

Synchrotron-sideband snake depolarizing resonances^e

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Abstract. We recently created a snake depolarizing resonance using an rf solenoid magnet in a ring containing a nearly 100 % Siberian snake. We found that the primary snake rf resonance also had two weaker synchrotron sidebands, which are second-order snake resonances; they were probably caused by the energy-dependent strength of the solenoid snake due to the Lorentz contraction of its longitudinal $\int B \cdot dl$. This was the first observation of an rf synchrotron-sideband depolarizing resonance in the presence of a nearly full Siberian snake.^[d]

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Beam-line Polarimeter for Intermediate-Energy Deuteron

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We have developed a beam-line polarimeter for intermediate energy deuterons at RIKEN Accelerator Research Facility. The $d + p$ elastic scattering is used as polarimetry. Recently, calibration measurement has been carried out at $E_d = 140$ and 200 MeV. The values of A_y (A_{yy}) are -0.519 ± 0.005 (0.541 ± 0.005) and -0.332 ± 0.005 (0.306 ± 0.006) at 140 MeV and 200 MeV, respectively.