

## **ABSTRACT**

Attenuation characteristic of matter is ability to absorb or decrease intensity of radiation that for down to surface of matter. Decreasing of radiation cause interaction with matter. happened through three processes : photoelectric effect, compton scattering effect and pair production effect.

Increasing temperature of matter, cause atomic vibration to grow worse until limited Debye's temperature. So, Debye's temperature specific of matter show atomic got maximum. If increased temperature again, possible will be happen damage to atomic matter. Before that, it's happen discharge electrons of matter, will influence attenuation characteristic. With increasing temperture of matter, coefficient of attenuation become decrease. So radiation out of matter more and more increase. It's called happen radiation leaking out.

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Sifat atenuasi suatu materi adalah kemampuan menyerap atau mengurangi intensitas radiasi yang mengenai permukaannya. Hilangnya energi radiasi karena berinteraksi dengan materi, disebabkan tiga proses : efek fotoelistrik, efek hamburan compton efek produksi pasangan.

Kenaikan suhu pada materi, menyebabkan, getaran atomnya semakin menghebat, sampai batas suhu Debye-nya. Jadi suhu Debye suatu materi menunjukkan getaran atom-atomnya sudah mencapai maksimum. Bila suhu dinaikkan lagi kemungkinan atom materi akan rusak. Dengan adanya kejadian tersebut, maka perubahan suhu akan mempengaruhi sifat atenuasinya. Semakin tinggi suhu, koefisien atenuasi semakin kecil sehingga radiasi yang lolos semakin banyak, maka dikatakan terjadi kebocoran radiasi.