



Contribution ID: 19

Type: **Poster Presentation**

## The Deuteron Accelerator Conceptual Design for Beijing ISOL

*Tuesday, 12 May 2015 17:01 (0 minutes)*

Beijing ISOL is an isotope separation on line (ISOL) type rare ion beam facility for both basic science and applications, which is proposed jointly by Peking University (PKU) and China Institute of Atomic Energy (CIAE) [1]. It can be driven by a reactor or a deuteron accelerator. The driver accelerator can accelerate the deuteron beam up to 40 MeV with maximum beam current of 10 mA. Proton beam up to 33 MeV and He<sup>2+</sup> beam up to 81.2 MeV can also be accelerated in this accelerator. The accelerator can be operated on either CW (continuous waveform) or pulse mode, and the ion energy can be adjusted in a wide range. Details will be given in this paper.

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[1] B.Q. Cui, Y. Gao, Y.C. Ge, Z.Y. Guo, Z.H. Li, W.P. Liu, S.X. Peng, Z. H. Peng, Z. Wang, S. Yan, Y. L. Ye, S. Zeng, G.H. Zhang, F. Zhu. Nuclear Instruments and Methods in Physics Research B 317 (2013) 257–262.

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**Session Classification:** Poster Session B