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## Study on magnets sorting for the HEPS booster

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The High Energy Photon Source (HEPS) is a 1360.4-m, 6-GeV, ultralow-emittance light source, being built in the suburb of Beijing, China. The HEPS booster contains 128 dipoles, 148 quadrupoles and 68 sextupoles, which are divided into several groups. The magnets in one group are connected in series, and powered by a single power supply. To minimize the impact on beam dynamics, magnets sorting needs to be done. The RMS values of closed-orbit distortion and beta-beating were used as the merit functions of dipole sorting and quadrupole sorting, respectively, and the sextupoles were grouped with the integral field differences between magnets. This paper will present the sorting process and the results of beam dynamics after sorting.

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### Footnotes

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Yes

**Primary author:** PENG, Yuemei (Chinese Academy of Sciences)

**Co-authors:** PAN, JunTong (Chinese Academy of Sciences); ZHOU, Jian Xin (Institute of High Energy Physics)

**Presenter:** PENG, Yuemei (Chinese Academy of Sciences)

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