

**A VUV-Wiggler Scheme with Nonsinusoidal
Magnetic Field for High Energy Storage Rings,**

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Kurchatove Institute - It is necessary to use the undulators with large value of deflection parameter for generation of vacuum ultraviolet radiation at the high energy storage rings (with the electron beam energy reaching several GeV). However, the total power generated by such an undulator considerably exceeds the power generated at harmonics of the fundamental. Thus, a surface of the first optical element of the monochromator is influenced by the strong thermal effect. The proposed wiggler scheme, with nonsinusoidal magnetic field, allows one to change angular distribution of the undulator total power. It is shown in this paper that using of the appropriate form of the undulator magnetic field makes it possible to essentially change a correlation between intensities of radiation at harmonics of the fundamental and those at high harmonics in the direction of an undulator axis by suppressing the high harmonics.