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# Radioastronomical Observations of PAHs and Other Aromatic Species at the Earliest Stages of Star Formation

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## Abstract

Motivated by our discovery of benzonitrile (cyanobenzene; C<sub>6</sub>H<sub>5</sub>CN) in the dark cloud TMC-1, we have undertaken two large observational follow-ups with the GBT: GOTHAM and ARKHAM. Here, I will present the first science results of both projects. GOTHAM aims to explore the extent of aromatic chemistry in TMC-1, where we detected C<sub>6</sub>H<sub>5</sub>CN, using a deep spectral line survey; our detections of new interstellar molecules from this work will be described. ARKHAM seeks to understand how widespread detectable aromatic chemistry is at the earliest stages of star formation. We will also present our detections of benzonitrile in sources outside TMC-1, including those in which collapse toward protostellar formation, and a protostellar source itself, are included.

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