

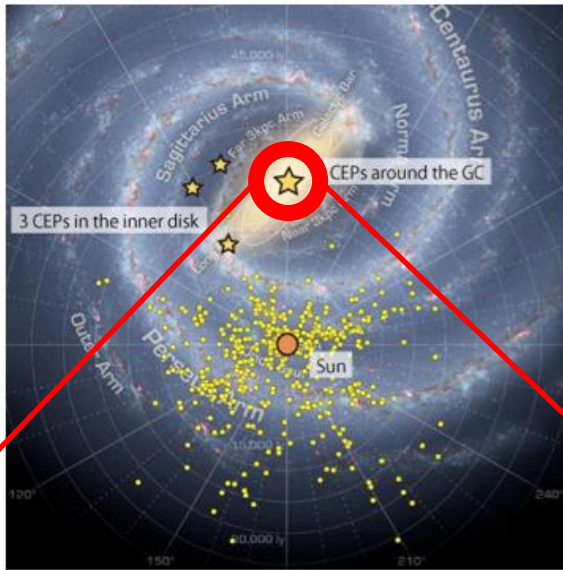


Derivation of Stellar Abundances with Near Infrared Spectra: The Case of Metallic Standard Stars

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Spectroscopic Observations



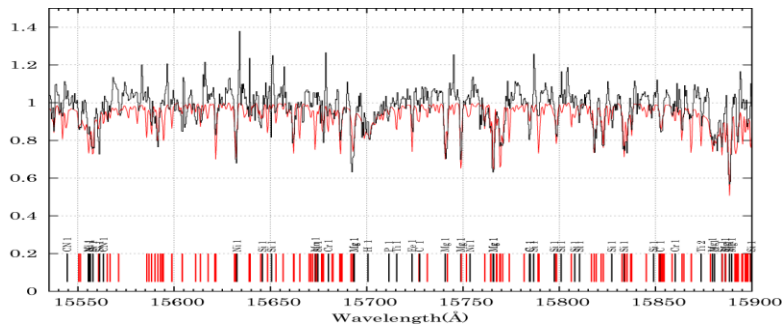
Target

- Galactic Center Cepheids
- **Metallic Standard Stars**

SUBARU/IRCS + AO188

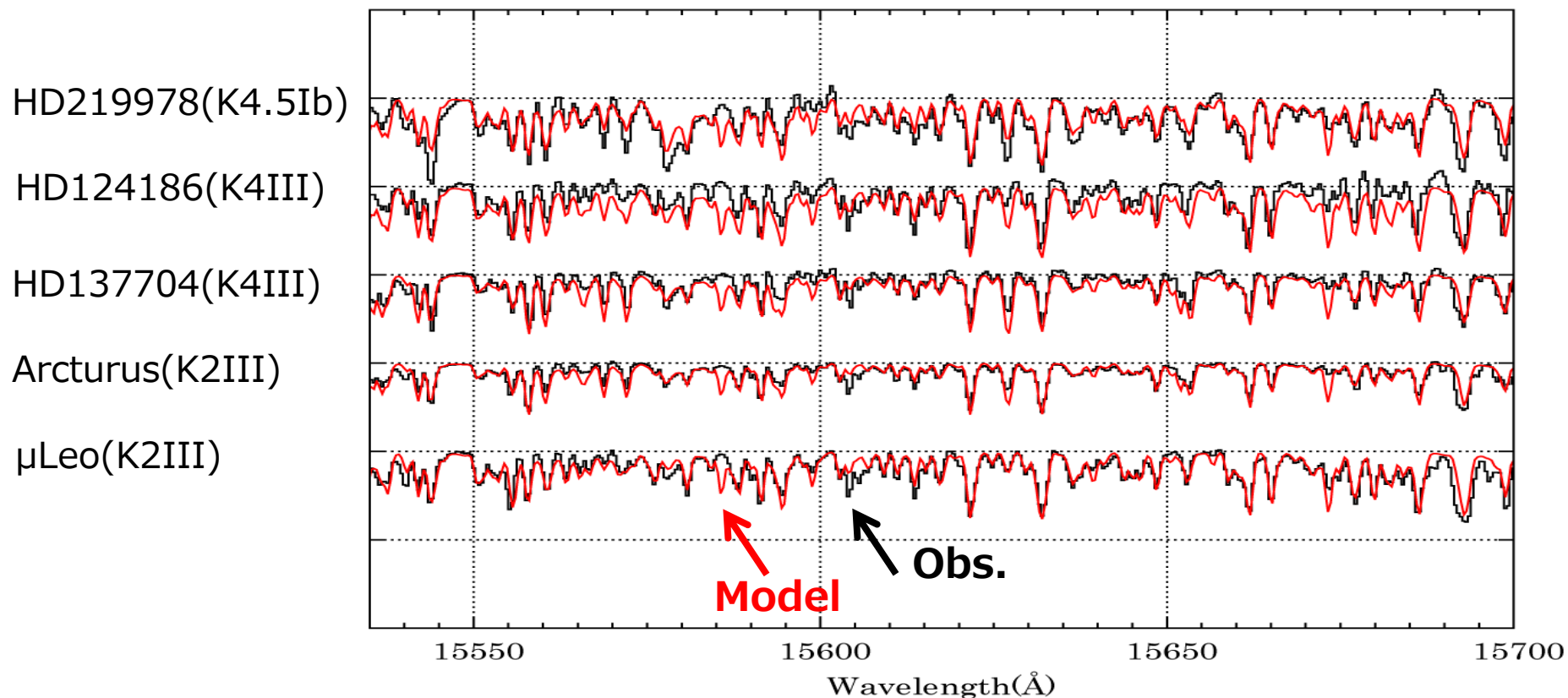
- Wavelength Coverage : 14600~17900 Å
- Wavelength Resolution : R=20,000

