[7]
7 A3	151.4	2.110	0.215	0.542	0.226	0.017	0.2[4]	0.3[7]
10 A4	314.9	2.080	0.205	0.511	0.258	0.027	0.1[3]	0.1[6]
13 A5	666.3	2.116	0.196	0.521	0.257	0.025	0.1[4]	0.1[7]
16 A6	1397	2.097	0.198	0.520	0.257	0.025	0.3[5]	0.2[8]
18 A7	2920	2.090	0.195	0.520	0.260	0.025	0.6[6]	0.5[9]
21 A8	6095	2.087	0.195	0.519	0.261	0.026	0.1[6]	0.1[9]
24 A9	9679	1.588	0.235	0.508	0.240	0.017	0.6[7]	0.5[10]
2 B1	53.54		0.610	0.338	0.050	0.2[2]	0.5[5]	0.1[7]
4 B2	96.41	1.801	0.585	0.352	0.062	0.3[2]	0.4[5]	0.8[8]
6 B3	172.0	1.784	0.568	0.355	0.073	0.4[2]	0.1[4]	0.1[7]
8 B4	308.3	1.792	0.550	0.369	0.077	0.4[2]	0.6[6]	0.9[9]
11 B5	543.8	1.764	0.543	0.372	0.081	0.4[2]	0.2[6]	0.3[9]
14 B6	953.3	1.753	0.539	0.372	0.084	0.5[2]	0.3[6]	0.3[9]
15 B7	1675	1.757	0.529	0.377	0.089	0.6[2]	0.2[7]	0.3[10]
17 B8	2928	1.749	0.529	0.377	0.088	0.6[2]	0.8[8]	0.1[10]
20 B9	5109	1.745	0.528	0.376	0.090	0.6[2]	0.7[8]	0.8[11]
22 B10	8549	1.673	0.516	0.384	0.094	0.6[2]	0.1[8]	0.2[11]
5 C1	77.59		0.271	0.172	0.490	0.067	0.4[3]	0.5[6]
12 C2	319.0	4.111	0.295	0.116	0.495	0.095	0.3[4]	0.3[7]
19 C3	1578	5.948	0.302	0.102	0.493	0.103	0.1[5]	0.1[8]
23 C4	6858	4.346	0.315	0.092	0.493	0.101	0.6[7]	0.6[10]
9 D	55.32		0.304	0.059	0.489	0.146	0.2[2]	0.2[5]

TABLE XIX. As in Table XVI for H^- $^1D^o$ resonances below the $n = 3$ threshold.

State	$< r_{out} >$	$R_{<r>}$	pd	df	fg	gh	hi
1	22.50		.934	.066	.1[3]	.2[5]	.2[6]
2	141.4	6.29	.873	.127	.4[4]	.1[6]	.3[8]
3	1213.	8.58	.858	.142	.5[6]	.1[8]	.4[10]

TABLE XX. As in Table XVI for H^- $^1D^o$ resonances below the $n = 4$ threshold.

State	$< r_{out} >$	$R_{<r>}$	pd	df	fg	gh	hi
1 A1	35.19		.748	.242	.010	.1[4]	.8[7]
2 A2	76.11	2.163	.690	.293	.017	.5[4]	.8[7]
4 A3	169.6	2.229	.646	.328	.025	.1[4]	.2[7]
5 A4	378.8	2.233	.625	.345	.030	.3[5]	.4[8]
7 A5	844.2	2.229	.612	.354	.033	.5[6]	.7[9]
9 A6	1877.	2.223	.602	.360	.037	.1[6]	.2[9]
10 A7	4165.	2.219	.604	.360	.036	.2[7]	.3[10]
3 B1	71.91		.476	.469	.055	.4[3]	.4[6]
6 B2	258.0	3.589	.431	.497	.072	.3[4]	.3[7]
8 B3	1064.	4.122	.421	.503	.076	.2[5]	.2[8]
11 B4	4239.	3.987	.415	.507	.078	.9[7]	.9[10]

TABLE XXI. As in Table XVI for H^- $^1F^o$ resonances below the $n = 3$ threshold.

