

MÖSSBAUER ABSORPTION BY THICK
FERROMAGNETS IN RADIO-FREQUENCY
MAGNETIC FIELD

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S u m m a r y

The dynamical scattering theory is developed for transmission of the Mössbauer radiation through a ferromagnetic absorber of arbitrary thickness whose magnetization periodically reverses under the influence of an external radio-frequency (RF) magnetic field. The thickness dependence of the Mössbauer absorption spectrum as well as the time dependence and energy distribution of the transmitted beam are analyzed. The transmitted spectrum as a function of the frequency of transmitted γ -quanta, reveals a sideband structure separated by twice the frequency of the RF field, which collapses to a single line at high frequencies.