



Illinois Wesleyan University
Digital Commons @ IWU

John Wesley Powell Student Research
Conference

2007, 18th Annual JWP Conference

Apr 14th, 2:35 PM - 3:35 PM

Determination of the Band Gap and Disorder Parameter of Water

Justin Myer

Illinois Wesleyan University

William Brandon, Faculty Advisor

Illinois Wesleyan University

Follow this and additional works at: <https://digitalcommons.iwu.edu/jwprc>

Myer, Justin and Brandon, Faculty Advisor, William, "Determination of the Band Gap and Disorder Parameter of Water" (2007). *John Wesley Powell Student Research Conference*. 29.

<https://digitalcommons.iwu.edu/jwprc/2007/posters2/29>

This Event is protected by copyright and/or related rights. It has been brought to you by Digital Commons @ IWU with permission from the rights-holder(s). You are free to use this material in any way that is permitted by the copyright and related rights legislation that applies to your use. For other uses you need to obtain permission from the rights-holder(s) directly, unless additional rights are indicated by a Creative Commons license in the record and/ or on the work itself. This material has been accepted for inclusion by faculty at Illinois Wesleyan University. For more information, please contact digitalcommons@iwu.edu.

©Copyright is owned by the author of this document.

Poster Presentation P58

DETERMINATION OF THE BAND GAP AND DISORDER PARAMETER OF WATER

Justin Myer and William Brandon*

Physics Department, Illinois Wesleyan University

We have constructed an apparatus to measure Faraday rotation in liquids and other transparent materials. Using a theory from Mort and Scher relating the amount of rotation to the level of disorder and resonance frequency in amorphous materials, a prediction of the band gap of liquid water has been obtained. We find a band gap that is slightly lower than what has been obtained from previous experiments, but which is in agreement with current theoretical predictions by Cabral do Couto et al.