THE GBT PRIMOS PROJECT - SCIENCE, STATUS, AND SUSPICIONS

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In the Fall of 2007 we began observations to conduct a GBT legacy spectroscopic survey of SgrB2(N-LMH) in order to provide a complete inventory of known and unidentified species in the range of 300 MHz to 50 GHz. This survey will be the deepest spectral line survey to date toward this source at these frequencies and the data are being provided to the astronomical community on a quarterly basis (as available) as data accumulate in order to facilitate the identification of new interstellar species and deduce likely molecular formation chemistry. To date, we have completed 45 sessions toward Sgr B2N. This corresponds to ∼245 hours completed out of 625 approved which is ∼39% of the project. Over 720 individual spectral line features have been detected with ∼240 of the 720 being unidentified. In this presentation are summarized the science, current status of the observations and the suspicious transitions detected that may be from new molecular species. In addition, also addressed is the probability of the unambiguous identification of new molecules at these frequencies with exceeding low spectral line density. As has been the case for the last 2 years, researchers can obtain and analyze the raw or fully calibrated spectral line data available at: http://www.cv.nrao.edu/ aremijan/PRIMOS/.