

MEDIUM RESOLUTION SPECTRAL LIBRARY OF LATE-TYPE STELLAR TEMPLATES IN NEAR-INFRARED BAND

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1. Introduction

- The medium resolution ($R = 5000-6000$) spectra in the near-infrared band $1.4-1.8 \mu\text{m}$, for late-type stars.
- We measured the equivalent of widths and compared our results to those of Meyer et al. (1998) (M98).
- We use the $\text{Mg}(1.71113 \mu\text{m})$ line to estimate approximate temperature for late-type stars.

2. Observation, data reduction, and Results

- SUBARU 8.2 m telescope.
- Infrared Camera Spectrograph (IRCS).
- G-K-M types stars.
- Data reduction by using IRAF (Image Reduction Analysis Facilities).

3. Discussion

- Comparison the spectral resolution of Arcturus (K2 III).
- Discussion the results from comparing our EW results with M98.

4. Conclusion and Future works

- The medium resolution ($R = 5000-6000$) spectra in the near-infrared band $1.4-1.8 \mu\text{m}$, for late-types G-K-M stars. Our spectral resolution is good enough for analysis the lines in the spectra.
- The approximate temperature of late-type stars is estimate by using absorption line $\text{Mg} (1.71113 \mu\text{m})$.
- The CO band head $1.62073 \mu\text{m}$ obtained from the spectra is potentially useful for measuring the velocity dispersion in the central region of the QSO host galaxies.

