
Physics with OSCAR at the Oslo Cyclotron Laboratory

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For more than 20 years, researchers working at the Oslo Cyclotron Laboratory (OCL) have been dedicated, among other things, to exploring the statistical properties of nuclei in the quasi-continuum. Oslo-method experiments simultaneously provide experimental values of the nuclear level density and the γ -strength function of nuclei [1], both necessary ingredients for (n,γ) cross section calculations, with implications in nuclear technology and astrophysics. Recently, the CACTUS array of NaI detectors at the OCL has been replaced by OSCAR, a new array of 30 cylindrical, large volume ($3.5'' \times 8''$) LaBr₃:Ce detectors. The higher efficiency, and the better energy and time resolutions of OSCAR, open up new experimental possibilities. Some details of the OSCAR array and the physics experiments at the OCL will be presented in the contribution.

References

- [1] A. Schiller *et al.*, Nucl. Instrum. Methods Phys. Res. A **447**(2000)498.