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## Construction of a Radiofrequency Plasma Device

Matt Highland, '02  
*Illinois Wesleyan University*

Jeremiah Williams, Faculty Advisor  
*Illinois Wesleyan University*

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Poster Presentation P9

CONSTRUCTION OF A RADIOFREQUENCY PLASMA DEVICE

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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.