| Star | Period (days) | | sma (AU) | | Msin(i) (MJup) | | Eccentricity | | Baseline (days) | | V(km/s) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | CH survey | This paper | CH survey | This paper | CH survey | This paper | CH survey | This paper | CH survey[[1]](#footnote-0) | This paper | Gaia Data Release 2 |
| HD 142 | b = 350.3 | DPASS  b = 351.4  c = 10016  MCMC  b =  c = | b = 1.0 | DPASS  b = 1.02  c = 9.6  MCMC  b = 1.02 ± 0.01  c = | b = 1.31 | DPASS  b = 1.1  c = 10.4  MCMC  b =  c = 10.4 ± 0.5 | b = 0.25 | DPASS  b = 0.15  c = 0.27  MCMC  b =  c = 0.27 ± 0.03 | 1359 | 7860 | 5.444 ± 0.136 |
| HD 7449 | b = 1275  c = 4046 | DPASS  b = 1263  c = 7845  MCMC  b = 1256 ± 11  c = 19500 – 39700 | b = 2.3  c = 5.1 | DPASS  b = 2.3  c = 7.9  MCMC  b =  c = 15 – 24 | b = 1.11  c = 2 | DPASS  b = 0.82  c = 6.4  MCMC  b = 0.84 ± 0.07  c = 35 – 189 | b = 0.82  c = 0.53 | DPASS  b = 0.65  c = 0.23  MCMC  b = 0.66 ± 0.05  c < 0.36 | 4029 | 5903 | -19.848 ± 0.157 |
| HD 11964 | b = 37.94  c = 2010 | DPASS  b = 37.9  c = 1912.2  MCMC  b = 37.94 ± 0.01  c = | b = 0.23  c = 3.2 | DPASS  b = 0.23  c = 3.1  MCMC  b = 0.229 ± 0.001  c = | b = 0.053  c = 0.55 | DPASS  b = 0.064  c = 0.61  MCMC  b = 0.065 ± 0.003  c = | b = 0.12  c = 0.07 | DPASS  b = 0.12  c = 0.07  MCMC  b < 0.15  c = | 2475 | 7652 | -9.318 ± 0.144 |
| HD 27631 | b = 2220 | DPASS  b = 2180  MCMC  b = | b = 3.1 | DPASS  b = 3.23  MCMC  b = 3.23 ± 0.06 | b = 1.7 | DPASS  b = 1.5  MCMC  b = 1.5± 0.2 | b = 0.17 | DPASS  b = 0.15  MCMC  b = 0.04 – 0.22 | 4137 | 7413 | 21.091 ± 0.153 |
| π Men (HD 39091) | b = 2151 | DPASS  b = 2082.2  MCMC  b = 2098.6 ±0.3 | b = 3.4 | DPASS  b = 3.3  MCMC  b = 3.31 ± 0.01 | b = 10.08 | DPASS  b = 10  MCMC  b = 10.05 ± 0.04 | b = 0.64 | DPASS  b = 0.64  MCMC  b = 0.64 ± 0.01 | 2278 | 8027 | 10.731 ± 0.146 |
| HD 47186 | b = 4.08  c = 3552 | DPASS  b = 4.08  c = 83984 (UP 366900)  MCMC  b = 4.085 ± 0.001  c = 9790 – 42000 | b = 0.05  c = 4.5 | DPASS  b = 0.05  c = 37.4 (UP 100)  MCMC  b = 0.050 ± 0.001  c = 9 – 24 | b = 0.072  c = 0.58 | DPASS  b = 0.073  c = 0.64 (UP 0.98)  MCMC  b =  c = 0.63 ± 0.05 | b = 0.04  c = 0.28 | DPASS  b = 0.06  c = 0.93 (UP 0.95)  MCMC  b < 0.07  c = | 2698 | 5029 | 4.263 ± 0.161 |
| HD 50499 | b = 2457.87 | DPASS  b = 2470  c = 9000 (UP 320000)  MCMC  b = 2470 ± 15  c = 8500 – 19700 | b = 3.9 | DPASS  b = 3.92  c = 9.3 (UP 100)  MCMC  b =  c = 8.9 – 15.7 | b = 1.74 | DPASS  b = 1.42  c = 2.7 (UP 14)  MCMC  b = 1.45 ± 0.08  c = 2.6 – 4.6 | b = 0.25 | DPASS  b = 0.32  c = 0.18 (UP 0.92)  MCMC  b =  c = 0.14 – 0.35 | 4480 | 8123 | 36.937 ± 0.150 |
| HD 65216 | b = 579  c = 5542 | DPASS  b = 577  c = 5381 (UP 117800)  MCMC  b =  c = 5800 – 28000 | b = 1.3  c = 6 | DPASS  b = 1.3  c = 5.8 (UP 45)  MCMC  b =  c = 6 – 17 | b = 1.41  c = 2.24 | DPASS  b = 1.3  c = 2 (UP 2.2)  MCMC  b =  c = 1.7 – 3.5 | b = 0.26  c = 0.15 | DPASS  b = 0.17  c = 0.3 (UP 0.9)  MCMC  b =  c = 0.23 – 0.73 | 4039 | 5371 | 42.572 ± 0.157 |
