

# A Magnet Design Of An Advanced High Field Superconducting Cyclotron for Medical Isotopes Production

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Radioisotopes are one of the essential cornerstones of modern medicine. They may be used for both diagnostic and therapeutic purposes. Here we present a description of a compact high field superconducting magnet used for a 30 MeV cyclotron with a magnetic field 2 times higher than conventional H- cyclotrons developed recently. This magnet will be a modern, state of the art design, which, because of the higher magnetic field, smaller, lower maintenance, lighter weight and lower power consumption than any other magnet available. The purpose of this design to help cyclotron to provide a sustainable supply of the critical Imaging Isotope F-18 and N13, to eliminate the need for supply from other production facilities for small centers. This paper mainly focuses on the simulation results of the Magnet proposed for our project as the Magnet design is 60% of the overall TAAC30 cyclotron Design.

## Speaker Bio

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