DISCOVERY OF ^{13}CCC in SgrB2(M)

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Small carbon chain molecules like linear C_3 are thought to play a crucial role in the formation of larger, complex molecules, including pre-biotic species. The formation pathways of organic molecules with carbon chains as backbones is by far not well understood. Studies of isotope fractionation have proven to be a useful tool of tracing chemical reaction pathways and to elucidate formation and destruction processes of interstellar molecules. Recent velocity-resolved observations in the far-infrared have resulted in the detection of C_3 ro-vibrational transitions in the warm envelopes of star-forming hot cores W31C, W49N and DR21(OH). Multiple far-infrared transitions of C_3 have also been detected towards the Galactic center molecular clouds SgrB2(M) and Sgr B2(N). Since C^+ is involved in an important step of the formation route of the C_3 molecule, it is likely that effects of isotopic fractionation of C^+ will manifest itself in the $^{12}C_3/^{13}CCC$ and $^{12}C_3/C^{13}CC$ ratios as well. Based on high resolution THz- laboratory measurements of C_3 and its ^{13}C-isotopologues conducted at the Kassel laboratories, we used the GREAT-receiver onboard SOFIA for a first ever detection of ^{13}CCC towards SgrB2(M). In this talk we present results and possible implications of the observation.