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Measurement of the H- content in mixed beam from ion source

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H- ion source produces mixed beam of H- and electrons. Usually, a bending magnet is needed to measure the contents of mixed beam. However, bending magnet is generally lacked in H- machine, because bending magnet increases the transport line length, leading to more serve decline of H-. How to measure the H- content in mixed beam without the help of bending magnet is worthy to be studied. In this paper we describe a method to measure the H- content utilizing common devices in low energy beam transport line. This method is mainly based on a solenoid. the H- and electron contents can be obtained by analyzing the change of the beam transmission when sweeping the solenoid current. The experiments were performed.

Footnotes

Funding Agency

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Yes

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