



Elastic Scattering of ${}^7\text{Be}$, ${}^8\text{B}$ and a Roadmap to a Self-Consistent Approach to the ${}^7\text{Be}(p, \gamma)$ Solar S-Factor

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The ${}^7\text{Be}(p, \gamma){}^8\text{B}$ reaction has been intensively studied for several decades now through direct and indirect reaction measurements. Indirect studies employing the Coulomb dissociation (CD) method have had general success extracting the solar S-factor, but inconsistencies appear to remain between the different CD measurements themselves and between the direct measurements and CD.

In this talk I will present the results of our ${}^7\text{Be}$ and ${}^8\text{B}$ elastic scattering analysis and sketch a roadmap for how these data can help us to achieve a self-consistent experimental and theoretical framework from which an improved S-factor can be obtained. Additionally, our ${}^7\text{Be}$ and ${}^8\text{B}$ elastic scattering results provide the first opportunity to test optical model potentials (global and folding) to low A nuclei with large isospin asymmetry $(N-Z)/A$. Attempts to fit our elastic data with these models will be discussed.

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The seminar will be given in English.
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