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MAGNETO-OPTICAL STRUCTURE OF THE NICA COLLIDER WITH HIGH CRITICAL ENERGY.

In the proton option of the NICA collider, there is a problem of crossing transition energy. To do this, we have investigated ways to increase the critical energy for the proton option of the NICA collider. The method of superperiodic modulation of quadrupole gradients is applied. Two variants of dispersion suppression on the arch for matching with straight sections are considered. The selection of sextupoles is carried out to suppress the natural chromaticity and compensate for the sextupole component. The Twiss parameters for the proposed structures are given, as well as the dynamic apertures and working points are investigated.