## Appendix: Basic Data

| Star | Period | $\pi$ | $\sigma$ | $\mu_\alpha cos(\delta)$ | $\sigma$ | $\mu_\delta$ | $\sigma$ | $V_J$ |
|---|---|---|---|---|---|---|---|---|
| K | Ref | E(B-V) | Ref | $V_r$ | $\sigma$ | Ref | [Fe/H] | Ref |
| SW And | 0.442279 | -0.04 | 1.50 | -5.09 | 1.49 | -19.21 | 1.00 | 9.71 |
| 8.54 | 1 | 0.045 | 1 | -21 | 1 | 4,7,9,10,13 | -0.24 | 1,2,3,4,5,6 |
| XX And | 0.722742 | 1.50 | 2.15 | 58.97 | 1.64 | -35.46 | 1.47 | 10.68 |
| 9.51 | 2 | 0.060 | 1 | 0 | 1 | 13,14 | -1.94 | 1,6 |
| AT And | 0.616913 | -2.70 | 2.43 | -7.05 | 1.70 | -50.29 | 1.79 | 10.71 |
| 9.06 | 2 | 0.135 | 1 | -228 | 1 | 9,10,11 | -1.18 | 1,2,3 |
| CI And | 0.484718 | -6.34 | 4.66 | -0.35 | 3.63 | -3.98 | 2.41 | 12.28 |
| | | 0.090 | 1 | 24 | 5 | 10,13 | -0.69 | 2,6 |
| WY Ant | 0.574312 | 0.00 | 1.67 | 35.64 | 1.56 | -48.74 | 1.56 | 10.87 |
| 9.64 | 1 | 0.060 | 1 | 204 | 1 | 1,13,15 | -1.48 | 6,13 |
| TY Aps | 0.501692 | 0.48 | 2.47 | -35.44 | 1.75 | 8.18 | 2.13 | 11.85 |
| 10.18 | 3 | 0.220 | 2 | 88 | 5 | 9,13,16 | -0.95 | 3,6,14 |
| XZ Aps | 0.587277 | 0.71 | 3.03 | -17.67 | 2.29 | 9.04 | 2.99 | 12.38 |
| | | 0.120 | 1 | 202 | 1 | 9,13 | -1.06 | 3,6 |
| SW Aqr | 0.459303 | 1.15 | 2.46 | -42.05 | 2.63 | -58.87 | 1.96 | 11.18 |
| 10.08 | 2 | 0.090 | 1 | -50 | 7 | 13,16 | -1.63 | 1,6,14 |
| SX Aqr | 0.535714 | -0.53 | 2.97 | -39.84 | 3.94 | -47.04 | 2.11 | 11.78 |
| 10.57 | 2 | 0.060 | 1 | -165 | 3 | 11,13,16,17 | -1.87 | 6,9,14 |
| BR Aqr | 0.481878 | -4.01 | 2.38 | 5.57 | 2.42 | -9.17 | 1.68 | 11.42 |
| 10.37 | 3 | 0.015 | 1 | 30 | 1 | 10,13 | -0.74 | 2,6,9,12 |
| BV Aqr | 0.364414 | 3.74 | 2.13 | -0.25 | 2.10 | -21.13 | 1.38 | 10.90 |
| | | 0.015 | 1 | -239 | 3 | 9 | -1.42 | 3,7 |
