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【390】 Production and characterization of the Cesium magnetometer cells for the n2EDM experiment

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The n2EDM experiment, currently under commission at the Paul Scherrer Institute, aims to improve the sensitivity of the neutron electric dipole moment measurement by an order of magnitude. Achieving this sensitivity requires precise magnetic field measurements to control adverse systematic effects resulting from magnetic field inhomogeneities. An array of 112 optically-pumped cesium magnetometers will be used to measure the magnetic-field gradients and correct associated systematic shifts. This contribution introduces the concept of cesium magnetometry and details the production and characterization of the core component of a magnetometer: the anti-spin-relaxation-coated glass cells containing the cesium vapor.

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