

R01a **Spatially-resolved SED and CO SLED of the merging LIRG NGC 1614**

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We present $1''.0$ ($= 330$ pc) resolution observations with ALMA band 3, 6, 7, and 9 toward the local merging galaxy NGC 1614. The system can be used as a template of starburst-dominated galaxies, because it shows little evidence for the presence of bright or Compton-thick AGN in the radio, mid-IR, and X-ray wavelengths. Based on modelings of the radio-to-FIR (4.8 - 691 GHz) spectral energy distribution (SED) and CO spectral line energy distribution (SLED; up to $J_{upper} = 6$), we found that the molecular gas ISM in the nuclear starburst ring can be expressed as a warm (> 140 K) and cold (20 K) components. This is consistent with the observed blackbody spectrum from a warm (110 K) and cold (35 K) dust. Mechanical heating from stellar feedbacks and a putative nuclear outflow is a possible source for heating the warm gas rather than photo-dominated region (PDR).