

Line identifications in the optical spectrum of χ Lupi

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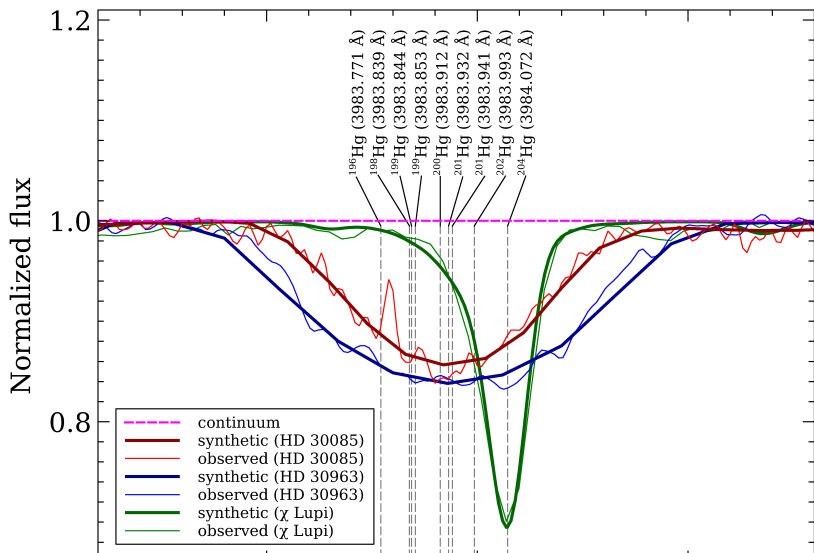
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The abundance pattern of χ Lupi

- The southern star χ Lupi is a bright spectroscopic binary system ($V = 3.95$).
- The primary is a very sharp lined late B star with the HgMn peculiarity, the secondary a normal A3 dwarf.
- The fundamental parameters of the primary are $T_{\text{eff}} = 10608 \pm 200$ K, $\log(g) = 3.98 \pm 0.25$ dex
- An archival FEROS spectrum ($R=45000$) has been downloaded from the ESO archive and synthesized.
- We find distinct underabundances of He, C, nearly solar abundances for O, Mg, Al, S, Ca, Sc, and Fe,
- and mild overabundances for P, most of the iron-peak elements, the Sr-Y-Zr triad, Ba and Hg (about 100000 \odot)
- We present here the first list of identifications for all lines absorbing more than 2 % in the spectrum of χ Lupi A from 3700 Å up to 7500 Å.

Synthesis of the Hg II line at 3983.93 Å in χ Lupi A , HD 30085 and HD 30963 with the HFS of several isotopes



Thank You !