Table 1. H_2 lines observed in HH99B *(to be continued)*.

Line id.	λ_{vac} (μm)	E_{up} (K)	S/N^a_{max}	Line id.	λ_{vac} (μm)	E_{up} (K)	S/N_{max}	Line id.	λ_{vac} (μm)	E_{up} (K)	S/N_{max}
					v=1						
1-0S(0)[1]	2.2233	6471	44	1-0S(7)	1.7480	12818	65	1-0S(21)[3]	1.7195	38136	7
1-0S(1)	2.1218	6951	650	1-0S(8)	1.7147	14221	70	1-0S(23)	1.7801	42122	4
1-0S(2)	2.0338	7584	48	1-0S(9)	1.6877	15723	46	1-0Q(1)	2.4066	6149	44
1-0S(3)	1.9576	8365	46	1-0S(10)	1.6665	17312	9	1-0Q(2)	2.4134	6471	30
1-0S(5)[2]	1.8358	10342	5	1-0S(18)[3]	1.6586	32136	3	1-0Q(3)	2.4237	6951	50
1-0S(6)	1.7879	11522	30	1-0S(19)[3]	1.6750	34131	8	1-0Q(4)	2.4375	7584	18
					v=2						
2-0S(0)	1.1896	12095	6	2-0Q(8)	1.3020	16881	9	2-1S(1)	2.2477	12551	44
2-0S(1)	1.1622	12551	48	2-0Q(9)[5]	1.3188	18108	12	2-1S(2)	2.1542	13151	22
2-0S(2)	1.1382	13151	7	2-0Q(10)	1.3375	19436	3	2-1S(3)	2.0735	13891	40
2-0S(3)	1.1175	13891	6	2-0Q(15)	1.4648	27267	3	2-1S(4)	2.0041	14764	21
2-0S(4)	1.0998	14764	6	2-0Q(19)[3]	1.6156	34447	3	2-1S(5)[2]	1.9448	15764	30
2-0Q(1)	1.2383	11790	14	2-0O(2)	1.2932	11636	7	2-1S(8)[6]	1.8183	19435	7
2-0Q(2)[4]	1.2419	12095	9	2-0O(3)	1.3354	11790	16	2-1S(9)[7]	1.7904	20855	22
2-0Q(3)	1.2473	12551	22	2-0O(6)	1.4870	13151	5	2-1S(10)	1.7688	22356	3
2-0Q(4)	1.2545	13151	7	2-0O(7)	1.5464	13891	8	2-1S(13)[8]	1.7364	27267	6
2-0Q(5)	1.2636	13891	11	2-0O(9)	1.6796	15764	5	2-1S(17)[3]	1.7587	34446	4
2-0Q(6)	1.2745	14764	7	2-0O(11)	1.8349	18108	3	2-1S(18)[3]	1.7753	36301	3
2-0Q(7)	1.2873	15764	9	2-1S(0)	2.3556	12095	10	2-1S(19)[3,9]	1.7962	38166	8
					v=3						
3-1S(0)[10]	1.2621	17388	9	3-1S(9)	1.1204	25661	7	3-1O(5)	1.5220	17819	10
3-1S(1)	1.2330	17819	10	3-1Q(1)	1.3141	17099	8	3-1O(7)[14]	1.6453	19087	9
3-1S(2)	1.2077	18387	8	3-1Q(2)[12]	1.3181	17388	12	3-1O(9)[11]	1.7898	25661	10
3-1S(3)	1.1857	19087	9	3-1Q(3)	1.3240	17819	8	3-2S(1)	2.3864	17819	8
3-1S(4)	1.1672	19913	8	3-1Q(5)[13]	1.3420	19087	9	3-2S(2)	2.2870	18387	9
3-1S(5)	1.1520	20857	10	3-1Q(11)[2]	1.4479	25661	8	3-2S(3)	2.2014	19087	25
3-1S(6)	1.1397	21912	5	3-1Q(13)	1.5024	28558	6	3-2S(4)	2.1280	19913	11
3-1S(7)	1.1304	23071	7	3-1Q(15)[3]	1.5685	31691	6	3-2S(5)	2.0656	20857	17
3-1S(8)	1.1241	24323	5	3-1O(4)	1.4677	17388	6	3-2S(7)	1.9692	23071	14

Table 1. H_2 lines observed in HH99B *(continued)*.

