NOEMA OBSERVATIONS OF COMPLEX ORGANIC MOLECULES IN NGC 1333 IRAS 4B

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Complex organic molecules (COMs) are observed in every stage of star formation from molecular clouds to the formation of protoplanetary disks. Many of these molecules are formed via energetic processing of icy grain mantles, while more complex chemical processing occurs in the gas phase at the hot core or hot corino stage. We are surveying a set of 30 star-forming regions to examine the relationship between COMs and the physical properties of the cores. In this study, we observed the hot corino NGC 1333 IRAS 4B with the Northern Extended Millimeter Array (NOEMA). The two cores of IRAS 4B are imaged in the 145 GHz spectral region, revealing the spatial distribution of various COMs. Multiple regions of extended emission are observed, indicating outflows from both cores. We will present the initial imaging results, molecular detections, and spectral analysis of these observations. We will discuss the results in the context of COM formation in the early stages of star and planet formation.