

HIGHER ORDER MODES IN A STRING OF MULTI-CELL ACCELERATING STRUCTURES

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Abstract

The International Linear Collider will employ tens of thousands of superconducting 9-cell accelerating structures for its main linacs. Damping of higher order modes is crucial to beam stability. Study of higher order modes, however, tends to focus on trapped modes in a single 9-cell structure model alone both in simulation and measurement. Propagating modes above cut-off frequencies are left untouched because of difficulty of a realistic model of multiple 9-cell structures. We have simulated a full spectrum of higher order modes in a long string of 9-cell structures.

**CONTRIBUTION NOT
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