					H_2 lines						
Line id.	λ_{vac} (μm)	E_{up} (K)	S/N^a_{max}	Line id.	λ_{vac} (μm)	E_{up} (K)	S/N_{max}	Line id.	λ_{vac} (μm)	E_{up} (K)	S/N_{max}
					v=4						
4-2S(0)[15]	1.3425	22354	9	4-2S(8)	1.1987	28885	7	4-2O(4)[18]	1.5635	22354	6
4-2S(1)	1.3116	22760	14	4-2S(9)	1.1958	30141	6	4-2O(5)	1.6223	22760	7
4-2S(2)	1.2846	23296	21	4-2Q(7)	1.4592	25625	6	4-2O(6)	1.6865	23297	4
4-2S(3)[16]	1.2615	23956	9	4-2Q(9)	1.4989	27708	7	4-2O(7)	1.7563	23956	7
4-2S(4)[17]	1.2422	24735	9	4-2Q(11)[3]	1.5495	30141	3	4-3S(3)	2.3445	23956	6
4-2S(5)	1.2263	25625	12	4-2Q(13)[3]	1.6123	32857	3	4-3S(4)	2.2667	24735	3
4-2S(6)	1.2139	26618	5	4-2Q(15)[3]	1.6892	35786	3				
4-2S(7)	1.2047	27708	10	4-2O(3)	1.5099	22081	6				
					v=5						
5-3S(3)	1.3472	28500	4	5-3Q(1)	1.4929	26737	3	5-3Q(7)[3,19]	1.5626	30065	6
5-3S(4)	1.3270	29231	3	5-3Q(2)	1.4980	26994	9	5-3Q(11)[3]	1.6673	34291	4
5-3S(5)[3]	1.3107	30066	10	5-3Q(4)	1.5158	27880	5	5-3Q(12)[3]	1.7021	35529	4
5-3S(7)[3]	1.2894	32017	7	5-3Q(6)	1.5443	29230	3	5-3Q(13)[3]	1.7412	36821	5
					v=6						
6-4S(1)[3]	1.5015	31664	5	6-4Q(7)[3]	1.6829	34175	5	6-4O(4)[3,21]	1.7965	31306	8
6-4Q(3)[3]	1.6162	31664	3	6-4Q(9)[3,20]	1.7369	35992	6				
					v=7						
7-5Q(5)[3]	1.7784	36591	3								

Notes: [a]maximum signal-to-noise ratio in the line image. In case of blends the reported number refers to the sum of the blended lines (unless the emission comes from different zones of the bow).

[1] blends with [Fe II] $a^2H_{11/2}$-$a^2G_{9/2}$
[2] contaminated by atmospheric absorption
[3] detected in the whole bow
[4] blends with 4-2S(4)
[5] blends with 3-1Q(2)
[6] blends with HI 4-9
[7] blends with 3-1O(9)
[8] blends with 6-4Q(9), HI4-10
[9] blends with 6-4O(4)
[10] blends with 4-2S(3)
[11] blends with 2-1S(9)
[12] blends with 2-0Q(9)
[13] blends with 4-2S(0)
[14] blends with [Fe II] $a^4D_{7/2}-a^4F_{9/2}$
[15] blends with 3-1Q(5)
[16] blends with 3-1S(0)
[17] blends with 2-0Q(2)
[18] blends with 5-3Q(7)
[19] blends with 4-2O(4)
[20] blends with 2-1S(13), HI 4-10
[21] blends with 2-1S(19)

Table 2. Ionic lines observed in HH99B.

