

5 Years of a Cold-Neutron Disk-Chopper Spectrometer, AMATERAS

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AMATERAS is a cold-neutron multi disk-chopper spectrometer at Materials and Life Science Experimental Facility in J-PARC. [1] By using a pulse shaping chopper and owing to the high peak intensity from a coupled moderator source at MLF, AMATERAS is designed to realize high intensity and fine and flexible energy resolution measurements in quasielastic and inelastic neutron scattering experiments from cold to thermal neutron energy region. AMATERAS had the first neutron beam in May 2009. After then, experiments of more than 70 proposals (including 17 in house projects proposals) have been carried out and results were distributed as 15 scientific papers and more than 100 presentations at domestic and international scientific meetings by users. In parallel to the user program, we have been continuously studying the property of this new type of spectrometer and doing commissioning works to maintain and upgrading the spectrometer performance.

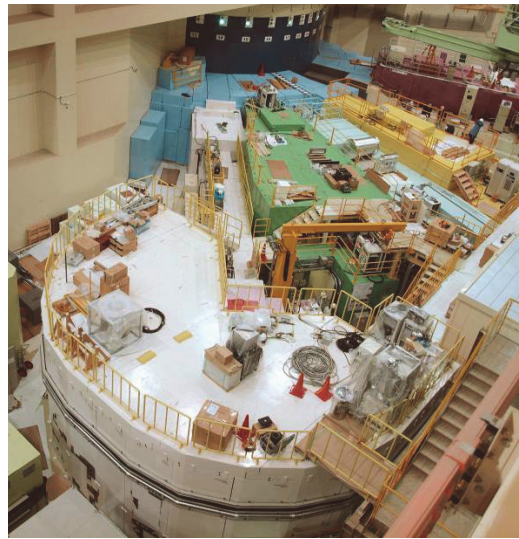


Fig. 1 AMATERAS at MLF, J-PARC

In this presentation, we will show the current status of AMATERAS including the results of performance tests and some of examples of scientific outputs.

References

[1] K. Nakajima, S. Ohira-Kawamura, T. Kikuchi, M. Nakamura, R. Kajimoto, Y. Inamura, N. Takahashi, K. Aizawa, K. Suzuya, K. Shibata, T. Nakatani, K. Soyama, R. Maruyama, H. Tanaka, W. Kambara, T. Iwahashi, Y. Itoh, T. Osakabe, S. Wakimoto, K. Kakurai, F. Maekawa, M. Harada, K. Oikawa, R. E. Lechner, F. Mezei, and M. Arai, *J. Phys. Soc. Jpn.*, **80** (2011) SB028.