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The Formation of Metal Plasma in Duhocamis

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The dual hollow cathode ion source for metal ion beams (Duhocamis) was introduced in 2007. The Duhocamis is derived from the indirectly-heated cathode GSI-PIG ion source and more suitable for producing various metal ion beams. To understand the discharge characteristics of Duhocamis, a series of arc discharge experiments have been performed on the test bench at Peking University. The transfer process from PIG discharge to dual hollow cathode discharge (DHCD) mode in the source was observed, and the metal ion ratio more than 90% for DHCD was measured. Based on the experimental results, the formation process of metal plasma was emphasized and discussed.

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