| DN Aqr | 0.633763 | 4.20 | 2.08 | 50.29 | 2.68 | -12.83 | 1.64 | 11.20 |
| 9.91 | 2 | 0.015 | 1 | -220 | 6 | 13,16 | -1.66 | 6,14 |
| V341 Aql | 0.578021 | 7.73 | 5.82 | 34.86 | 7.36 | -25.02 | 5.42 | 10.85 |
| 9.72 | 2 | 0.105 | 1 | -79 | 2 | 11,13 | -1.22 | 1,6 |
| S Ara | 0.451888 | 0.51 | 2.15 | -26.24 | 2.29 | -8.44 | 1.24 | 10.78 |
| 9.55 | 3 | 0.110 | 2 | 185 | 10 | 15 | -0.71 | 13 |
| MS Ara | 0.524958 | 10.00 | 3.95 | -2.88 | 4.82 | -37.39 | 2.93 | 12.07 |
| | | 0.120 | 1 | 101 | 14 | 13 | -1.48 | 6 |
| X Ari | 0.651139 | 0.89 | 1.55 | 66.42 | 1.94 | -88.06 | 1.73 | 9.57 |
| 7.95 | 1 | 0.180 | 1 | -36 | 1 | 5,13,14 | -2.43 | 1,4,5,6 |
| TZ Aur | 0.391675 | -1.81 | 3.57 | -12.47 | 5.18 | -8.63 | 2.90 | 11.91 |
| 11.07 | 2 | 0.075 | 1 | 45 | 2 | 11,13,18 | -0.79 | 1,6 |
| RS Boo | 0.377337 | 0.77 | 1.57 | 6.56 | 1.32 | 1.06 | 1.13 | 10.37 |
| 9.45 | 1 | 0.015 | 1 | -7 | 1 | 5,9,10,13,14 | -0.36 | 1,2,3,4,6,10,12 |
| ST Boo | 0.622291 | 0.47 | 1.75 | -15.87 | 1.32 | -12.54 | 1.47 | 11.01 |
| 9.82 | 2 | 0.015 | 1 | 13 | 1 | 11,13 | -1.76 | 5,6,10,11,12 |
| TV Boo 'c' | 0.312559 | -0.50 | 1.60 | -5.80 | 1.33 | -34.93 | 1.29 | 10.97 |
| 10.22 | 1 | 0.015 | 1 | -98 | 10 | 4,11 | -2.44 | 1,7 |
| TW Boo | 0.532273 | -0.52 | 1.77 | -3.29 | 1.50 | -54.98 | 1.64 | 11.29 |
| 10.09 | 2 | 0.015 | 1 | -99 | 1 | 11,13 | -1.46 | 6,10,11 |
| UY Boo | 0.650845 | 2.06 | 1.92 | 2.32 | 1.56 | -46.73 | 1.15 | 10.94 |
| 9.79 | 2 | 0.015 | 1 | 145 | 2 | 10,13 | -2.56 | 1,6,12 |
| AE Boo 'c' | 0.314896 | 1.38 | 1.86 | -25.63 | 1.68 | -38.34 | 1.44 | 10.65 |
| 9.71 | 3 | 0.015 | 1 | 79 | 1 | 9,10 | -1.39 | 2,3,7 |
| UY Cam 'c' | 0.267042 | -1.64 | 2.08 | -3.03 | 1.48 | -16.65 | 1.90 | 11.53 |
| | | 0.030 | 1 | -46 | 3 | 10 | -1.33 | 2,7 |

