

Abstract Submitted  
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**Stability of positron-atom complexes in ground and excited states**<sup>1</sup> SERGIY BUBIN, OLEG PREZHDO, University of Rochester — Using a variational method with an explicitly correlated Gaussian basis set we have studied the stability of weakly bound positron-atom complexes in the ground and lowest excited states with higher spin multiplicity. Our calculations provide rigorous theoretical confirmation that a positron can be attached to the lowest quartet state of Li and triplet state of Be. The result is particularly notable for the positron-Be complex, as the excited triplet state lies below the autoionization threshold. The simultaneous existence of the ground and meta-stable excited states of positronic Li and Be opens up new possibilities for the experimental detection of positron-atom complexes.

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