HCO^+ IN THE CIRCUMSTELLAR SHELL OF THE CARBON STAR IRC+10216

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We report on the current search for the positive ion HCO^+ in circumstellar envelope of IRC+10216. Past observations suggested the presence of the J=1-0 transition in this source, but no further confirming lines were detected. Recently, observations at the ARO 12 m telescope have confirmed a U-shaped feature at the J=1-0 rotational transition of HCO+. Further investigations into the J=2-1 transition using the 12 m telescope shows the possible presence of a weak, blended feature at this frequency. We are currently conducting observations at the ARO Submillimeter telescope with the use of the ALMA Band 6 receiver of the J=3-2 transition. The presence and importance of positive molecular ions in the circumstellar envelope of this star has long been debated. This study should settle this issue.