Abstracts

Magnetic Bremsstrahlung Radiation Sources Using The Meissner Effect

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Given the recent interest in high T/sub c/ superconductors, development of a radiation source that could exploit the novel properties of these materials has been suggested. One approach would be to use the Meissner magnetic field rejection phenomenon to create a high-field gradient region that could function as a source of magnetic bremsstrahlung. Physical structures containing superconducting component could serve as the basis for such magnetic bremeetrahlung devices as a Free Electron Laser. A preliminary discussion of the merits and liabilitee of the use of Meissner effect magnetic field manipulation in radiation eource application is presented. There are a number of reasons to believe that the Meissner effect will lead to an exciting new class of devices.

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