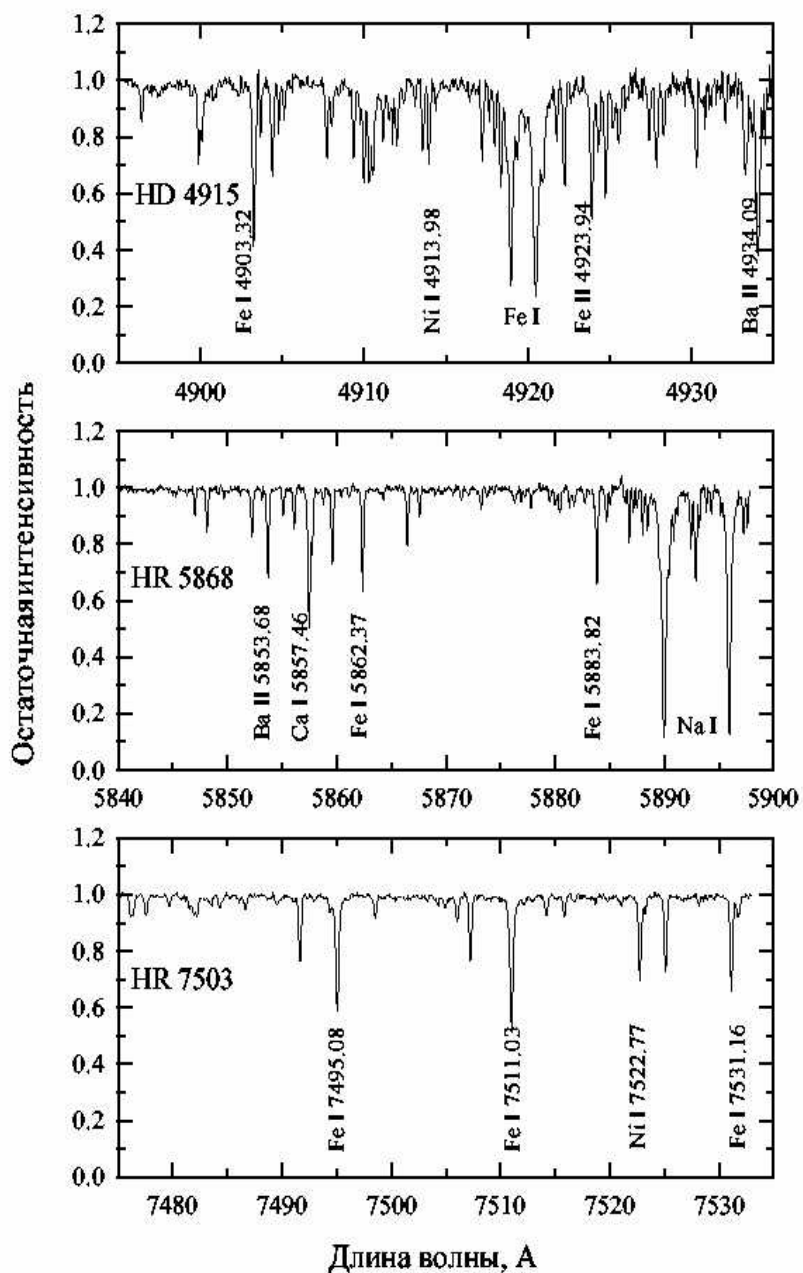


HD 225239) (HD 133002
 " .2, (Z=0.019). 12
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 WIDTH6 c
 [6].
 VALD [7]. " - "
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 [8]. .3,
 (, HD 34411 - Na, Mg, Al -
 , [9] , [10] Ba, Nd, Eu,
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 HD 213575, (Vspace) HD 4915
 [11] (U, V, W). 2

