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Multiturn injection design and optimization for XiPAF-upgrading synchrotron

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XiPAF (Xi'an 200MeV proton application Facility) synchrotron is using Hˆ- stripping injection and phase space painting scheme. With the demand of more particle species for single event effect study, XiPAF synchrotron has been upgraded to multiturn injection from stripping injection, the injection system must be redesigned. This paper report XiPAF synchrotron multiturn injection scheme, a simulation results by PyOrbit show that the injection efficiency is ˜80% for proton and ˜70% for heavy ions. The influence of space charge and magnet errors on accumulated particle number has been studied by simulation.

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Footnotes

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