**Appendix: Basic Data (cont)**

| Star | Period | $\pi$ | $\sigma$ | $\mu_\alpha cos(\delta)$ | $\sigma$ | $\mu_\delta$ | $\sigma$ | $V_J$ |
|---|---|---|---|---|---|---|---|---|
| K | Ref | E(B-V) | Ref | $V_r$ | $\sigma$ | Ref | [Fe/H] | Ref |
| RV CrB 'c' | 0.331593 | -0.26 | 2.02 | -22.25 | 1.43 | -27.43 | 1.87 | 11.41 |
| 10.49 | 2 | 0.015 | 1 | -125 | 5 | 11 | -1.69 | 7 |
| TV CrB | 0.584611 | -1.67 | 3.49 | -2.44 | 3.40 | -3.62 | 3.59 | 11.87 |
| 10.73 | 3 | 0.030 | 1 | -126 | 7 | 9,13 | -2.33 | 6 |
| W Crt | 0.412013 | -0.27 | 2.62 | -22.26 | 2.52 | -8.02 | 1.78 | 11.54 |
| 10.56 | 1 | 0.030 | 1 | 60 | 1 | 1,13,16 | -0.54 | 1,6,14 |
| X Crt | 0.732833 | -0.31 | 2.58 | -1.17 | 2.07 | -41.63 | 1.58 | 11.48 |
| 10.19 | 2 | 0.015 | 1 | 80 | 2 | 11,13,16 | -2.00 | 6,10,14 |
| UY Cyg | 0.560705 | 0.42 | 2.06 | -3.73 | 1.43 | -11.33 | 1.56 | 11.11 |
| 9.73 | 2 | 0.090 | 2 | 3 | 10 | 11 | -0.80 | 1 |
| XZ Cyg | 0.466579 | 2.28 | 0.86 | 83.51 | 1.00 | -24.17 | 0.92 | 9.68 |
| 8.80 | 2 | 0.105 | 1 | -162 | 7 | 12,13 | -1.44 | 1,4,6 |
| DX Del | 0.472617 | 1.55 | 1.54 | 14.75 | 1.56 | 8.69 | 0.97 | 9.94 |
| 8.71 | 1 | 0.090 | 1 | -52 | 3 | 3,9,13 | -0.39 | 1,3,4,6 |
| RW Dra | 0.442898 | 1.80 | 2.04 | -11.75 | 3.56 | -5.08 | 3.29 | 11.71 |
| 10.69 | 2 | 0.015 | 1 | -112 | 1 | 12,13 | -1.55 | 1,6,11 |
| SU Dra | 0.660419 | 1.11 | 1.15 | -46.30 | 0.97 | -77.87 | 1.01 | 9.78 |
| 8.68 | 1 | 0.030 | 1 | -167 | 1 | 4,9,10,13 | -1.80 | 1,2,3,4,6,10 |
| SW Dra | 0.569670 | 0.21 | 1.15 | -25.59 | 1.04 | -8.81 | 0.98 | 10.48 |
| 9.33 | 1 | 0.015 | 1 | -29 | 1 | 5,7,9,10,11,13 | -1.12 | 1,2,3,6,11,12 |
| XZ Dra | 0.476494 | 2.00 | 0.97 | 11.89 | 1.01 | 4.84 | 1.19 | 10.25 |
| 9.19 | 2 | 0.090 | 1 | -30 | 1 | 13,14 | -0.79 | 1,4,6 |
| BC Dra | 0.719576 | 1.68 | 1.57 | -17.33 | 1.48 | 34.36 | 1.80 | 11.60 |
| | | 0.060 | 1 | -141 | 2 | 9,13 | -2.00 | 6 |
| BK Dra | 0.592081 | 1.31 | 1.36 | -16.09 | 1.05 | 29.97 | 1.38 | 11.19 |
| | | 0.090 | 1 | -77 | 12 | 10,13 | -1.95 | 2,6,11 |
| BT Dra | 0.588673 | 1.88 | 1.60 | 2.35 | 1.71 | -32.09 | 1.86 | 11.64 |
| | | 0.015 | 1 | -164 | 2 | 10,13 | -1.75 | 6,11 |
| RX Eri | 0.587246 | 1.08 | 1.29 | -15.63 | 1.16 | -11.15 | 1.04 | 9.69 |
| 8.42 | 1 | 0.030 | 1 | 67 | 1 | 4,6,13,15 | -1.33 | 1,6,13 |
| SV Eri | 0.713863 | 1.22 | 1.77 | 12.48 | 1.79 | -51.10 | 1.95 | 9.96 |
| 8.69 | 2 | 0.060 | 1 | -14 | 4 | 13,16,18 | -1.70 | 1,4,6,14 |
| BB Eri | 0.569896 | 2.66 | 3.03 | 31.74 | 2.52 | -1.71 | 2.44 | 11.52 |
| | | 0.015 | 1 | 247 | 2 | 10,13,18 | -1.32 | 1,2,6 |
| CS Eri 'c' | 0.311333 | 3.25 | 0.97 | 95.42 | 0.87 | 6.92 | 0.85 | 9.00 |
| | | 0.015 | 1 | -147 | 10 | 9 | -1.41 | 3 |
| SS For | 0.495432 | 3.56 | 1.44 | 28.42 | 1.22 | -71.48 | 1.14 | 10.19 |
| 9.22 | 2 | 0.015 | 1 | -113 | 1 | 7,13,16,17 | -0.94 | 6,14 |
| SX For | 0.605333 | -1.23 | 1.89 | 35.33 | 1.62 | -9.95 | 1.73 | 11.12 |
| | | 0.015 | 1 | 230 | 3 | 13,16,17 | -1.66 | 6,14 |
| RR Gem | 0.397316 | -4.98 | 2.83 | -1.24 | 3.80 | 0.67 | 2.07 | 11.38 |
| 10.26 | 1 | 0.075 | 1 | 64 | 1 | 4,11,13 | -0.29 | 1,6,12 |
| SZ Gem | 0.501136 | 2.62 | 3.25 | -10.89 | 3.19 | -27.66 | 2.13 | 11.75 |
| 10.71 | 2 | 0.030 | 1 | 326 | 4 | 10,11,12,13 | -1.46 | 2,6,10 |
| TW Her | 0.399601 | 0.60 | 1.64 | 3.10 | 1.42 | 1.16 | 1.43 | 11.28 |
| 10.22 | 1 | 0.060 | 1 | -5 | 1 | 5,13 | -0.69 | 1,6 |
| VX Her | 0.455373 | 0.47 | 1.82 | -54.20 | 1.76 | 18.03 | 1.57 | 10.69 |
| 9.62 | 2 | 0.060 | 1 | -377 | 3 | 14 | -1.58 | 1,5,11,12 |

