Chemical compositions of a faint Milky Way dwarf satellite galaxy Boötes I

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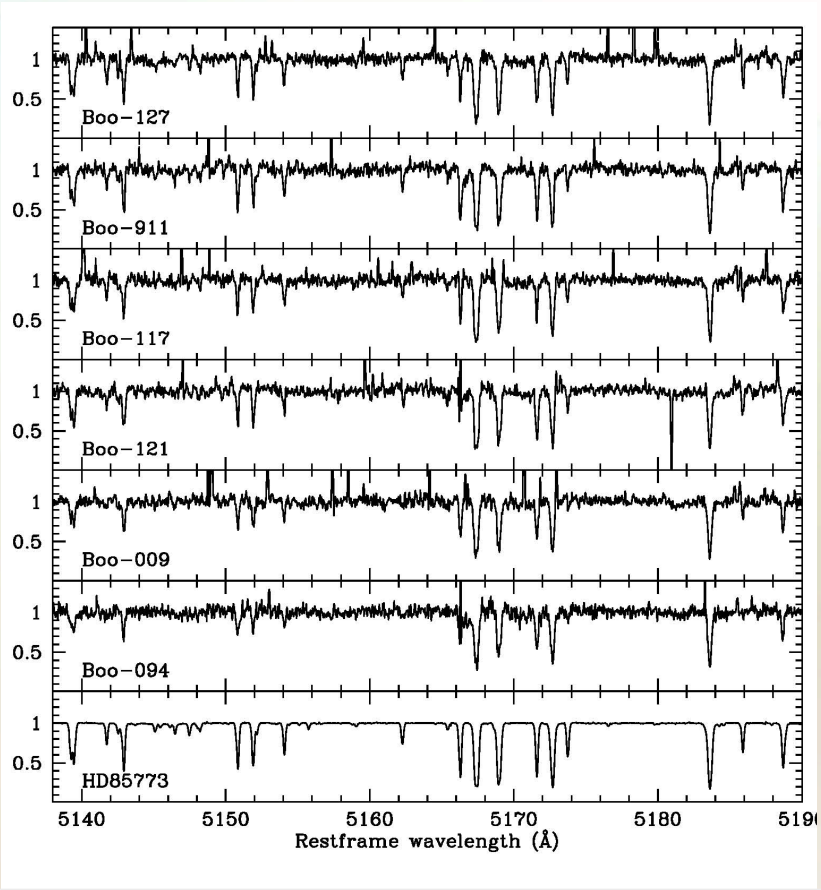
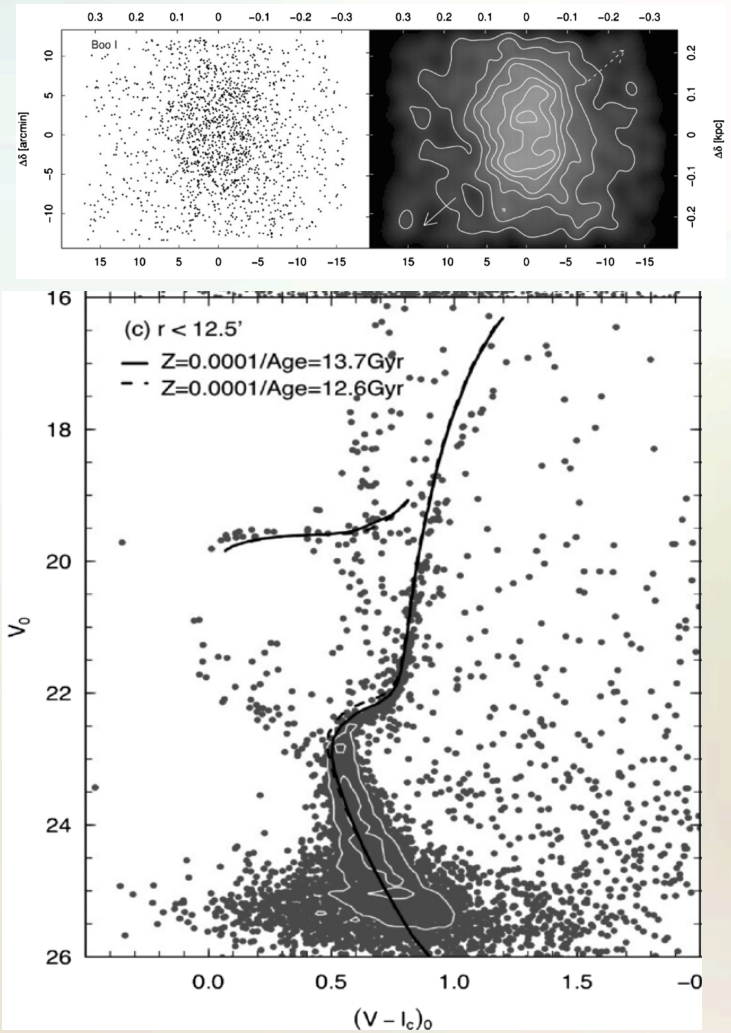
For more detail:
Ishigaki et al. 2014, A&A, accepted, arXiv:1401.1265



