Contribution ID: **172** Type: **Oral**

Investigation of double beta decay of 100Mo to excited final states of 100Ru

Thursday, 12 September 2013 16:40 (20 minutes)

Double beta decay of 100Mo to the excited states of daughter nuclei has been studied using a 600 cm3 low-background HPGe detector and an external source consisting of 2588 g of 97.5% enriched metallic 100Mo, which was formerly inside the NEMO-3 detector and used for the NEMO-3 measurements of 100Mo. The half-life for the two-neutrino double beta decay of 100Mo to the excited 0+1 state in 100Ru is measured to be T1/2 = [7.3 +- 0.6(stat) +- 0.6(syst)]x10^20 yr.
For other (0v + 2v) transitions to the 2+1, 2+2, 0+2, 2+3 and 0+3 levels in 100Ru, limits are obtained at the level of ~ (0.25-1.1)x10^22 yr. All results are still preliminary.

Primary author: Prof. BARABASH, Alexander (ITEP)

Presenter: Prof. BARABASH, Alexander (ITEP)

Session Classification: Double Beta Decay/ Neutrino Mass V

Track Classification: Double Beta Decay