A near-infrared stellar spectral library: II. K-band spectra

Arvind C. Ranade\textsuperscript{1}, Harinder P. Singh\textsuperscript{2}, Ranjan Gupta\textsuperscript{3} and N. M. Ashok\textsuperscript{4}

\textsuperscript{1}Vigyan Prasar, A-50, Institutional Area, Sector-62, NOIDA 201 307, India
\textsuperscript{2}Department of Physics \& Astrophysics, University of Delhi, Delhi 110 007, India
\textsuperscript{3}IUCAA, Post Bag 4, Ganeshkhind, Pune 411 007, India
\textsuperscript{4}Physical Research Laboratory, Navrangpura, Ahmedabad 380009, India

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Abstract. This paper is the second in the series of papers on near-infrared (NIR) stellar spectral library produced by reducing the observations carried out with 1.2 meter Gurushikhar Infrared Telescope (GIRT), at Mt. Abu, India using a NICMOS3 HgCdTe 256 $\times$ 256 NIR array based spectrometer. In paper I (Ranade et al. 2004), H-band spectra of 135 stars at a resolution of $\sim 16\text{\AA}$ were presented. The K-band library being released now consists of 114 stars covering spectral types O7–M7 and luminosity classes I–V. The spectra have a moderate resolution of $\sim 22\text{\AA}$ in the K band and have been continuum shape corrected to their respective effective temperatures. We hope to release the remaining J-band spectra soon. The complete H and K-Band library is available online at: http://vo.iucaa.ernet.in/~voi/NIR_Header.html

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1. Introduction

In the last few years, several population synthesis models have completely renewed the interest for population analysis. Models by Vazdekis et al. (1999), Bruzual & Charlot (2003) and le Borgne et al. (2004, PEGASE.HR) gained in details with a higher spectral