Near-IR Diffuse Interstellar Bands in the APOGEE Survey

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APOGEE, part of the SDSS-III, is a near-IR, high resolution, ongoing spectroscopic survey of 100,000 giant stars in the Milky Way's bulge, disk, and halo, probing both highly dusty and relatively dust-free environments and providing us with a unique, homogeneous view of the Milky Way. This dataset is also well-suited to a search for Milky Way interstellar absorption lines. Recently, Geballe et al. (2011, Nature) reported the first detection of diffuse interstellar bands (DIBs) at wavelengths longer than 1.5 microns along a few lines of sight. Our analysis of the APOGEE spectra has resulted in the detection of some of these near-IR features along several thousand sight-lines, increasing the number of detections in this wavelength regime by more than two orders of magnitude and producing the largest homogeneous sample of DIB systems (at any wavelength) in terms of both size and sky coverage. We will describe our detection method and present DIB maps and correlations with other ISM tracers to illustrate how a large sample of DIBs, particularly at IR wavelengths, can serve as a useful tool to probe the structure of the Galaxy and the chemistry of the interstellar medium.