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Thu-Mo-Po4.14-05 [112]: A superconducting magnetic and electrostatic hybrid suspension and feedback system for gravity measurement

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A high precision superconducting levitation system for gravity measurement has been developed which used the levitation of a superconducting sphere by the magnetic field of two superconducting coils. In order to obtain high stiffness in a suspension system, an electrostatic suspension system is introduced to the superconducting levitation system. The hybrid levitation system is operated in feedback so that the sphere remains in a stable position. This method greatly improves the suspension stiffness of the existing suspension structure, and its characteristics will be introduced in the paper. It will provide a reference to expand the dynamic range of gravity measurement.

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