

DNP06-2006-020023

Abstract for an Invited Paper  
for the DNP06 Meeting of  
the American Physical Society

### **Determination of the $^{11}\text{Li}$ charge radius**

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Despite being discovered over 20 years ago the structure of halo nuclei is still not fully understood. One particularly important question concerns the interaction between the halo particles and the nuclear core. This has been investigated in  $^{11}\text{Li}$  via the measurement of the change in the nuclear charge radius between  $^{11}\text{Li}$  and  $^9\text{Li}$  which can be observed in a model independent way via high precision isotope shift measurements on atomic transitions. The short lifetime and necessity to isolate the small, charge radius dependent field shift from the much larger mass dependent shift requires both experimental techniques and facilities as well as atomic theory at the forefront of today's capabilities. The result of this measurements will be presented along with a discussion of its implications on nuclear structure.

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