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## A left-handed helical snakes for the HSR

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The Electron Ion Collider calls for polarized proton and helion beams on polarized electron beam collisions. To preserve polarization of polarized hadron beams, six full helical snakes will be installed. As there are currently 4 snakes in RHIC, the remaining two snakes will be made from existing rotator magnet coils. The rotator magnets are made from both right handed and left handed helicities. In order for a sufficient stock of spare coils, one snake will be made of left handed coils. Simulations using zgoubi show the left handed snake has sufficient range to provide the desired snake precession axes for helions and protons with the existing power supplies.

### Footnotes

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