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Relaxed insertion region optics and linear tuning knobs for the Future Circular Collider

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This paper provides updates on two essential toolsets designed to facilitate the tuning and commissioning processes of the Future Circular Collider (FCC): relaxed optics and linear tuning knobs specifically for the experimental insertion regions. Motivated by the imperative need for efficient tuning strategies, we outline the construction methodology for both toolsets and present initial studies demonstrating their efficacy. The paper discusses the significance of these tools in enhancing the operational capabilities of the FCC and presents early results showcasing their potential impact on the collider's performance during tuning and commissioning phase.

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