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Micro-vibration testing and evaluation of the site selected for the construction of Hefei Advanced Light Source project

Tuesday 3 June 2025 16:00 (2 hours)

The Hefei Advanced Light Facility (HALF) is a fourth-generation synchrotron radiation light source based on a diffraction-limited storage ring, which has been recently approved for construction in China. Its beam energy is 2.2 GeV, the target emittance is 86 pm·rad, and the circumference of the storage ring is 479.86 m. The micro-vibration control indicator for the foundation of the Hefei Advanced Light Facility (HALF) is that the root mean square (RMS) integral of displacement is 30 nanometers within the frequency range of 1 to 100 Hz. In order to ensure that the micro vibration level of the project site meets the design requirements after completion, it is necessary to test and evaluate the micro vibration level and vibration propagation law of the project site selection. Therefore, a series of micro vibration measurement works have been carried out on the site. This study will provide experimental basis for the design of advanced light source micro vibration control in Hefei, and also provide reference for the research methods of ground vibration propagation.

Footnotes

Paper preparation format

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Region represented

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