State	$< r_{out} >$	$R_{<r>}$	sf	pd	pg	df	dh	fg	fi	gh	gk
1	47.78		0.143	0.815	0.015	0.027	0.3[3]	0.5[4]	0.8[7]	0.2[6]	0.4[8]
2	154.6	3.24	0.176	0.756	0.032	0.035	0.1[2]	0.5[5]	0.8[7]	0.1[7]	0.5[9]
3	483.2	3.13	0.183	0.737	0.039	0.039	0.2[2]	0.5[6]	0.9[8]	0.1[8]	0.5[10]
4	1488.	3.08	0.186	0.731	0.041	0.040	0.2[2]	0.6[7]	0.9[9]	0.1[9]	0.5[11]
5	4604.	3.03	0.187	0.728	0.042	0.040	0.3[2]	0.6[8]	0.1[9]	0.2[10]	0.6[12]

TABLE XXII. As in Table XVI for H^{-} $^1F^o$ resonances below the $n = 4$ threshold.

State	$< r_{out} >$	$R_{<r>}$	sf	pd	pg	df	dh	fg	fi	gh	gk
1 A1	36.14		0.565	0.293	0.085	0.054	0.2[2]	0.4[2]	0.1[4]	0.1[4]	0.9[7]
4 A2	88.18	2.44	0.522	0.222	0.172	0.052	0.026	0.5[2]	0.9[3]	0.2[4]	0.9[6]
7 A3	230.6	2.62	0.479	0.228	0.196	0.047	0.044	0.5[2]	0.3[2]	0.1[5]	0.4[6]
11 A4	591.7	2.57	0.453	0.243	0.199	0.047	0.052	0.3[2]	0.4[2]	0.3[5]	0.7[7]
13 A5	1509.	2.55	0.442	0.241	0.202	0.050	0.056	0.4[2]	0.4[2]	0.2[6]	0.1[7]
16 A6	3828.	2.54	0.447	0.223	0.212	0.050	0.059	0.4[2]	0.5[2]	0.3[7]	0.2[8]
2 B1	55.73		0.203	0.693	0.029	0.072	0.1[2]	0.2[2]	0.1[4]	0.7[5]	0.6[8]
3 B2	108.7	1.95	0.207	0.674	0.034	0.080	0.3[2]	0.3[2]	0.6[4]	0.3[5]	0.3[7]
6 B3	209.6	1.93	0.217	0.640	0.047	0.087	0.5[2]	0.4[2]	0.2[3]	0.1[5]	0.3[7]
8 B4	398.5	1.90	0.219	0.627	0.052	0.091	0.6[2]	0.4[2]	0.3[3]	0.3[6]	0.1[7]
10 B5	751.3	1.89	0.226	0.602	0.065	0.093	0.9[2]	0.5[2]	0.4[3]	0.9[7]	0.2[8]
12 B6	1411.	1.88	0.225	0.601	0.064	0.094	0.9[2]	0.5[2]	0.5[3]	0.3[7]	0.7[9]
14 B7	2642.	1.87	0.227	0.594	0.068	0.095	0.010	0.5[2]	0.5[3]	0.8[8]	0.3[9]
15 B8	4888.	1.85	0.221	0.612	0.058	0.096	0.8[2]	0.5[2]	0.4[3]	0.2[8]	0.4[10]
17 B9	6749.	1.36	0.275	0.621	0.020	0.079	0.4[2]	0.2[2]	0.3[3]	0.3[8]	0.7[10]
5 C1	45.71		0.223	0.067	0.019	0.624	0.2[2]	0.078	0.8[4]	0.8[3]	0.1[6]
9 C2	143.9	3.15	0.301	0.034	0.103	0.445	0.034	0.086	0.3[2]	0.3[3]	0.2[5]

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