

Current status of laser and optical system for EDM search using cold francium atoms at RIKEN/CNS

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“A laser and optical system for magneto-optical trapping (MOT) of radioactive francium (Fr) atoms has been developed at RIKEN/CNS. The wavelength meter stabilized the laser frequencies involved in MOT, and the 400 m fiber link overcame the challenge of spatial separation of the laser and Fr atoms. MOT was successfully demonstrated in test experiments using stable rubidium. This achievement is not only a benchmark for Fr experiments but also provides valuable insights for experimental designers who need to move the light source away from the atomic source for various reasons. The current status and outlook of the EDM search project will also be presented at the event.”

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