Subaru/HDS spectra of the six Boötes I sample stars

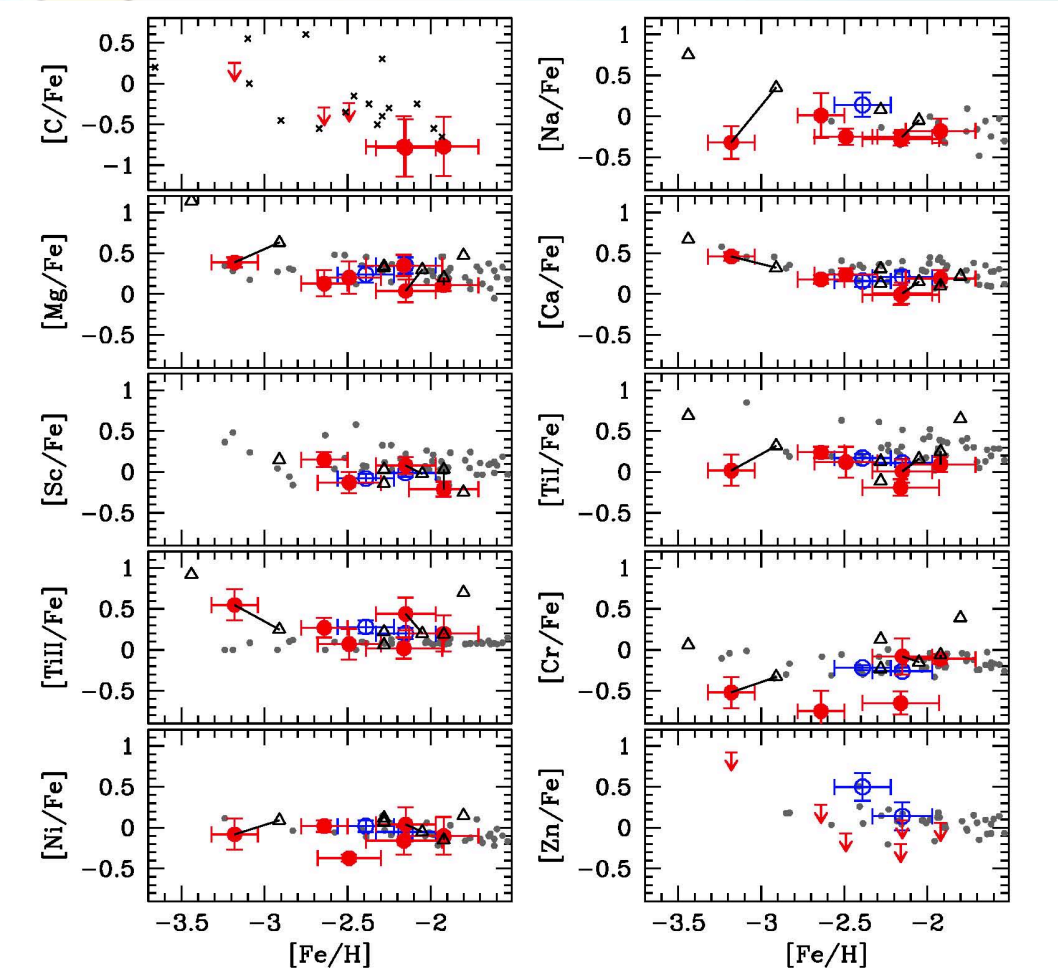
A ultra-faint dwarf galaxy: Boötes I

- Ultra-faint dwarf galaxies in the Milky Way: *fossil record of the galaxy formation*
  - The building blocks of larger galaxies
  - Nucleosynthesis in the first generation of stars
- Boötes I
  - $L \approx 10^4 L_\odot$, $M \approx 10^7 M_\odot$, $D_\odot \approx 66$kpc
  - An exclusively old stellar population
  - Very metal-poor ($[Fe/H]_{mean} \sim -2.5$)
- **High-resolution spectroscopy with Subaru/HDS (PI: S. Okamoto) for six giant stars in Boötes I**

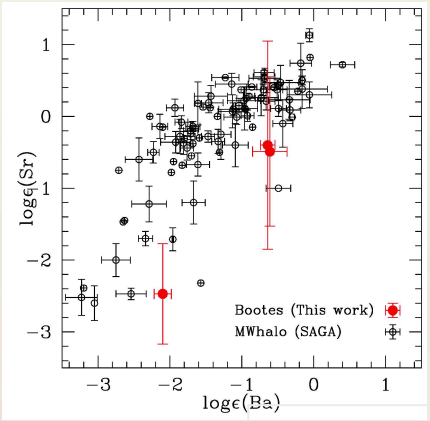


(Top) Spatial distribution of Boötes I stars. (Bottom) Color magnitude diagram of Boötes I (From Okamoto et al. 2012).

Chemical abundances



- The [X/Fe] abundance ratios are are mostly homogeneous for the elements lighter than zinc.
- The [Sr/Ba] abundance ratios are lower than bulk of the Milky Way halo stars



Ishigaki et al. 2014