

Table 2. Characteristics of the stars

| * | Sp | T_{eff} | $\lg g$ | $[Fe/H]^{Ph}$ | $[Fe/H]^{Sp}$ |
|--------------|--------|-----------|---------|---------------|---------------|
| HD 6497 | K2 III | 4610 | 2.00 | -0.02 | -0.74 |
| HD 35620 | K3 III | 4250 | 1.60 | 0.07 | -0.22 |
| HD 37160 | G8 III | 4770 | 2.60 | -0.61 | -0.87 |
| HD 43039 | G8 III | 4720 | 2.50 | -0.42 | -0.33 |
| HD 49009 | K2 III | 4480 | 2.10 | -0.04 | -0.68 |
| HD 68879 | G8 III | 4450 | 2.20 | -0.41 | -0.76 |
| HD 95272 | K0 III | 4780 | 2.40 | -0.12 | -0.21 |
| HD 95689 | K0 III | 4840 | 2.50 | -0.13 | -0.15 |
| HD 107328 | K1 III | 4490 | 2.10 | -0.23 | -0.64 |
| HD 129312 | G8 III | 5060 | 2.60 | -0.14 | -0.06 |
| HD 135722 | G8 III | 4810 | 2.60 | -0.48 | -0.69 |
| HD 148856 | G8 III | 4970 | 2.80 | -0.30 | -0.24 |
| HD 188056 | K3 III | 4690 | 1.90 | 0.39 | 0.02 |
| HD 197989 | K0 III | 4780 | 2.50 | -0.28 | -0.20 |
| NGC 752 N213 | K0 III | 4730 | 2.30 | -0.04 | -0.76 |
| HD 2796 | | 5340 | 2.50 | -0.84 | -2.38 |
| HD 4306 | | 5390 | 3.00 | -1.17 | -2.67 |
| CD -30 298 | | 5260 | 3.10 | -1.21 | -2.96 |
| HD 6268 | | 5120 | 2.80 | -0.93 | -2.21 |
| BD -18 271 | | 4280 | 2.00 | -1.31 | -2.06 |

ELEMENTAL ABUNDANCES IN THE ATMOSPHERES OF THREE METAL - DEFICIENT GIANTS

T. V. Mishenina¹, V. G. Klochkova², V. E. Panchuk²

¹ Astronomical Observatory, Odessa State University,

T.G.Shevchenko Park, Odessa 270014 Ukraine

² Special Astrophysical Observatory RAS

Nizhniy Arkhyz, Stavropol'skii Kraii, 357147 Russia

ABSTRACT. High dispersion high resolution CCD spectra have been used for the determination of the elemental abundances in three metal-deficient stars. The following results were obtained: 1) an overabundance of O is found; 2) Si, Ca, Ti are overabundant with respect to iron in stars with $[Fe/H] = -1.5$; 3) halo stars show an underabundance of the

odd elements Na and Al relative to the abundance of the even element Mg); 4) Ni and Mn are slightly overdeficient; 5) an underabundance of Cu is found in all three stars; 6) s-process elements are slightly overabundant.

Key words: stars: metal-deficient giants – stars: abundances – stars: atmospheres – Galaxy(the): evolution of