

Progress in Neutron Resonance Imaging Experiments Using MCP at CSNS Back-n

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Neutron resonance imaging (NRI) has shown great potential in the field of archaeology. This technique, which exploits the resonant absorption of neutrons by specific isotopes, has been refined using boronized microchannel plates (MCP) detectors to achieve higher contrast and spatial resolution than traditional neutron imaging methods. In this presentation, we will discuss the latest progress in neutron resonance imaging experiments using boronized MCP at the China Spallation Neutron Source (CSNS) Back-n facility. The results of the test experiment have demonstrated the capability of boronized MCP for high-resolution imaging and its potential for enhancing the sensitivity and efficiency of NRI.