

NEW RESULTS FROM A SPECTRAL-LINE SURVEY OF Sgr B2(N): INSIGHT INTO GAS-PHASE PROCESSES

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A confusion-limited spectral line survey of Sgr B2(N) at 3, 2, and 1 mm (68 - 116, 130 - 172, and 210 - 280 GHz) using the Kitt Peak 12 m and the Submillimeter Telescope (SMT) of the Arizona Radio Observatory has recently been completed. While this data is still being analyzed, interesting new results have already been found. For example, a study of the spectra of CH₂NH and CH₃NH₂ has shown that these species, previously thought to be closely-related synthetically, vary greatly in rotational temperature and distribution in Sgr B2(N). Thus the hypothesized grain synthesis of CH₃NH₂ from CH₂NH is improbable, and neutral-neutral reactions are the most likely source of these species. These data, as well as other results, also provide insight into the physical structure of the Sgr B2(N) region.