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# Study on 200 MeV separated drift tube linac in Korea Multi-purpose Accelerator Complex

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Korea Multi-purpose Accelerator Complex (KOMAC) has been preparing 200 MeV energy upgrade. As a possible upgrade choice, separated drift tube linac (SDTL) type is considered in this study. From 2D analysis, optimum cell design deriving maximized effective shunt impedance and minimized Kilpatrick number is obtained. Then, final tank parameters considering stems, slug tuners, vacuum ports are determined under resonance frequency of 350 MHz. Based on that, 3D calculation is conducted to address electromagnetic and thermo-mechanical analysis. Electromagnetic mode and field flatness are analyzed by tuning slug tuners. In addition, appropriate cooling system is designed to minimize resonance frequency and electromagnetic structure variation.

## Footnotes

## Paper preparation format

Word

## Region represented

Asia

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