



## Illinois Wesleyan University Digital Commons @ IWU

---

John Wesley Powell Student Research  
Conference

2002, 13th Annual JWP Conference

---

Apr 21st, 9:00 AM - 10:00 AM

# Construction of a Radiofrequency Plasma Device

Matt Highland, '02

*Illinois Wesleyan University*

Jeremiah Williams, Faculty Advisor

*Illinois Wesleyan University*

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

---

Matt Highland, '02 and Jeremiah Williams, Faculty Advisor, "Construction of a Radiofrequency Plasma Device" (April 21, 2002). *John Wesley Powell Student Research Conference*. Paper 4.  
<http://digitalcommons.iwu.edu/jwprc/2002/posters/4>

This Event is brought to you for free and open access by The Ames Library, the Andrew W. Mellon Center for Curricular and Faculty Development, the Office of the Provost and the Office of the President. It has been accepted for inclusion in Digital Commons @ IWU by the faculty at Illinois Wesleyan University. For more information, please contact [digitalcommons@iwu.edu](mailto:digitalcommons@iwu.edu).

©Copyright is owned by the author of this document.

Poster Presentation P9

CONSTRUCTION OF A RADIOFREQUENCY PLASMA DEVICE

Matt Highland and Jeremiah Williams\*  
Department of Physics, Illinois Wesleyan University

We have begun building a radio-frequency plasma device to study a wide range of plasma phenomena, including power coupling between the source antenna and the plasma and wave propagation. In this poster, we will discuss the design and construction of a high vacuum system utilizing a diffusion pump. We will also discuss the physics behind, and construction of, the radio-frequency plasma source, including the RF supply, matching network, antenna and background magnetic field.