Defocusing beam line design for an irradiation facility at the TAEA SANAEM Proton Accelerator Facility

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- To perform irradiation tests using 30MeV proton beam

  @ Ankara, Turkey

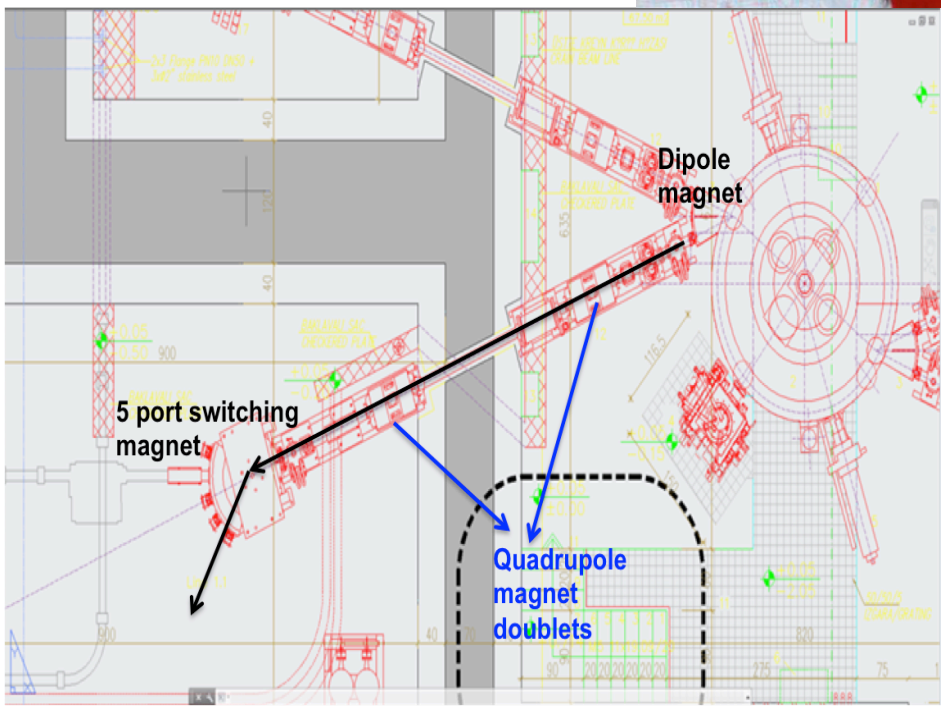
- To satisfy space radiation requirements ESA ESCC-25100 standard:

  Beam size must be enlarged

  (15.40cm x 21.55cm)

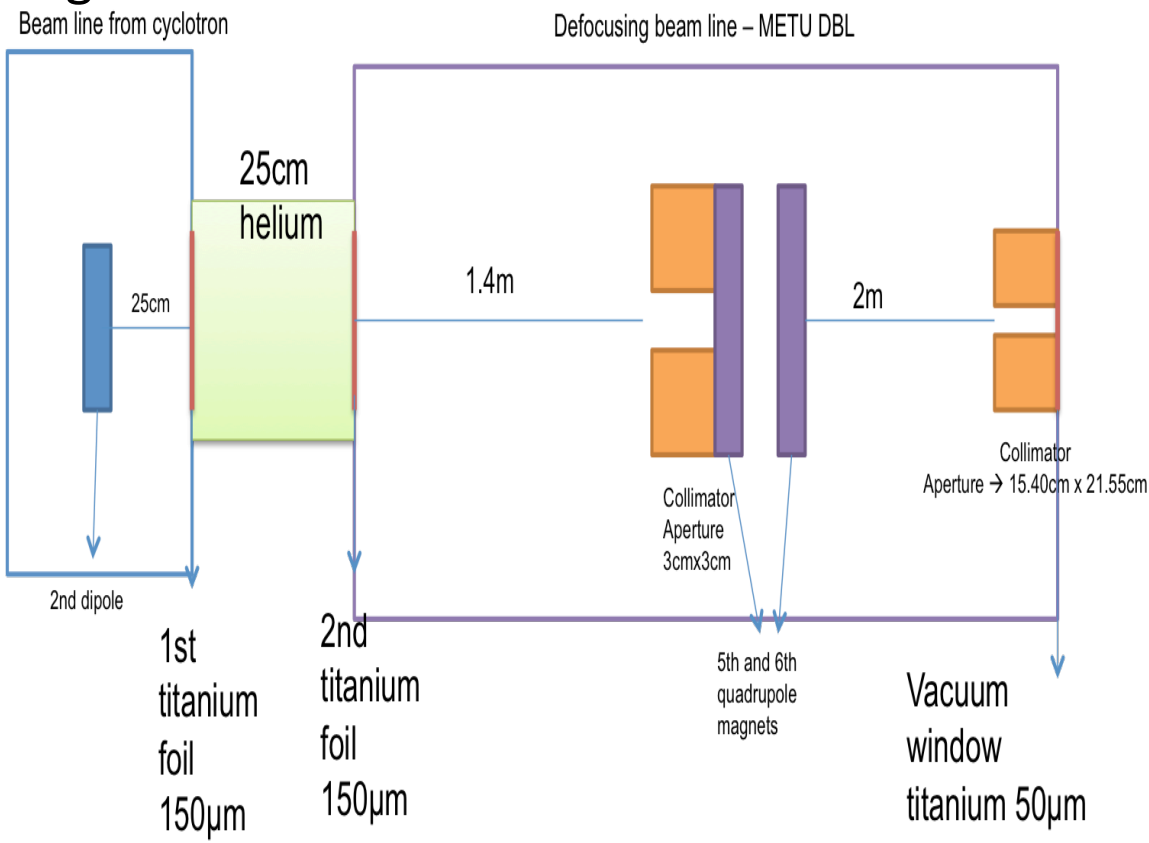
  Beam flux must be reduced

  (10^5 p/cm^2/s to at least 10^8p/cm^2/s)



Turtle Simulations

- Quadrupole magnets → enlarge the beam size
- Scattering foils → reduce the flux
- Conceptual design is now finalized.
- Technical design report is being prepared.



The irradiation tests can be performed between

3.1×10^7 p/cm^2/s to 1.9×10^9 p/cm^2/s for an area of 15.40cmx21.55cm