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Commissioning of the RFQcb at the Isolde Offline 2 target test facility

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The Offline 2 mass separator laboratory is part of the CERN-ISOLDE Offline facilities - a suite of installations required to perform essential quality control on target and ion source units before irradiation at CERN-ISOLDE. The facility is also used for offline studies as a prerequisite before conducting any beam development online, especially establishing systematic effects. The Offline 2 separator resembles the online CERN-ISOLDE Frontend and employs identical services such as beam instrumentation, gas system, laser ionization and the equipment control system. The facility is able to generate dc as well as bunched non-radioactive beams up to an energy of 60 keV. The ion beams can be cooled and bunched in an unmodulated RFQ. In order to study effects of the RFQ buffer gas on the formation of molecular species, a dedicated identification setup is required. This work presents the current status of the commissioning of RFQ and results of its first operation. Furthermore, we show the first results of beam emittance measurements, which are compared to 3D beam dynamic simulations. We present the ongoing installation of a Magnetof ion and Wien filter behind the RFQ, respectively.

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Footnotes

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Yes

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