Abstract Submitted
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New *ab initio* potential curves for the ground and low-lying excited states in $NaCa^+$ and $LiBe^+$ molecular ions[1] DI SHU, SANDIPAN BANERJEE, JOHN A. MONTGOMERY JR., ROBIN CÔTÉ, Department of Physics, University of Connecticut — We report new accurate *ab initio* calculations for the ground and low-lying excited states in $NaCa^+$ molecular ion and the lowest singlet and triplet states in $LiBe^+$. Preliminary results of the corrections due to the nuclear hyperfine interactions in the lowest singlet and triplet states for $NaCa^+$ are also reported. The *ab initio* calculations were performed using valence multireference configuration interaction (MRCI) with complete active space self consistent field (CASSCF) orbitals.

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