Line id.	λ_{vac} (μm)	E_{up} (K)	S/N$_{max}$[a]	Line id.	λ_{vac} (μm)	E_{up} (K)	S/N$_{max}$
Ionic lines							
[FeII] lines[b]							
$\mathbf{a^4D_{7/2}}-a^6D_{9/2}$	1.2570	11446	700	$\mathbf{a^4D_{1/2}}-a^6D_{3/2}$	1.2525	12729	20
$a^4D_{7/2}-a^6D_{7/2}$	1.3209	11446	130	$a^4D_{1/2}-a^6D_{1/2}$	1.2707	12729	24
$a^4D_{7/2}-a^4F_{5/2}$	1.9541	11446	7	$a^4D_{1/2}-a^4F_{5/2}$	1.6642	12729	18
$a^4D_{7/2}-a^4F_{9/2}$ [1]	1.6440	11446	720	$a^4D_{1/2}-a^4F_{3/2}$	1.7454	12729	21
$a^4D_{7/2}-a^4F_{7/2}$	1.8099	11446	99	$\mathbf{a^4P_{5/2}}-a^4D_{5/2}$	1.9675	19387	20
$\mathbf{a^4D_{5/2}}-a^6D_{9/2}$	1.1916	12074	7	$a^4P_{5/2}-a^4D_{1/2}$ [2]	2.1609	19387	5
$a^4D_{5/2}-a^6D_{7/2}$	1.2489	12074	17	$\mathbf{a^4P_{3/2}}-a^4D_{7/2}$	1.7489	19673	9
$a^4D_{5/2}-a^6D_{5/2}$	1.2946	12074	70	$\mathbf{a^4P_{1/2}}-a^4D_{5/2}$	1.8139	20006	6
$a^4D_{5/2}-a^6D_{3/2}$	1.3281	12074	42	$\mathbf{a^2G_{9/2}}-a^4D_{7/2}$	1.2675	22797	2
$a^4D_{5/2}-a^4F_{9/2}$	1.5339	12074	30	$\mathbf{a^2G_{7/2}}-a^4D_{7/2}$ [3]	1.1885	23552	16
$a^4D_{5/2}-a^4F_{7/2}$	1.6773	12074	157	$\mathbf{a^2P_{3/2}}-a^4P_{5/2}$	2.0466	26417	4
$a^4D_{5/2}-a^4F_{5/2}$	1.8005	12074	35	$a^2P_{3/2}-a^4P_{3/2}$	2.1334	26417	5
$\mathbf{a^4D_{3/2}}-a^6D_{3/2}$	1.2791	12489	41	$a^2P_{3/2}-a^4P_{1/2}$	2.2442	26417	4
$a^4D_{3/2}-a^6D_{1/2}$	1.2981	12489	23	$\mathbf{a^2H_{11/2}}-a^2G_{9/2}$ [4]	2.2244	29265	21
$a^4D_{3/2}-a^4F_{7/2}$	1.5999	12489	46	$\mathbf{a^2H_{9/2}}-a^2G_{9/2}$	2.0157	29934	5
$a^4D_{3/2}-a^4F_{5/2}$	1.7116	12489	13	$a^2H_{9/2}-a^2G_{7/2}$	2.2541	29934	35
$a^4D_{3/2}-a^4F_{3/2}$	1.7976	12489	36	$\mathbf{b^4P_{1/2}}-a^4P_{3/2}$	1.1446	32242	2
H lines							
3-5 (Paβ)	1.2822	151492	21	4-11	1.6811	156499	6
4-14	1.5884	156999	3	4-10[5]	1.7367	156226	6
4-13	1.6114	156870	4	4-9[6]	1.8179	155855	6
4-12	1.6412	156708	3	4-7 (Brγ)	2.1661	154583	12
Other lines							
He I $^1P_1-^1S_0$	2.0587	246226	3	[Ti II]$a^2F_{5/2}$-$a^4F_{3/2}$[10]	2.1605	6652	5
He I $^3D-^3P$ [7]	2.0607	282101	8	[Ti II]$a^2F_{7/2}$-$a^4F_{9/2}$	2.2201	7040	5
He I $^3P_0-^3D$ [7]	1.9522	289992	5	[Ti II]$a^2D_{5/2}$-$a^4F_{5/2}$	1.1560	12570	2
[P II]$^2D_2$-$^3P_1$	1.1471	12764	5	[Ti II]$a^4P_{3/2}$-$b^4F_{7/2}$	1.2036	13506	2
[P II]$^2D_2$-$^3P_2$ [8]	1.1886	12764	16	[Ti II]$a^2P_{3/2}$-$b^4F_{3/2}$	1.1028	14340	2
[Co II] b^3F_4-a^5F_5 [9]	1.5474	14119	5	[Ti II]$a^2H_{11/2}$-$a^2F_{/2}$	1.2695	17729	3

Notes: [a] maximum signal-to-noise ratio in the line image. In case of blends the reported number refers to the sum of the blended lines (unless the emission comes from different zones of the bow). [b] Lines coming from the same upper level are grouped, and the first term of each group is evidenced with bold-face characters.

[1] blends with 3-1O(7)
[2] blends with [Ti II]$a^2F_{5/2}$-$a^4F_{3/2}$ (fundamental transition)
[3] blends with [P II]$^1D_2$-$^3P_2$
[4] blends with 1-0S(0)
[5] blends with 2-1S(13), 6-4Q(9)
[6] blends with 2-1S(8)
[7] multiplet
[8] blends with [Fe II] $a^2G_{7/2}$-$a^4D_{7/2}$
[9] tentative identification
[10] blends with [Fe II] $a^4P_{5/2}-a^4D_{1/2}$