**Appendix: Basic Data (cont)**

| Star | Period | $\pi$ | $\sigma$ | $\mu_\alpha cos(\delta)$ | $\sigma$ | $\mu_\delta$ | $\sigma$ | $V_J$ |
|---|---|---|---|---|---|---|---|---|
| K | Ref | E(B-V) | Ref | $V_r$ | $\sigma$ | Ref | [Fe/H] | Ref |
| VZ Her | 0.440326 | 1.84 | 1.77 | -19.42 | 1.53 | -16.44 | 1.68 | 11.48 |
| 10.60 | 2 | 0.030 | 1 | -115 | 1 | 11,13 | -1.02 | 1,6 |
| AR Her | 0.469970 | 1.24 | 1.68 | -61.70 | 1.80 | 14.86 | 2.18 | 11.24 |
| 10.25 | 2 | 0.015 | 1 | -350 | 10 | 11 | -1.30 | 9 |
| SV Hya | 0.478544 | 5.57 | 2.06 | -36.23 | 1.78 | 12.97 | 1.59 | 10.53 |
| 9.45 | 2 | 0.090 | 1 | 107 | 2 | 12,13,16 | -1.50 | 6,14 |
| WZ Hya | 0.537723 | 2.90 | 2.46 | -8.69 | 2.82 | -14.78 | 1.79 | 10.90 |
| 9.65 | 2 | 0.060 | 1 | 304 | 1 | 11,13 | -1.39 | 6,10 |
| DD Hya | 0.501818 | -1.50 | 4.50 | 1.65 | 5.91 | -6.65 | 3.75 | 12.22 |
| | | 0.030 | 1 | 156 | 1 | 10,13 | -0.97 | 2,6 |
| IK Hya | 0.650327 | 2.35 | 1.40 | -61.98 | 1.33 | -51.51 | 0.84 | 10.11 |
| | | 0.090 | 1 | 258 | 15 | 9 | -1.24 | 3 |
| V Ind | 0.479591 | 1.50 | 1.59 | -71.47 | 1.46 | -83.42 | 0.96 | 9.96 |
| | | 0.015 | 1 | 202 | 2 | 8,13,16,17 | -1.50 | 6,14 |
| RR Leo | 0.452387 | -0.54 | 2.18 | -16.97 | 2.51 | -9.34 | 1.52 | 10.73 |
| 9.70 | 1 | 0.015 | 1 | 88 | 1 | 4,11,13 | -1.60 | 1,4,6,10 |
| SS Leo | 0.626343 | 1.12 | 2.25 | -24.48 | 2.12 | -25.00 | 1.68 | 11.03 |
| 9.97 | 1 | 0.015 | 1 | 163 | 2 | 2,6,11,13 | -1.79 | 1,6 |
| ST Leo | 0.477984 | -2.33 | 2.75 | -11.23 | 3.05 | -38.21 | 2.07 | 11.49 |
| 10.46 | 2 | 0.015 | 1 | 168 | 8 | 10,13 | -1.17 | 1,2,6 |
| AX Leo | 0.726828 | 7.89 | 5.37 | -26.49 | 6.74 | -27.13 | 4.81 | 12.26 |
| 10.91 | 3 | 0.015 | 1 | 193 | 6 | 10,13 | -1.72 | 2,6 |
| BX Leo 'c' | 0.362772 | 2.79 | 3.23 | -24.23 | 3.80 | -15.50 | 2.87 | 11.61 |
| 10.67 | 3 | 0.015 | 1 | 26 | 5 | 9,10 | -1.28 | 2,7 |
| U Lep | 0.581474 | 3.16 | 1.90 | 41.43 | 1.25 | -61.32 | 1.63 | 10.57 |
| 9.49 | 2 | 0.015 | 1 | 125 | 2 | 13,16 | -1.78 | 1,6,14 |
| VY Lib | 0.533938 | -0.46 | 3.15 | 0.86 | 3.43 | -49.60 | 2.66 | 11.73 |
| | | 0.135 | 1 | 151 | 6 | 13,16 | -1.34 | 6,11,14 |
| CG Lib 'c' | 0.306789 | -5.76 | 3.38 | -61.15 | 4.19 | -25.49 | 3.12 | 11.55 |
| | | 0.135 | 1 | -179 | 10 | 16 | -1.19 | 7,14 |
| FW Lup | 0.484171 | 2.62 | 1.31 | -6.22 | 1.13 | -16.05 | 1.05 | 9.06 |
| 7.69 | 3 | 0.090 | 2 | 3 | 3 | 9 | -0.20 | 3 |
| TT Lyn | 0.597438 | -2.06 | 1.67 | -81.96 | 1.57 | -41.83 | 0.98 | 9.86 |
| 8.65 | 1 | 0.015 | 1 | -65 | 2 | 4,9,10,13 | -1.56 | 1,2,3,4,10,12 |
| TW Lyn | 0.481853 | -3.31 | 4.18 | -6.69 | 5.08 | 1.11 | 3.26 | 12.00 |
| | | 0.045 | 1 | -39 | 1 | 10,13 | -0.66 | 2,6 |
| RR Lyr | 0.566805 | 4.38 | 0.59 | -109.59 | 0.53 | -195.54 | 0.59 | 7.76 |
| 6.53 | 2 | 0.060 | 2 | -63 | 8 | 13 | -1.39 | 1,4,5,6 |
| CN Lyr | 0.411382 | -2.68 | 2.15 | 0.34 | 1.61 | -8.94 | 1.95 | 11.48 |
| 9.91 | 3 | 0.240 | 2 | 27 | 3 | 9,10,13 | -0.58 | 2,3,6 |
| EZ Lyr | 0.525268 | 0.02 | 6.37 | -1.59 | 5.92 | 13.10 | 8.23 | 11.57 |
| 10.50 | 2 | 0.075 | 1 | -74 | 10 | 10 | -1.22 | 1 |
| IO Lyr | 0.577122 | 0.65 | 2.36 | -14.43 | 2.45 | 30.08 | 2.50 | 11.85 |
| | | 0.060 | 1 | -188 | 2 | 10,13 | -1.14 | 1,2,6 |
| Z Mic | 0.586934 | -1.97 | 3.17 | 16.51 | 3.27 | -7.58 | 1.60 | 11.65 |
| | | 0.075 | 1 | -61 | 2 | 13,16 | -1.10 | 6,14 |
| RV Oct | 0.571130 | 0.42 | 1.39 | -32.99 | 1.14 | 15.59 | 1.37 | 10.98 |
| 9.51 | 1 | 0.090 | 1 | 136 | 1 | 1,13 | -1.71 | 6,14 |

