



Contribution ID: 11

Type: **not specified**

Plans for beta decay experiments at RIBF

Wednesday, 23 May 2012 11:45 (45 minutes)

The beta-decay study of neutron rich nuclei is a priority of the Radioactive Ion Beam Factory (RIBF). The unique capabilities of RIBF to produce and identify extremely neutron rich nuclei produced by in-flight fission of a 345 MeV/nucleon ^{238}U beam has been proven for example in Ref. [1], and the first successful beta-decay experiment in the ^{110}Zr regions was performed in 2008 with ^{238}U beam at an average intensity of 0.3 pnA [2].

In this contribution I will briefly report the current status of the ^{238}U beam, the detector capability, and the near-future plans for beta-decay experiments at RIBF. In particular, I will discuss the current status of the beta counting system, which is relevant for the future beta-delayed neutron emission campaign prospected at RIBF.

References

[1] Onishi et al., Journal of the Physical Society of Japan, 79, 073201(2010).

[2] Nishimura et al., PRL 106, 052502 (2011).

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Session Classification: beta-dn