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E I N L A D U N G

zum

V E R A - S E M I N A R

von

Collin TIESSEN

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Ottawa, Canada

Atomic mini-golf: Optimizing an ion source for AMS using Lorentz 2E

The cesium-sputter ion source has been the method of choice for extracting negative ions for AMS studies since the field began. The component materials, insulator shielding, and memory effects have been innovated throughout the years, but few have examined the electrodynamics in detail. Using Integrated Engineering Software's Lorentz 2E ion trajectory simulation software, the High Voltage Engineering Europa SO-110C ion source has been modelled. These simulations include the mutual space charge interaction between the primary cesium ions and the sputtered negative ions. The consequences of changing various geometries, electrode potentials, and ion currents were studied to inform an improved design and operating conditions. The goal is to optimize the distribution of cesium for better usage of sample material while also ensuring a low emittance of the outgoing negative ion beam. Key simulations and experiments performed at the A. E. Lalonde AMS lab will be discussed.

Donnerstag, 04. November 2021, 16:45 Uhr

Zoom-Meeting / ab 16:30 Uhr offen

https://univienna.zoom.us/j/98906007827?pwd=TE5KQnlPZjBTNC9kVldlK3pWWktZdz09

Die Zugangsdaten: Meeting ID: 989 0600 7827 *Passwort: VERArocks*

R. Golser W. Kutschera