**Appendix: Basic Data (cont)**

| Star | Period | $\pi$ | $\sigma$ | $\mu_\alpha cos(\delta)$ | $\sigma$ | $\mu_\delta$ | $\sigma$ | $V_J$ |
|---|---|---|---|---|---|---|---|---|
| K | Ref | E(B-V) | Ref | $V_r$ | $\sigma$ | Ref | [Fe/H] | Ref |
| RY Oct | 0.563469 | 5.77 | 3.79 | -3.83 | 3.93 | -29.41 | 3.54 | 12.06 |
| | | 0.105 | 1 | 37 | 10 | 13 | -1.83 | 6 |
| SS Oct | 0.621825 | 2.61 | 2.79 | 3.33 | 2.99 | -34.73 | 2.47 | 11.91 |
| | | 0.105 | 1 | 312 | 14 | 13 | -1.60 | 6 |
| UV Oct | 0.542625 | 1.48 | 0.94 | -57.83 | 0.89 | -121.26 | 0.94 | 9.50 |
| 8.23 | 3 | 0.105 | 1 | 116 | 6 | 13,15 | -1.74 | 6,13 |
| V445 Oph | 0.397023 | 0.08 | 2.47 | -11.35 | 3.67 | 5.48 | 2.36 | 11.05 |
| 9.24 | 1 | 0.195 | 1 | -20 | 1 | 2,13 | -0.19 | 1,5,6,14 |
| V455 Oph | 0.453918 | 3.77 | 4.18 | -32.22 | 3.29 | -23.43 | 3.13 | 12.36 |
| 11.00 | 3 | 0.150 | 2 | -32 | 1 | 9,10,13 | -1.07 | 2,6 |
| WY Pav | 0.588580 | 1.10 | 3.92 | -31.26 | 4.09 | -27.57 | 2.68 | 12.18 |
| | | 0.105 | 1 | -76 | 14 | 13 | -0.98 | 6 |
| BN Pav | 0.567173 | 0.68 | 5.00 | 0.80 | 4.49 | -4.50 | 4.22 | 12.60 |
| | | 0.045 | 1 | 114 | 14 | 13 | -1.32 | 6 |
| BP Pav | 0.527128 | -7.74 | 4.02 | -25.48 | 3.19 | -30.76 | 3.23 | 12.54 |
| | | 0.060 | 1 | 348 | 14 | 13 | -1.48 | 6 |
| VZ Peg 'c' | 0.306486 | -1.61 | 2.97 | 19.02 | 2.46 | -28.41 | 1.85 | 11.90 |
| | | 0.060 | 1 | -264 | 1 | 9,10 | -1.80 | 2,3,7 |
| AV Peg | 0.390380 | 1.41 | 1.72 | 13.37 | 1.94 | -7.65 | 1.51 | 10.50 |
| 9.36 | 1 | 0.060 | 1 | -58 | 1 | 4,13,14 | -0.08 | 1,4,6 |
| BH Peg | 0.640983 | -0.21 | 1.82 | -24.17 | 1.60 | -65.42 | 1.39 | 10.46 |
| 8.97 | 2 | 0.060 | 1 | -275 | 3 | 3 6,13,14 | -1.22 | 1,6 |
| CG Peg | 0.467134 | 2.10 | 2.06 | -1.87 | 2.04 | -5.58 | 1.52 | 11.18 |
| 9.93 | 2 | 0.075 | 1 | -6 | 2 | 11,13,14 | -0.50 | 6,9 |
| DH Peg 'c' | 0.255510 | 0.15 | 1.42 | 19.22 | 2.03 | -1.63 | 0.98 | 9.55 |
| 8.62 | 1 | 0.060 | 1 | -70 | 1 | 5,9 | -1.24 | 1,3,4,7 |
| AR Per | 0.425549 | 1.84 | 1.64 | -7.01 | 1.69 | -9.63 | 1.17 | 10.51 |
| 8.66 | 1 | 0.310 | 2 | 5 | 1 | 4,9,10,11,13,18 | -0.30 | 1,2,3,4,6 |
| RV Phe | 0.596413 | 2.49 | 2.90 | 50.25 | 2.52 | -13.96 | 1.80 | 11.94 |
| 10.72 | 1 | 0.015 | 1 | 99 | 2 | 7,15 | -1.69 | 13 |
| U Pic | 0.440371 | 1.51 | 1.65 | -1.96 | 1.56 | 1.62 | 2.12 | 11.38 |
| 10.37 | 2 | 0.015 | 1 | 21 | 6 | 13,16 | -0.72 | 6,14 |
| RU Psc 'c' | 0.390317 | 2.20 | 1.63 | 96.20 | 2.18 | -39.82 | 0.90 | 10.19 |
| 9.16 | 2 | 0.045 | 1 | -131 | 1 | 11,13 | -1.75 | 1,7 |
| XX Pup | 0.517198 | 1.58 | 2.41 | -19.09 | 2.03 | -2.11 | 2.13 | 11.25 |
| 10.14 | 2 | 0.030 | 2 | 391 | 5 | 10,11,18 | -1.33 | 2 |
| HH Pup | 0.390746 | 0.89 | 1.61 | 2.24 | 1.73 | -0.43 | 1.81 | 11.29 |
| | | 0.150 | 1 | 9 | 3 | 13,16 | -0.50 | 6,14 |
| HK Pup | 0.734254 | 1.52 | 2.57 | 21.12 | 2.36 | 0.29 | 1.19 | 11.37 |
| 9.98 | 3 | 0.010 | 2 | 222 | 3 | 10 | -1.11 | 2 |
| V440 Sgr | 0.477474 | -0.71 | 2.10 | -5.82 | 2.01 | -54.43 | 1.11 | 10.34 |
| 9.10 | 2 | 0.120 | 1 | -62 | 1 | 7,13,16 | -1.40 | 5,6,9,14 |
| V675 Sgr | 0.642289 | 4.30 | 1.75 | 30.85 | 2.09 | -21.99 | 1.18 | 10.33 |
| 9.10 | 2 | 0.060 | 2 | -105 | 10 | 0 15 | -2.28 | 13 |
| RU Scl | 0.493333 | 0.63 | 1.67 | 54.29 | 2.14 | -17.92 | 1.02 | 10.22 |
| 9.21 | 2 | 0.015 | 1 | 34 | 3 | 13,16,17 | -1.27 | 6,14 |
| SV Scl 'c' | 0.377366 | 5.56 | 2.07 | -2.09 | 1.93 | -35.53 | 1.30 | 11.38 |
| 10.51 | 2 | 0.015 | 1 | -10 | 10 | 16 | -1.77 | 7,14 |

