

Abstract for an Invited Paper  
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**Two-proton radioactivity of  $^{48}\text{Ni}$ <sup>1</sup>**

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In experiment performed at NSCL facility we studied the decay of extremely neutron deficient isotope of  $^{48}\text{Ni}$ . Ions were implanted into a gaseous detector, the Optical Time Projection Chamber which allows to record tracks of charged particles. Six events of  $^{48}\text{Ni}$  were observed, the two-proton radioactivity (four events) and the  $\beta$ -decay (two events) channels were clearly identified. The half-life of  $^{48}\text{Ni}$  is determined to be  $T_{1/2} = 2.1_{-0.4}^{+1.4}$  ms. The results of three-dimensional events reconstruction as well as comparison of results with theoretical models will be presented.

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