

Carbon chain diversity in L1544 and IRAS 16293-2422: an astrochemical pathfinder study for the SKAO

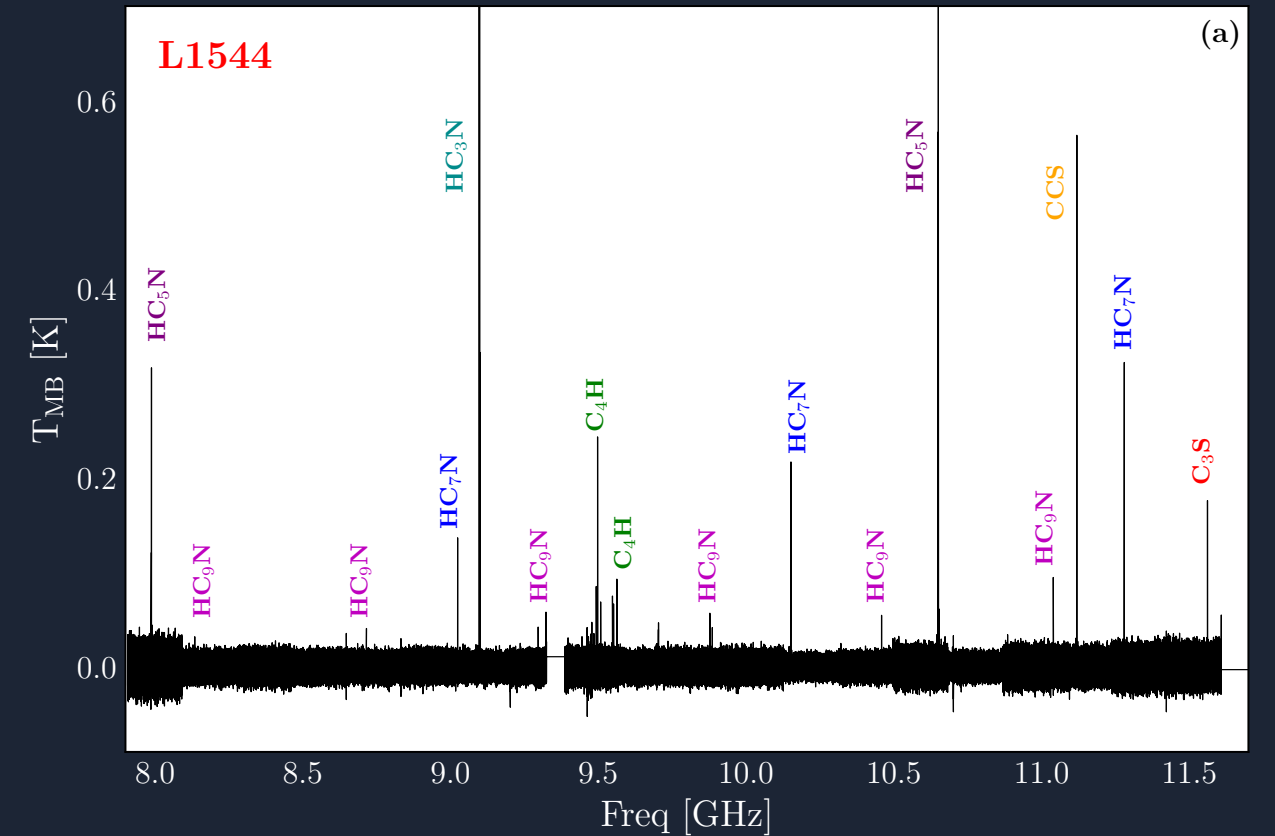
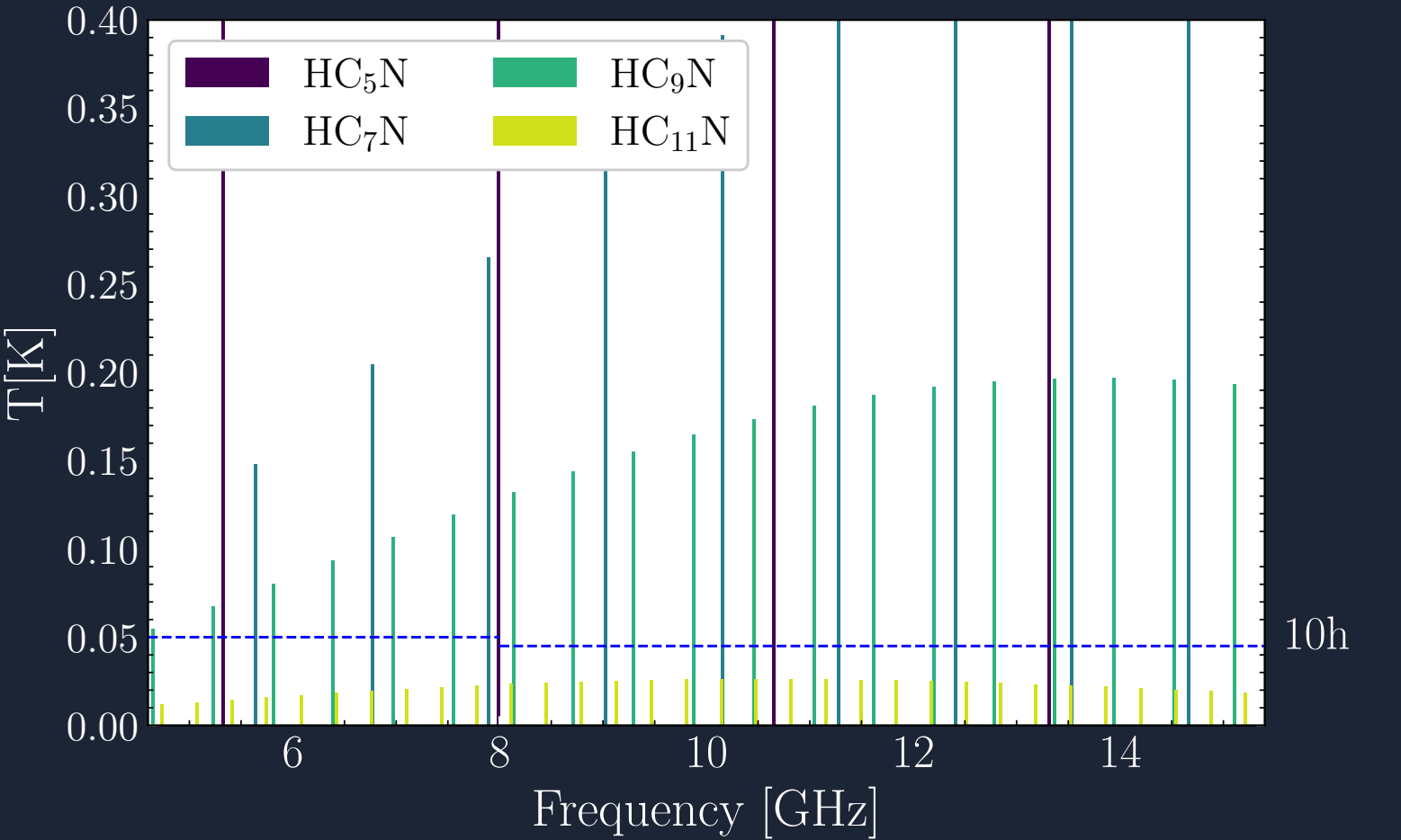
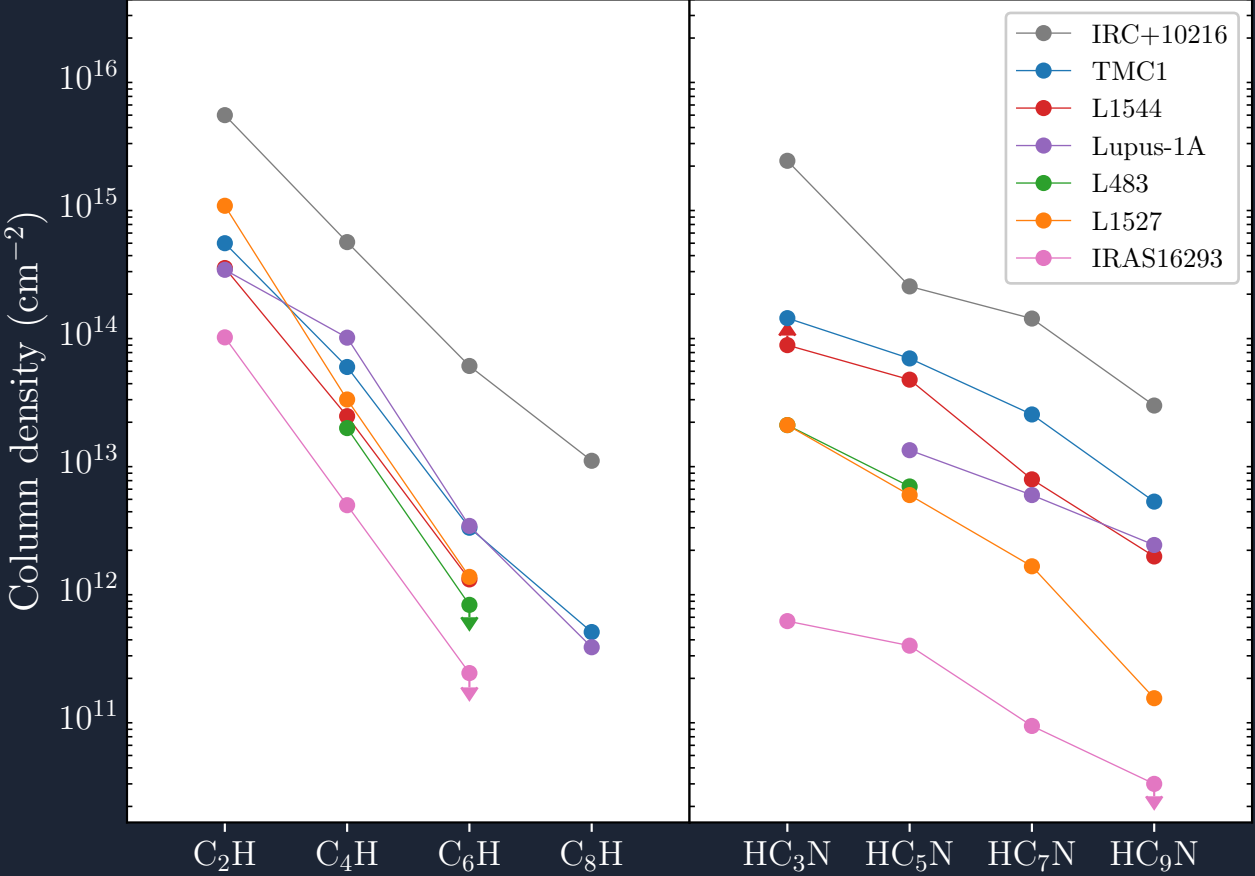