**Appendix: Basic Data (cont)**

| Star | Period | $\pi$ | $\sigma$ | $\mu_\alpha cos(\delta)$ | $\sigma$ | $\mu_\delta$ | $\sigma$ | $V_J$ |
|---|---|---|---|---|---|---|---|---|
| K | Ref | E(B-V) | Ref | $V_r$ | $\sigma$ | Ref | [Fe/H] | Ref |
| VW Scl | 0.510915 | 1.66 | 2.12 | 25.59 | 1.91 | -38.16 | 1.29 | 11.03 |
| | | 0.015 | 1 | 53 | 10 | 9 | -0.84 | 3 |
| VX Scl | 0.637334 | -2.35 | 2.77 | 37.57 | 2.17 | -24.77 | 1.61 | 12.02 |
| | | 0.015 | 1 | -47 | 11 | 13 | -2.25 | 6 |
| VY Ser | 0.714094 | -0.96 | 1.68 | -103.20 | 1.92 | -10.12 | 1.40 | 10.13 |
| 8.78 | 1 | 0.030 | 1 | -146 | 1 | 1 5,9,10,13 | -1.79 | 1,2,3,4,5,6,10 |
| AN Ser | 0.522069 | -0.21 | 2.48 | -2.46 | 3.29 | -5.99 | 2.25 | 10.94 |
| 9.83 | 2 | 0.015 | 1 | -47 | 1 | 11,13 | -0.07 | 1,6 |
| AP Ser 'c' | 0.340789 | -4.74 | 2.30 | -38.27 | 2.63 | -42.75 | 1.98 | 11.11 |
| 10.20 | 3 | 0.015 | 1 | -88 | 2 | 9,10 | -1.58 | 1,2,3,7 |
| AT Ser | 0.746568 | 0.49 | 2.99 | -1.52 | 3.46 | -6.35 | 3.52 | 11.48 |
| 10.27 | 2 | 0.030 | 1 | -67 | 3 | 11,12,13 | -2.03 | 1,6 |
| T Sex 'c' | 0.324698 | 2.38 | 1.72 | -21.08 | 1.98 | -22.43 | 0.85 | 10.04 |
| 9.18 | 1 | 0.015 | 1 | 29 | 1 | 4,9,10 | -1.34 | 1,2,3,4,7 |
| MT Tel 'c' | 0.316899 | 1.01 | 1.26 | -136.48 | 1.38 | -114.14 | 0.91 | 8.98 |
| | | 0.060 | 1 | 56 | 10 | 9 | -1.85 | 3,7 |
| RW TrA | 0.374035 | 1.34 | 3.30 | -9.11 | 2.47 | -5.89 | 2.40 | 11.40 |
| | | 0.090 | 1 | -56 | 17 | 13,16 | -0.13 | 6,14 |
| W Tuc | 0.642230 | 4.88 | 1.82 | 4.62 | 1.65 | -20.25 | 1.79 | 11.41 |
| 10.35 | 1 | 0.015 | 1 | 65 | 1 | 8,13,15 | -1.57 | 6,13 |
| AM Tuc 'c' | 0.405789 | 0.22 | 1.93 | 23.57 | 1.85 | -27.88 | 2.12 | 11.67 |
| | | 0.015 | 1 | 130 | 10 | 16 | -1.49 | 7,14 |
| RV Uma | 0.468062 | 0.66 | 1.43 | -26.33 | 1.53 | -43.32 | 1.52 | 10.77 |
| 9.79 | 2 | 0.015 | 1 | -185 | 1 | 12,13 | -1.20 | 1,6,10 |
| SX UMa 'c' | 0.307153 | 0.70 | 1.39 | -67.24 | 1.18 | 2.49 | 1.41 | 10.84 |
| 10.03 | 2 | 0.015 | 1 | -154 | 1 | 9,10 | -1.81 | 1,2,3,7 |
| TU Uma | 0.557659 | -0.03 | 1.35 | -68.91 | 1.18 | -52.47 | 1.04 | 9.82 |
| 8.67 | 1 | 0.015 | 1 | 89 | 2 | 4,9,10,13 | -1.51 | 1,2,3,4,6,10 |
| AB Uma | 0.599577 | 0.91 | 1.90 | -18.50 | 1.72 | -15.42 | 1.50 | 10.94 |
| 9.59 | 3 | 0.015 | 1 | -50 | 1 | 10,13 | -0.49 | 2,6,11 |
| AF Vel | 0.527398 | 2.24 | 2.13 | 40.68 | 1.51 | -13.96 | 1.56 | 11.44 |
| 10.06 | 2 | 0.150 | 2 | 236 | 10 | 16 | -1.49 | 14 |
| ST Vir | 0.410820 | -2.89 | 3.22 | -3.73 | 3.72 | -19.69 | 2.90 | 11.52 |
| 10.60 | 2 | 0.030 | 1 | 1 | 4 | 12,13 | -0.67 | 1,6 |
| UU Vir | 0.475606 | -0.37 | 1.97 | -44.42 | 2.06 | -4.65 | 1.55 | 10.56 |
| 9.51 | 1 | 0.015 | 1 | -8 | 1 | 4,5,6,13 | -0.87 | 1,4,6,10 |
| AF Vir | 0.483722 | -6.81 | 4.21 | -58.14 | 3.45 | -0.71 | 2.71 | 11.80 |
| 10.75 | 3 | 0.015 | 1 | -20 | 8 | 10,13 | -1.33 | 2,6 |
| AM Vir | 0.615088 | -3.25 | 2.91 | 2.57 | 2.71 | -44.07 | 1.59 | 11.52 |
| | | 0.030 | 1 | 98 | 1 | 9,13 | -1.37 | 3,6 |
| AT Vir | 0.525792 | 1.87 | 2.28 | -61.31 | 1.99 | -23.11 | 1.42 | 11.34 |
| 10.30 | 2 | 0.015 | 1 | 336 | 3 | 10,13,18 | -1.60 | 1,6 |
| AU Vir 'c' | 0.343230 | -0.21 | 2.95 | -5.72 | 2.78 | -26.47 | 1.90 | 11.59 |
| 10.81 | 3 | 0.015 | 1 | 119 | 2 | 16,18 | -1.50 | 7,9,14 |
| AV Vir | 0.656908 | 3.02 | 3.02 | 9.56 | 2.96 | -38.69 | 1.97 | 11.82 |
| 10.63 | 2 | 0.015 | 1 | 153 | 1 | 11,13 | -1.25 | 1,6 |
| BN Vul | 0.594125 | 5.89 | 2.11 | -41.88 | 1.67 | -36.79 | 1.94 | 11.02 |
| 8.81 | 2 | 0.390 | 2 | -267 | 5 | 11 | -1.61 | 1 |

