**Diffuse Interstellar Bands in the High Resolution GAOES Data**

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ABSTRACT

Diffuse interstellar bands (DIBs) are an enigmatic set of absorption features, observed at optical and near infrared wavelengths in the spectra of reddened stars in our Galaxy. Identifying the carriers of the DIBs has been a longstanding challenge and is still very much a work in progress. In recent years, surveys of DIBs have been conducted, but mostly focus on strong diffuse bands. In this work, we extract and measure DIBs recorded in the high resolution stellar spectra observed by using Gunma Astronomical Observatory Echelle Spectrograph (GAOES) (Spectral resolution R~100000). We perform automated fitting of a combination of a smooth stellar continuum, a model of DIB profile, and a synthetic telluric transmission to the spectrum. The high-quality data allow us to study not only the strong and well-known DIBs, but also weak and barely studied DIBs, such as 6089.8, 6113.2, 6234 Å bands.

*Keywords: Interstellar Matter; Spectroscopy; Diffuse Interstellar Bands*

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