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## Study of the generalized electron emission theory in a superconducting cavity

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Generalized electron emission theories, consisting of field emission and thermionic emission, are investigated. Electrons in metals are emitted due to a strong local electric field for field emission, while for thermionic emission, electrons in metals are emitted due to local high temperatures. Field emission is studied in terms of dimensions, and thermionic emission is also examined as a function of dimensions. A generalized electron emission theory, derived from field emission and thermionic emission, is developed and applied to superconducting cavities.

### Footnotes

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### Paper preparation format

### Region represented

Asia

**Primary author:** KIM, Heetae (Institute for Basic Science)

**Presenter:** KIM, Heetae (Institute for Basic Science)

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