**Appendix: Basic Data (cont)**

| Star | Period | $\pi$ | $\sigma$ | $\mu_\alpha cos(\delta)$ | $\sigma$ | $\mu_\delta$ | $\sigma$ | $V_J$ |
|---|---|---|---|---|---|---|---|---|
| K | Ref | E(B-V) | Ref | $V_r$ | $\sigma$ | Ref | [Fe/H] | Ref |
| RW Cnc | 0.547193 | -4.78 | 3.06 | 1.50 | 3.22 | -33.33 | 1.78 | 11.85 |
| 10.75 | 2 | 0.015 | 1 | -85 | 1 | 11,13 | -1.67 | 6,10,11 |
| TT Cnc | 0.563450 | 1.95 | 3.00 | -40.96 | 3.13 | -29.24 | 2.35 | 11.35 |
| 10.05 | 2 | 0.030 | 1 | 49 | 1 | 11,13,18 | -1.57 | 1,6,10 |
| W CVn | 0.551759 | 1.15 | 1.69 | -19.30 | 0.91 | -15.63 | 1.26 | 10.55 |
| 9.43 | 2 | 0.015 | 1 | 42 | 3 | 12,13 | -1.22 | 1,6,10,12 |
| RZ CVn | 0.567417 | -1.75 | 2.45 | -53.42 | 2.41 | -0.15 | 1.60 | 11.57 |
| 10.57 | 2 | 0.015 | 1 | -12 | 1 | 11,13 | -1.84 | 1,6,10,11 |
| SS CVn | 0.478519 | -1.69 | 2.62 | 6.34 | 1.47 | -42.80 | 1.69 | 11.84 |
| 10.92 | 2 | 0.015 | 1 | -40 | 3 | 10,13 | -1.37 | 2,6,10,11 |
| ST CVn 'c' | 0.329063 | 0.00 | 2.80 | -14.17 | 2.71 | -14.31 | 1.86 | 11.37 |
| 10.44 | 2 | 0.015 | 1 | -129 | 1 | 11,12 | -1.07 | 1,7 |
| UZ CVn | 0.697783 | 16.26 | 7.16 | -11.53 | 4.78 | -39.45 | 5.96 | 12.12 |
| 10.90 | 3 | 0.015 | 1 | -28 | 3 | 10,13 | -1.89 | 2,6 |
| AA CMi | 0.476323 | 4.59 | 3.42 | 0.55 | 3.05 | 3.05 | 2.20 | 11.57 |
| 10.26 | 3 | 0.090 | 2 | 55 | 3 | 10 | -0.15 | 2,10 |
| RV Cap | 0.447750 | -2.99 | 2.46 | 18.77 | 2.58 | -106.21 | 1.87 | 11.04 |
| 10.10 | 2 | 0.045 | 1 | -99 | 4 | 13,17 | -1.61 | 1,6 |
| YZ Cap 'c' | 0.273458 | 2.97 | 2.52 | -17.60 | 3.26 | -18.41 | 1.47 | 11.30 |
| 10.37 | 3 | 0.060 | 1 | -105 | 3 | 7,15 | -1.06 | 1,7,13 |
| V499 Cen | 0.521210 | -2.09 | 1.99 | 9.23 | 1.56 | -23.91 | 1.78 | 11.12 |
| 9.99 | 2 | 0.075 | 1 | 331 | 3 | 13,15 | -1.43 | 6,13 |
| RZ Cep 'c' | 0.308645 | 0.22 | 1.09 | 90.61 | 1.38 | 189.10 | 1.00 | 9.47 |
| 8.10 | 2 | 0.250 | 2 | 9 | 3 | 12 | -1.77 | 1,7 |
| RR Cet | 0.553025 | -0.03 | 1.34 | 10.55 | 1.29 | -43.98 | 0.82 | 9.73 |
| 8.56 | 1 | 0.015 | 1 | -74 | 1 | 3,4,9,10,13 | -1.45 | 1,2,3,5,6 |
| RU Cet | 0.586271 | 3.02 | 3.17 | 20.36 | 3.56 | -27.45 | 2.02 | 11.68 |
| | | 0.015 | 1 | 46 | 10 | 13,16 | -1.66 | 6,9,14 |
| RV Cet | 0.623428 | 2.33 | 2.03 | 28.71 | 1.94 | -20.68 | 1.40 | 10.92 |
| 9.55 | 2 | 0.015 | 1 | -94 | 3 | 13,16,17 | -1.60 | 6,14 |
| RX Cet | 0.573696 | 2.70 | 2.63 | -20.19 | 3.42 | -62.68 | 1.89 | 11.44 |
| | | 0.015 | 1 | -57 | 2 | 13,16,17,18 | -1.28 | 6,14 |
| RZ Cet | 0.510613 | -2.57 | 3.43 | 21.67 | 2.62 | -0.92 | 2.88 | 11.85 |
| 10.68 | 2 | 0.015 | 1 | -7 | 3 | 10,13,18 | -1.36 | 1,2,6 |
| UU Cet | 0.606081 | 6.48 | 4.13 | 33.37 | 4.84 | -0.43 | 1.88 | 12.08 |
| 10.85 | 1 | 0.015 | 1 | -114 | 1 | 8,16 | -1.28 | 1,5,12,14 |
| RX Col | 0.593733 | -5.15 | 3.41 | 7.93 | 2.62 | 10.65 | 3.87 | 12.72 |
| | | 0.015 | 1 | 356 | 11 | 13 | -1.70 | 6 |
| RY Col | 0.478857 | 1.20 | 1.33 | 34.70 | 1.17 | 22.95 | 1.35 | 10.90 |
| 9.80 | 2 | 0.015 | 1 | 474 | 4 | 13,15 | -0.91 | 6,13 |
| S Com | 0.586591 | -1.34 | 2.67 | -16.44 | 3.43 | -16.52 | 2.15 | 11.63 |
| 10.60 | 3 | 0.015 | 1 | -55 | 1 | 11,13 | -1.91 | 1,6 |
| U Com 'c' | 0.292738 | 3.46 | 2.75 | -44.45 | 3.62 | -13.75 | 1.98 | 11.74 |
| 10.93 | 2 | 0.015 | 1 | -22 | 3 | 9,10 | -1.25 | 2,7,9 |
| ST Com | 0.598929 | -5.17 | 2.71 | -23.97 | 2.77 | -33.98 | 1.56 | 11.46 |
| 10.22 | 2 | 0.015 | 1 | -68 | 10 | 11 | -1.10 | 9 |
| V413 CrA | 0.589324 | 0.66 | 2.05 | -35.10 | 2.23 | -25.57 | 1.53 | 10.60 |
| | | 0.105 | 1 | -89 | 10 | 13,16 | -1.26 | 6,14 |