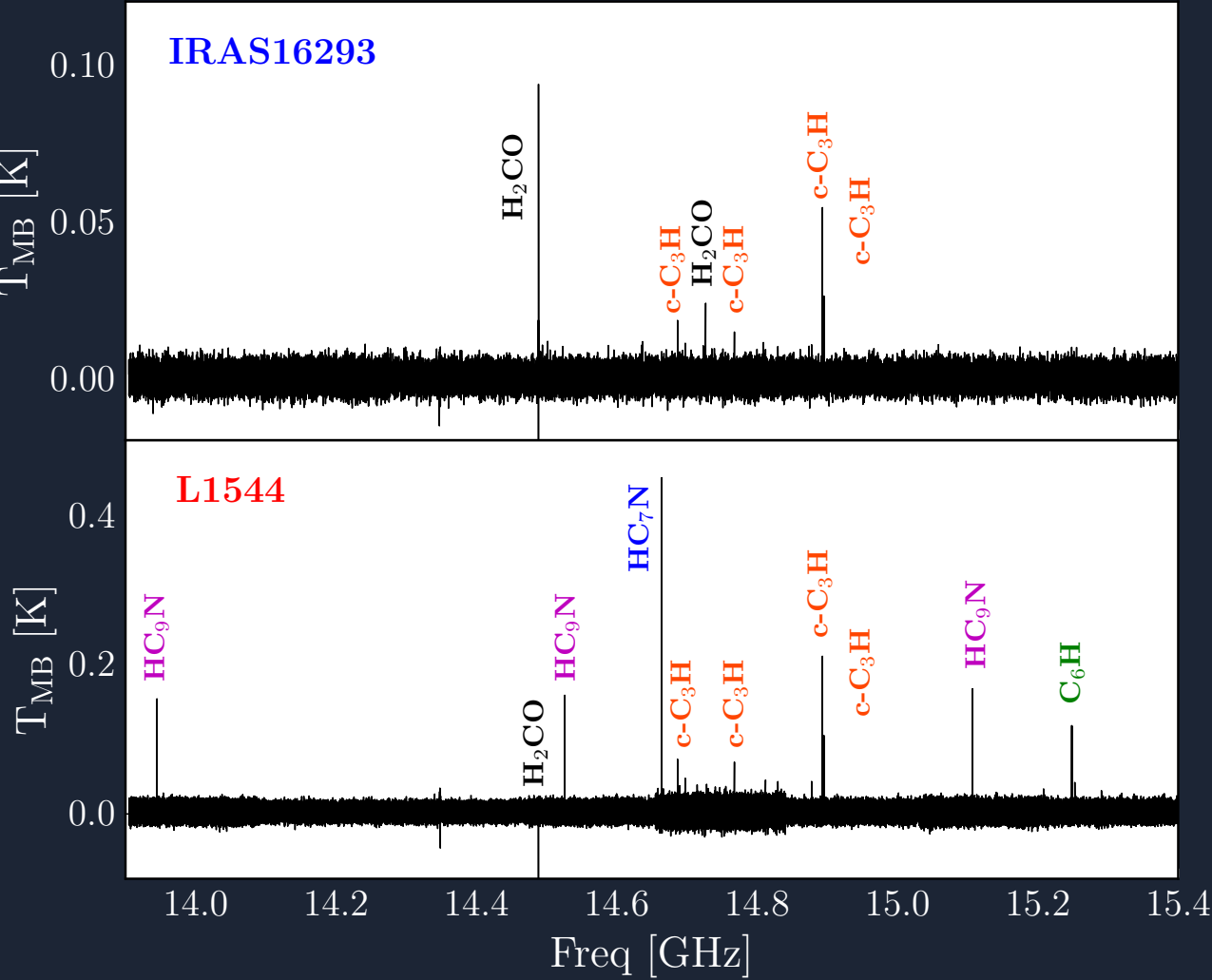
Lisa Giani¹, Eleonora Bianchi¹, Anthony Remijan², Claudio Codella^{1,3}, Giovanni Sabatini¹, Linda Podio¹, Cecilia Ceccarelli³, Marta De Simone⁴, Nadia Balucani⁵, Paola Caselli⁶, Heric Herbst^{7,8}, Francois Lique⁹, Silvia Spezzano⁶, Charlotte Vastel¹⁰, Brett McGuire^{11,12}

GBT Observations

Same
frequency
range of
SKA-Mid
Band5!

C_{2n}H and HC_{2n+1}N in star-forming regions

Future predictions with SKAO



Astrochemical modeling

General trends reproduced, but abundances of cyanopolynes longer than HC₅N underestimated by up to two orders of magnitude

↓

Ion-neutral reactions missing?

