Abstract Submitted for the HAW14 Meeting of The American Physical Society

Structure of neutron-rich Zn isotopes MEGUMI NIIKURA, Department of Physics, the University of Tokyo/ Institute of Nuclear Physics at Orsay, IN2P3-CNRS, THE EURICA COLLABORATION — A  $\beta$ -decay spectroscopy experiment in the closest vicinity of <sup>78</sup>Ni was performed at RIBF as a part of the EURICA campaign. The low-lying level structure in odd-mass isotonic chain along the neutron magic number of N = 50 is determined by the neutron single-particle evolution with decreasing proton number. Some reduction of the neutron singleparticle energy gap between  $2d_{5/2}$  and  $3s_{1/2}$  orbitals was already indicated by the  $\beta$ -decay studies on <sup>83</sup>Ge<sub>32</sub>. Theoretical models, that have attempted to extend this evolution towards <sup>78</sup>Ni, are not yet in agreement. We have performed the  $\beta$ -decay measurement of neutron-rich Cu isotopes in order to determine the low-lying level structure in Zn istopes which have only two valence protons above <sup>78</sup>Ni. In this contribution, the newly constructed level schemes of <sup>79-81</sup>Zn will be presented. The shell structure and its evolution based on the comparison with shell-model calculations will also be discussed.

> Megumi Niikura Department of Physics, the University of Tokyo

Date submitted: 01 Jul 2014

Electronic form version 1.4