

Abstract Submitted
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Collision Induced Electron Auto-Detaching States of H_2CC^- AND NO^- Below 10 keV with N_2 and O_2 ¹ GUILLERMO HINOJOSA, E. M. HERNÁNDEZ, L. HERNÁNDEZ, LAURA SERKOVIC-LOLI, Univ Nacl Autónoma de Mexico — Simple molecular anions (SMA) are one of the most extravagant species in nature. Their unstable character contrasts with its common presence in cold plasma and in different atmospheric environments where higher-than-expected populations of anions have been recently confirmed. Even more, SMA have been detected in the interstellar medium (IM) where they are likely to deplete due the low matter density and radiation present in the IM. As a consequence of studying the collision induced electron detachment cross sections of SMA with two different methods, it was possible to realize about the formation of autodetaching states. For the case of the vinylidene anion, which ground state anion has a lifetime of 102 s, it was possible to derive a combined lifetime τ^β of its metastable states. While for the nitric oxide anion, which ground state has a lifetime of 15 μs , a crude derivation of τ^β indicates that the lifetime of the collision induced metastable states is shorter than those of the vinylidene anion.

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