

**NEW BEAM DYNAMICS SIMULATION FOR THE UPDATED COIL DESIGN OF
MSC230 CYCLOTRON FOR MEDICAL-BIOLOGICAL RESEARCH**

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JINR is conducting development of the isochronous cyclotron MSC230 for the new JINR's international biomedical research center, which will be the successor of the medical beam line of currently discontinued Phasotron. The project is entering the production stage. The latest compatibility checkup of the systems showed that the current distance between coils is not sufficient for the insertion of the systems of internal elements' operation. Therefore, the coil distance was increased, that heavily affected magnetic field and required its reshape. This talk concerns the peculiarities of field correction and results of proton beam tracing from ion source to the extraction from cyclotron.