**Appendix: Basic Data (cont)**

Of the 180 stars classified by HIPPARCOS as RR Lyraes and observed by the satellite the following stars were removed:
CH AQL - No metallicity
IN ARA - Poor quality HIPPARCOS data (like RW COL)
BH AUR - No reddening
BB CMI - Ecl.Var. (Schmidt et al 1995)
V363 CAS - Fourier Coefficient R(21) is unusual - Anom.Ceph (see section 2.3)
V753 CEN - Period too short (0.221 days)
EZ CEP - Poor quality HIPPARCOS data (like RW COL)
XZ CET - Fourier Coefficient R(21) is unusual - Anom.Ceph (see section 2.3)
RW COL - HIPPARCOS data are Poor quality (light curve has a lot of scatter and Trig Parallax and Proper Motion have large errors)
V1719 CYG - Long period Delta Scuti (Fernley and Barnes 1997)
VZ DRA - No metallicity
BX DRA - Ecl.Var. (Schmidt et al 1995)
XZ GRU - Period too long (0.883 days)
LS HER - Period too short (0.231 days)
SZ HYA - Poor quality HIPPARCOS data (like RW COL)
BI HYA - Constant V mag from HIPPARCOS photometry
ET HYA - Both constant V mag from HIPPARCOS and constant radial velocity from spectra (Fernley and Barnes 1997)
CZ LAC - Poor quality HIPPARCOS data (like RW COL)
CW LUP - Both constant V mag from HIPPARCOS and constant radial velocity from spectra (Solano et al 1997)
TV LYN - Period too short (0.241 days)
VY NOR - Poor quality HIPPARCOS data (like RW COL)
V429 ORI - Both constant V mag from HIPPARCOS and constant radial velocity from spectra (Fernley and Barnes 1997)
IV PAV - Period too short (0.203 days)
KN PER - Ecl.Var (Schmidt 1991)
ST PIC - No metallicity or radial velocity
SS PSC - Long period Delta Scuti (Fernley and Barnes 1997)
IU PUP - Constant V mag from HIPPARCOS photometry
KZ PUP - Period too long (2.018 days)
V2232 SGR - Poor quality HIPPARCOS data (like RW COL)
V494 SCO - No Reddening
V690 SCO - No Reddening
UY SCL - Period too short (0.182 days)
AR SER - Fourier Coefficient R(21) is unusual - Anom.Ceph (see section 2.3)
CD VEL - No metallicity or radial velocity
BB VIR - Photometric evidence for HB Companion (Fernley 1993b)
NSV5394 - Constant V mag from HIPPARCOS photometry

**Appendix: Basic Data (cont)**

Star name is followed by a $'c'$ for RRc Lyraes, otherwise it is an RRab Lyrae. The identification of the $'c'$ types is from the Fourier components as discussed in section 2.3

Periods were initially from the GCVS (Kholopov et al 1985) and then refined using the HIPPARCOS photometry as discussed in section 2.1

Trigonometric Parallaxes and proper motions (and their errors) are from HIPPARCOS. The units are milliarcsecs and milliarcsecs/yr.

$V_J$ magnitudes are intensity mean magnitudes derived from the HIPPARCOS photometry using the procedures described in section 2.1. The error on these mean magnitudes is typically $\pm$ 0.02

K magnitudes are from (1) the Baade-Wesselink analyses listed in Skillen et al (1993) (2) Fernley, Skillen and Burki (1993) (3) Unpublished. Typically these have uncertainties of $\pm$0.04

E(B-V) is from (1) Burstein and Heiles (1982) (2) Using the Log(P) - (V-K) relations discussed in Section 2.2. Uncertainties on these reddenings are $\pm$0.015 for Burstein and Heiles and $\pm$0.03 for those derived from (V-K).

Systemic velocities (and their standard errors) are in kms/sec. The sources of the data are as follows: (1) Skillen et al 1993 (2) Fernley et al 1990 (3) Meylan et al 1986 (4) Liu and Janes 1990a (5) Jones et al 1988 (6) Carrillo et al 1995 (7) Cacciari et al 1987 (8) Cacciari et al 1990 (9) Solano et al 1997 (10) Fernley and Barnes 1997 (11) Hawley and Barnes 1985 (12) Fernley et al 1993 (13) Layden 1994 (14) Woolley and Aly 1966 (15) Kinman 1961 (16) Clube, Evans and Jones 1969 (17) Breger 1964 (18) Notni 1956 (19) Joy 1938,1950,1955

[Fe/H] use the relation [Fe/H] = -0.13 - 0.195$\Delta$S from Fernley and Barnes (1997). Typically the error on these abundances is $\pm$0.15 dex. Sources of data are as follows: (1)Suntzeff,Kraft and Kinman 1991 (2) Fernley and Barnes 1997 (3) Solano et al 1997 (4) Lambert et al 1996 (5) Clementini et al 1995 (6) Layden 1994 (7) Kemper 1982 (8) Butler 1975 (unless superseded by ref 1) (9) Preston 1959 (unless superseded by ref 1) Kinman and Caretta 1992 (11) Smith 1990 (12) Clementini et al 1991 (13) Kinman 1961 (14) Clube,Evans and Jones 1969