| HD 70642 | b = 2068 | DPASS  b = 2112  MCMC  b = 2115 ± 18 | b = 3.2 | DPASS  b = 3.2  MCMC  b = 3.23 ± 0.02 | b = 1.9 | DPASS  b = 1.9  MCMC  b = 1.8 ± 0.1 | b = 0.1 | DPASS  b = 0.5  MCMC  b < 0.12 | 2579 | 8014 | 49.396 ± 0.132 |
| HD 98649 | b = 10400 | DPASS  b = 5628  MCMC  b = | b = 9.4 | DPASS  b = 6.3  MCMC  b = | b = 7 | DPASS  b = 7  MCMC  b = 6.6 – 9.4 | b = 0.86 | DPASS  b = 0.87  MCMC  b = 0.84 – 0.95 | 3024 | 5943 | 4.328 ± 0.137 |
| HD 106515 | b = 3630 | DPASS  b = 3626  MCMC  b = 3660 ± 22 | b = 4.5 | DPASS  b = 4.6  MCMC  b = | b = 10.5 | DPASS  b = 9.8  MCMC  b = 9.3 ± 0.3 | b = 0.56 | DPASS  b = 0.56  MCMC  b = 0.57 ± 0.02 | 4371 | 4781 | 20.818 ± 0.131 |
| HD 117207 | b = 2597 | DPASS  b = 2611  MCMC  b = 2611 ± 7 | b = 3.8 | DPASS  b = 3.76  MCMC  b = 3.76 ± 0.01 | b = 1.82 | DPASS  b = 1.95  MCMC  b = 1.97 ± 0.04 | b = 0.14 | DPASS  b = 0.15  MCMC  b = 0.16 ± 0.02 | 2681 | 8228 | -17.535 ± 0.144 |
| HD 134987 | b = 258.18  c = 5000 | DPASS  b = 258.2  c = 6316  MCMC  b = 258.4 ± 0.01  c = | b = 0.8  c = 5.9 | DPASS  b = 0.81  c = 6.8  MCMC  b = 0.81 ± 0.01  c = | b = 1.56  c = 0.8 | DPASS  b = 1.6  c = 0.99  MCMC  b = 1.61 ± 0.02  c = | b = 0.23  c = 0.11 | DPASS  b = 0.22  c = 0.0  MCMC  b = 0.23 ± 0.01  c < 0.17 | 2275 | 7228 | 5.206 ± 0.145 |
| HD 142022 | b = 1928 | DPASS  b = 1940  MCMC  b = | b = 3 | DPASS  b = 3.04  MCMC  b = | b = 4.47 | DPASS  b = 4.5 (UP 35)  MCMC  b: 4–24 | b = 0.52 | DPASS  b = 0.51 (UP 0.95)  MCMC  b > 0.47 | 3968 | 3968 | -9.776 ± 0.123 |
| μ Ara (HD 160691) | b = 9.64  c = 313.2  d = 648.7  e = 8723 | DPASS  b = 9.6  c = 308  d = 645  e = 3965  MCMC  b = 9.64 ± 0.01  c = 309.0 ± 0.1  d = 645.0 ± 0.4  e = | b = 0.091  c = 0.9  d = 1.5  e = 8.5 | DPASS  b = 0.09  c = 0.9  d = 1.5  e = 5  MCMC  b = 0.091 ± 0.001  c = 0.92 ± 0.01  d = 1.50 ± 0.01  e = | b = 0.033  c = 0.6  d = 1.72  e = 2.49 | DPASS  b = 0.03  c = 0.4  d = 1.6  e = 1.8  MCMC  b =  c =  d = 1.63 ± 0.01  e = 1.84 ± 0.03 | b = 0.12  c = 0.04  d = 0.18  e = 0.43 | DPASS  b = 0.09  c = 0.06  d = 0.0  e = 0.08  MCMC  b < 0.10  c =  d =  e = 0.07 ± 0.01 | 4456 | 6342 | -9.291 ± 0.130 |
| HD 166724 | b = 8100 | DPASS  b = 4880 (UP 60000)  MCMC  b = 4500 – 6400 | b = 7.4 | DPASS  b = 5.3 (UP 28)  MCMC  b = 5.0 – 6.3 | b = 4.12 | DPASS  b = 3.5  MCMC  b = 3.5 ± 0.2 | b = 0.77 | DPASS  b = 0.74 (UP 0.95)  MCMC  b = | 3507 | 4018 | -17.843 ± 0.651 |
| HD 169830 | b = 225.62  c = 2102 | DPASS  b = 225.6  c = 1825  MCMC  b = 225.98 ± 0.01  c = 1819 ± 7 | b = 0.8  c = 3.6 | DPASS  b = 0.81  c = 3.27  MCMC  b = 0.81 ± 0.01  c = 3.27 ± 0.01 | b = 2.88  c = 4.04 | DPASS  b = 2.9  c = 3.5  MCMC  b = 3.01 ± 0.05  c = | b = 0.31  c = 0.33 | DPASS  b = 0.29  c = 0.26  MCMC  b =  c = | 3824 | 5614 | -17.214 ± 0.204 |
