

# Distributed coupling linacs: a paradigm shift in linear accelerator design

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Distributed coupling linear accelerators (DCLs) represent a revolutionary approach to accelerator design, offering significant advantages over traditional standing-wave and traveling-wave linacs. DCLs achieve record-breaking efficiency and gradient while remaining highly reliable, even under extreme operating conditions. These advancements make them ideal for a wide range of applications, including: Novel FELs, C3 collider concepts, medical radiotherapy, and Inspection and imaging technologies. This presentation delves into the theoretical underpinnings of DCLs and their latest development. We will explore how the technology has evolved from its initial pi-mode configuration to the even more efficient 3 pi/4-mode structure.

## Footnotes

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