High Contrast Imaging with NICMOS - II: Coronagraphic Polariometry

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Abstract

The spectral element set in Camera 2 of the Near Infrared Camera and Multi-Object Spectrometer (NIRCAM) is not currently available for coronographic imaging because of a large central obstruction that limits imaging performance. We present results from turbulence compensated coronagraphic imaging using the 0.8 to 2.4 μm bandpass of NIRCAM. The primary science target is the young (T-Tauri) star GM Aur and the two T-Tauri stars around it that we detected in GM Aur's vicinity. We used high contrast imaging to detect and image fainter companions to the primary star, and we present results from a test of the coronagraphic imaging mode. We compare the results of our analysis with those from other authors and with the results from the primary slitless coronagraphic images of this young star.