| HD 181433 | b = 9.37  c = 1019  d = 3201 | DPASS  b = 9.37  c = 1018  d = 6847 (UP 413290)  MCMC  b = 9.37 ± 0.01  c =  d = 6000 – 9600 | b = 0.08  c = 1.8  d = 3.9 | DPASS  b = 0.08  c = 1.82  d = 6.5 (UP 100)  MCMC  b = 0.080 ± 0.001  c = 1.82 ± 0.01  d = 6.0 – 8.2 | b = 0.023  c = 0.7  d = 0.58 | DPASS  b = 0.02  c = 0.68  d = 0.6 (0.91)  MCMC  b =  c =  d = 0.60 ± 0.02 | b = 0.42  c = 0.25  d = 0.11 | DPASS  b = 0.35  c = 0.24  d = 0.48 (0.95)  MCMC  b = 0.33 ± 0.09  c = 0.24 ± 0.02  d = | 2737 | 5026 | 39.977 ± 0.177 |
| HD 196067 | b = 4100 | DPASS  b = 3508 (UP 7259)  MCMC  1) b =  2) b = 5977 – 8100 | b = 5 | DPASS  b = 4.9 (UP 8)  MCMC  1) b = 5.0 ± 0.2  2) b =7.0 – 8.6 | b = 7.1 | DPASS  b = 6.6  MCMC  1) b = 5.8 – 13.5  2) b = 5.7 – 10.1 | b = 0.63 | DPASS  b = 0.6 (UP 0.68)  MCMC  1) b = 0.57 – 0.86  2) b = 0.66 – 0.88 | 4372 | 7478 | -10.985 ± 0.127 |
| HD 204313 | b = 2132  c = 34.88 | DPASS  b = 2035  c = 34.95  MCMC  b = 2040±6  c = 34.95 ± 0.04 | b = 3.3  c = 0.2 | DPASS  b = 3.2  c = 0.21  MCMC  b = 3.17 ± 0.01  c = 0.210 ± 0.001 | b = 4.65  c = 0.053 | DPASS  b = 4.1  c = 0.076  MCMC  b =  c = 0.07 ± 0.01 | b = 0.11  c = 0.13 | DPASS  b = 0.11  c = 0.2  MCMC  b =  c < 0.23 | 3619 | 6230 | -9.718 ± 0.165 |
| HD 215456 | b = 192  c = 2268 | DPASS  b = 192.8  c = 2230.8  MCMC  b = 192.9±0.4  c = | b = 0.7  c = 3.7 | DPASS  b = 0.7  c = 3.6  MCMC  b = 0.706 ± 0.001  c = | b = 0.1  c = 0.24 | DPASS  b = 0.12  c = 0.3  MCMC  b = 0.12 ± 0.01  c = | b = 0.13  c = 0.17 | DPASS  b = 0.1  c = 0.09  MCMC  b < 0.14  c < 0.14 | 2581 | 4946 | -18.839 ± 0.174 |
| HD 217107 | b = 7.12  c = 4270 | DPASS  b = 7.1  c = 5135  MCMC  b = 7.13 ± 0.01  c = | b = 0.073  c = 5.2 | DPASS  b = 0.073  c = 5.9  MCMC  b = 0.075 ± 0.001  c = 6.00 ± 0.04 | b = 1.4  c = 2.62 | DPASS  b = 1.3  c = 4  MCMC  b = 1.37 ± 0.01  c = 4.2 ± 0.2 | b = 0.12  c = 0.51 | DPASS  b = 0.13  c = 0.41  MCMC  b = 0.12 ± 0.01  c = 0.42 ± 0.03 | 471 | 7412 | -13.143 ± 0.127 |
| HD 220689 | b = 2191 | DPASS  b = 2302  MCMC  b = 2291 ± 25 | b = 3.3 | DPASS  b = 3.46  MCMC  b = 3.45 ± 0.06 | b = 1.19 | DPASS  b = 1.08  MCMC  b = 1.10 ± 0.09 | b = 0.2 | DPASS  b = 0.07  MCMC  b < 0.13 | 3973 | 6901 | 12.276 ± 0.306 |

Table 1: Comparison of the orbital parameters and masses of the CH survey as used by the CHS (left column for each parameter) with those obtained in this study (right column of each parameter) for planets with a semi-major axis larger than 3 au. The present study includes the results obtained with a genetic algorithm (DPASS) and those obtained with an MCMC. With MCMC, confidence intervals at 68% are given for each parameter and the median is given only when the probability distribution has a profile close to a Gaussian distribution.

1. The RV data used in the CHS data are not available. Therefore, the time baseline was estimated considering only the coralie-harps data obtained before july 2011. [↑](#footnote-ref-0)