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## Preliminary design of the magnet girder for the HALF storage ring

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Hefei Advanced Light Facility (HALF) was the fourth generation diffraction limited storage ring light source under pre-research in National Synchrotron Radiation Laboratory (NSRL) of China. Beam position stability was strictly required with the ultra-low beam emittance. The beam position stability of storage ring was affected by many factors. And the changes of magnetic field center position and magnetic field shape were the main factors. Because the magnets were installed on the mechanical support, therefore the alignment adjustment accuracy of magnet installation and the stability requirements of long-term magnetic field put forward new challenges to the design of magnet girder.

Based on the requirements of magnet support adjustment accuracy and stability, this paper designed the magnet girder and introduced the development progress of the girder. The adjustment performance test of magnet girder showed that the accuracy was better than  $10\text{ }\mu\text{m}$ , the resolution was  $1\text{ }\mu\text{m}$ , and the first natural frequency in magnets condition was 60Hz.

### Footnotes

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