

SMA Observations of the Massive Star-forming Regions NGC 6334 I & I(N)

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Abstract.

We present high-resolution observations of the massive star-formation regions NGC 6334 I and I(N) in the 230 GHz band. Data were obtained during Spring 2004 and 2005 in the compact and extended configurations of the Submillimeter Array (SMA), a joint venture of the Smithsonian Astrophysical Observatory and the Academia Sinica Institute of Astronomy and Astrophysics. Various pieces of evidence, including a molecular line survey by Thorwirth et al. (2003), have suggested that these two fields exist in different evolutionary stages, with field I(N) being younger. Our new observations will help to explore this hypothesis. We have detected and imaged a number of molecular lines that trace the outflow activity and dense gas in both fields. In field I, we have begun to resolve the strong dust continuum emission into multiple sources. In a separate work, these new sources were found to coincide with strong thermal centimeter lines of ammonia and methanol (Beuther et al. 2005).

Keywords. stars: formation, ISM: jets and outflows, ISM: molecules, submillimeter

References

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