, " " ,
 U-W, U-V, V-W, -
 120 K. [12].
 HD 225239, 100 / .
 U, V, W Vspace - HD 159222
 HD 34411, 50 , -
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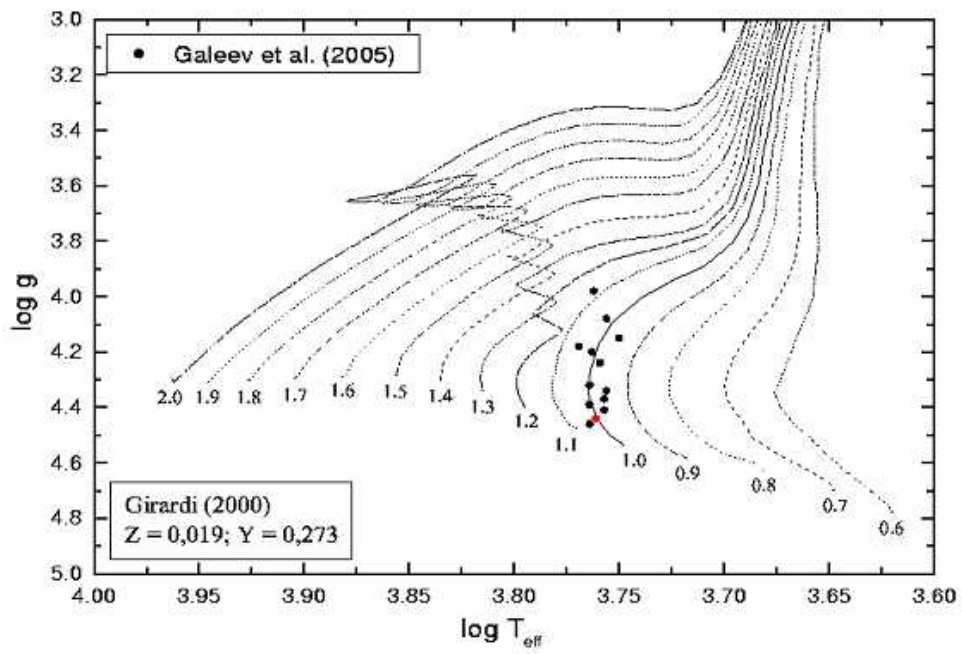
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" (- 1789.2003.2).



.1.

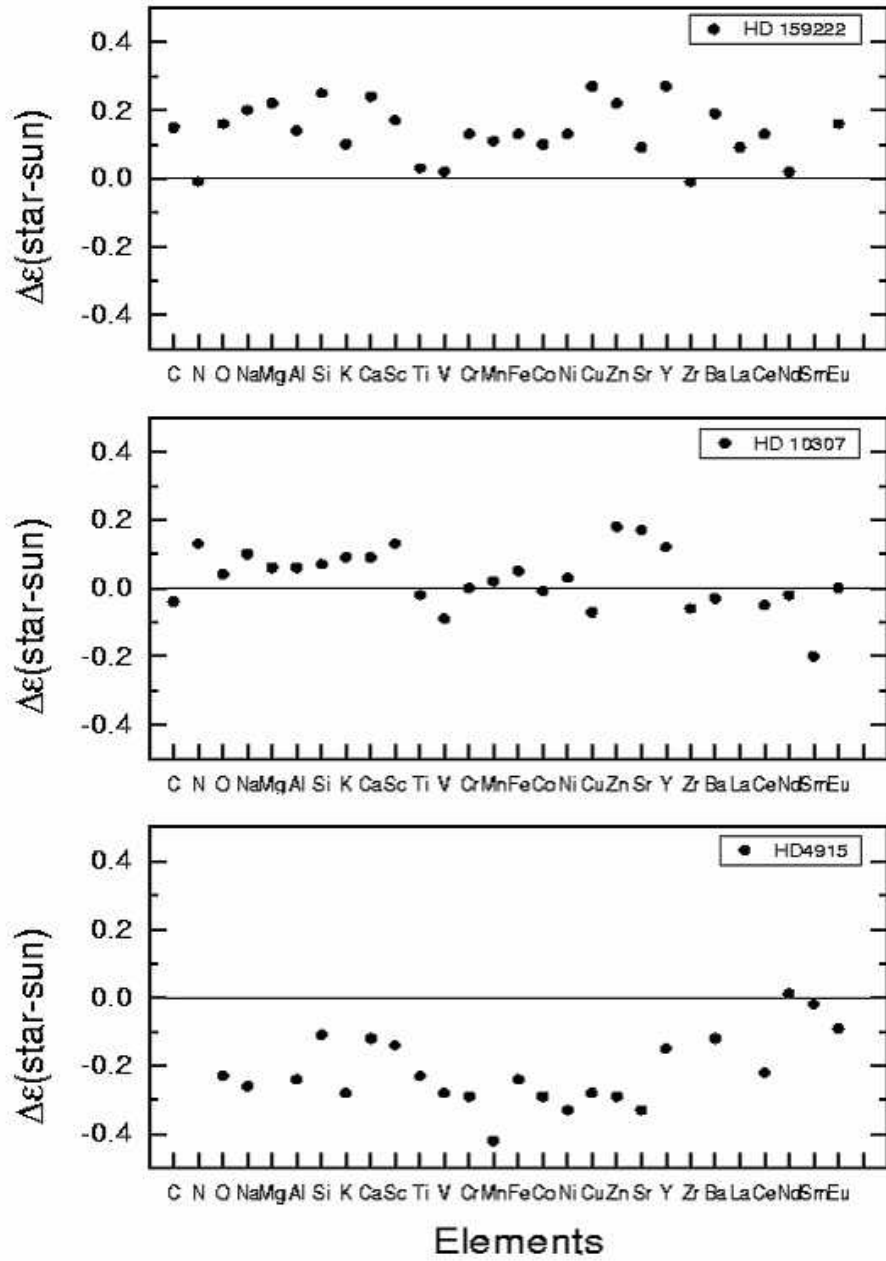
HD 141004 HD 186408,

- HD 4915,



.2.

