

Advanced Accelerator Concept activities at Snowmass

venerdì 22 settembre 2023 12:00 (30 minuti)

New concepts for particle acceleration, generation, and focusing at ultra high acceleration gradients (GeV/m and beyond) have the potential to enable future e^+e^- and $\gamma - \gamma$ colliders to and beyond 15 TeV energies. In addition to proven high gradient and ultra-bright beam generation, these systems have the potential to increase luminosity per unit beam power via short beams, for practical energy recovery to extend the reach of high energy physics, and for fast cooling. Conceptual collider parameters have been developed for colliders at a range of energies, and continuing to develop these concepts in interaction with the collider and high energy physics communities is important; as is development of technologies through nearer-term applications. Progress, next steps, and results of Snowmass Accelerator Frontier topical group # 6, Advanced Accelerator Concepts (<https://doi.org/10.48550/arXiv.2208.13279>) will be discussed.

We gratefully acknowledge the input of all of the members of the Accelerator Frontier 6 group of Snowmass, and of colleagues in the Accelerator, Energy, Community and other Frontiers.

This work supported by Office of Science, Office of High Energy Physics, U.S. Dept. of Energy under Contracts incl. No. DE-AC02-05CH11231 and DEAC02-76SF00515, & by the National Science Foundation.

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Classifica Sessioni: Plenary session

Classificazione della track: Invited