

Design Study of Quasi-Periodic Undulator,
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the quasi-periodic (QPU) is considered which generates
the irrational harmonics in the radiation spectrum. This
undulator consists of the arrays of magnet blocks
aligned in a quasi-periodic order, and consequently
leads to a quasi-periodic motion of electron. A
combination of the QPU and a conventional
crystal/grating monochromator provides pure
monochromatic photon beam for synchrotron radiation
users because the irrational harmonics are not diffracted
in the same direction by a monochromator. A small
prototype of the quasi-periodic undulator has been
designed in order to perform an experiment in a low
energy storage ring and to prove the validity of theory.

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