First Discovery of Cepheids in the Galactic Center (Matsunaga et al. 2011)



Analyzing Metallic Standard Stars with Near-Infrared Spectra

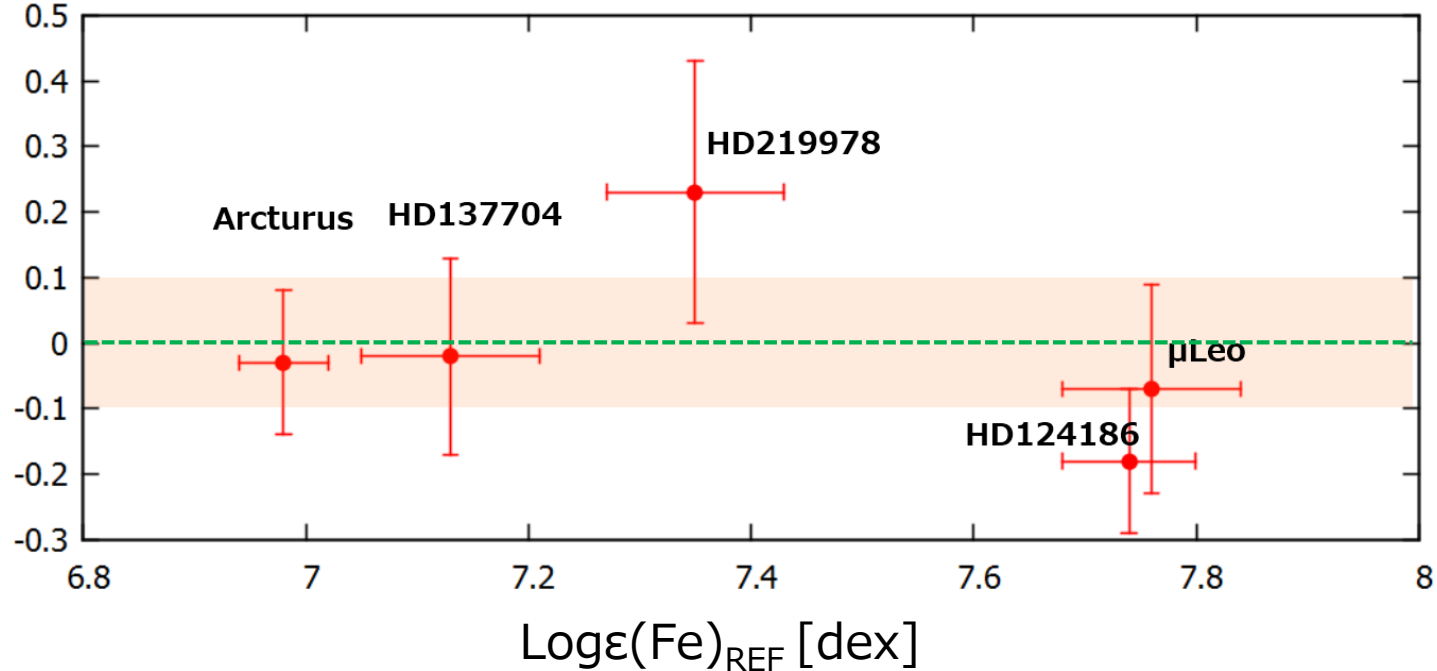
- Whereas metallicity measurements of CEPs have been done by a few groups using optical spectra.
- We started from testing our analysis procedures by measuring metallicities of **K-type standard stars**.



Abundance determination of standard stars

- Abundance of standard stars are determined using **12 Fe I lines** via **spectrum synthesis**.

Diff. $\log\epsilon(\text{Fe})$ [dex]
(This work — REF)



We are planning to **apply our analysis to the Cepheids around the Galactic Center.**



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