" " 0.6 2.0 [4],
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.3.

(HD 10307), (HD 159222), (HD 4915).

| HD-номер | Температура, К | $\log g$, dex | [Fe/H], dex | Масса, M_{\odot} | Возраст, млрд лет |
|----------|----------------|----------------|-------------|--------------------|-------------------|
| 159222 | 5805 | 4.39 | 0.13 | 1.0 | 6.0 |
| 186408 | 5740 | 4.24 | 0.10 | 1.0 | 9.4 |
| 222143 | 5720 | 4.41 | 0.10 | 0.95 | 10.4 |
| 34411 | 5800 | 4.20 | 0.08 | 1.0 | 9.2 |
| 10307 | 5815 | 4.32 | 0.05 | 1.0 | 7.7 |
| 141004 | 5870 | 4.18 | 0.05 | 1.05 | 8.3 |
| 186427 | 5700 | 4.34 | 0.05 | 0.95 | 9.4 |
| 213575 | 5630 | 4.15 | 0.05 | 0.95 | 10.3 |
| 146233 | 5710 | 4.37 | -0.01 | 0.95 | 4.6 |
| 197076 | 5810 | 4.46 | -0.05 | 1.05 | 5.2 |
| 187923 | 5700 | 4.08 | -0.12 | 1.02 | 10.4 |
| 4307 | 5780 | 3.98 | -0.17 | 1.1 | 7.2 |
| 4915 | 5660 | 4.59 | -0.24 | 0.9 | 12.8 |
| 133002 | 5610 | 3.45 | -0.38 | 1.6 | 1.7 |
| 225239 | 5650 | 3.79 | -0.39 | 1.1 | 5.8 |
| Среднее | 5750±70 | 4.28±0.1 | 0.0±0.11 | 1.0±0.05 | 8.0 ±2.5 |

(RV) (U, V, W)
(Vspace) -

| HD-номер | [Fe/H], dex | $RV \pm \sigma$, км/с | U, км/с | V, км/с | W, км/с | V_{space} , км/с |
|----------|-------------|------------------------|--------------|--------------|--------------|--------------------|
| 159222 | 0.13 | -58.07±0.31 | -34.89 | 37.71 | -53.37 | 74.08 |
| 186408 | 0.10 | -26.95±0.39 | -27.83 | -19.65 | 12.01 | 36.13 |
| 222143 | 0.10 | 1.78±0.33 | 20.14 | 8.57 | -15.04 | 26.55 |
| 34411 | 0.08 | 68.20±0.37 | 68.16 | -17.01 | -3.93 | 70.36 |
| Среднее | 0.10±0.02 | | 6.40±47.89 | 2.40±26.76 | -15.08±27.83 | 16.56 |
| 186427 | 0.05 | -27.00±0.33 | -27.09 | -20.46 | 12.04 | 36.02 |
| 10307 | 0.05 | 3.72±0.33 | 8.78 | -3.42 | 5.33 | 10.83 |
| 141004 | 0.05 | -64.39±0.35 | -2.01 | -39.88 | -31.23 | 50.69 |
| 213575 | 0.05 | -21.02±0.48 | -- | -- | -- | -- |
| 146233 | -0.01 | 11.22±0.37 | -17.76 | 3.53 | 1.32 | 18.16 |
| 197076 | -0.05 | -34.50±0.39 | -32.33 | 1.15 | -19.07 | 37.55 |
| Среднее | 0.02±0.04 | | -14.08±17.20 | -11.82±18.28 | -6.32±18.13 | 19.44 |
| 187923 | -0.12 | -21.35±0.34 | 14.00 | 26.93 | -37.78 | 48.46 |
| 4307 | -0.17 | -8.97±0.52 | -12.47 | -26.16 | -8.82 | 30.29 |
| 4915 | -0.24 | -2.60±0.38 | -- | -- | -- | -- |
| 133002 | -0.38 | -42.63±0.40 | -46.90 | -31.03 | -13.56 | 57.85 |
| 225239 | -0.39 | 6.20±0.63 | -46.75 | 99.66 | -80.84 | 136.58 |
| Среднее | -0.26±0.12 | | -23.03±29.52 | 17.35±60.83 | -35.25±32.93 | 45.54 |

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