

Design and improvement of normal conducting heavy ion linac in China

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The research on heavy ion linac was began more than ten years ago initially to improve the HIRFL operation at IMP. In China, the first continuous wave (CW) heavy ion linac, SSC Linac, working at 53.667 MHz was developed as the SSC injector. The ion particle can be accelerated to 1.48 MeV/u with the designed $A/q=5.17$. At present stage, this CW linac has been put into operation and the Uranium has been accelerated to 1.48 MeV/u successfully. To satisfy the continue requirements, a compact 162.5 MHz heavy ion linac operating in pulse mode was developed. The "KONUS" beam dynamics design was adopted and the heavy ions can be accelerated to 4MeV/u with $A/q\leq 3$. The SESRI linac was another pulse machine which was built at Harbin. In this linac, both of the heavy ions and proton beam can be accelerated by this linac to 2 MeV/u and 5.6 MeV, respectively. In this paper, the status of these three heavy ion linacs and their beam commissioning results will be presented.

Footnotes

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