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A wide open waveguide cavity for the International Linear Collider crabbing system

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The International Linear Collider (ILC) requires crabbing system to compensate 14 mrad crossing angle. The crabbing system at 1.3 GHz needs to provide 1.845 MV crabbing voltage for 250 GeV case and 7.4 MV for 1 TeV case and needs to be fitted within 3.8 m allocated space. In this paper, a Wide-Open-Waveguide (WOW) type cavity is proposed as one of the candidates due to its simple structure and reasonable High Order Mode (HOM) damping.

Footnotes

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