

CONTROLS FOR THE ELECTROMAGNETIC ELLIPTICAL WIGGLER AT ELETTRA

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An electromagnetic elliptical wiggler (EEW) has been installed and operated at ELETTRA. It provides circularly polarized radiation in the VUV/Soft-X-Ray range. The power supply for the horizontal field operates in three modes: d.c., trapezoidal (0.1 to 10 Hz) and sinusoidal (10 to 100 Hz). A dedicated digital feed-forward system uses four correction coils to compensate for the residual magnetic field errors. This article describes the control system for the EEW with special emphasis on the design and performance of the correction system.