

High gradient hadron linacs R&D for medical applications

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Proton and carbon radiotherapy systems demonstrated significant advantages in clinical efficiency and reduced toxicity profiles for many types of cancers, however the high cost of equipment and facilities are presently the limiting factor preventing hadron therapy from becoming the standard of care for a wider range of patients. Developing a high gradient linear accelerator capable of producing carbon beams with variable energy in a small footprint would offer a promising approach to reduce the cost and improve the quality of the treatment. In this talk we will review the ongoing R&D activities towards practical high-gradient linacs for hadron radiotherapy, pursued by different labs, and provide the recent progress with high-gradient structure development for the Advanced Compact Carbon Ion Linac (ACCIL).

Summary

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