

# Development for the measurement system of the $^{189}\text{Os}(n,n'\gamma)$ cross section and Re/Os chronometer

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So far, the cross section of the keV neutron inelastic scattering reaction from the ground state of  $^{189}\text{Os}$  to the 36 keV excited state has been measured by detecting neutrons inelastically scattered by  $^{189}\text{Os}$  [1]. However, it is not easy to accurately measure the cross section with the method, because both the inelastically and elastically scattered neutrons from  $^{189}\text{Os}$  are detected simultaneously by a neutron detector. Hence, we are now developing a new measurement system to detect the gamma ray from the  $(n,n'\gamma)$  reaction. In the poster session I will present a preliminary result of the test experiment of the new measurement system.

## Reference

[1] M.T.McEllistrem, R.R.Winters, R.L.Hershberger, Z.Cao, *Phy. Rev. C*40 (1989)