

2K OR NOT 2K

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Abstract

Particle accelerators based on superconducting cavity technology operate mostly in CW mode and require the highest possible Q_0 and the lowest possible operating temperature, compatibly with the overall efficiency of the cryogenic plant. However, for pulsed accelerators conditions and parameters can exist, by which optimal performance can be reached at intermediate temperatures, without the need of operating below the helium lambda point. In the design of future facilities, this fact may lead to decreased facility costs and to simplified operation. The parameter space and the applicability of these criteria will be presented.

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