and

$$\lambda(\gamma)\equiv\frac{2}{\pi}\int_0^\infty d\omega'\xi(\omega')\left\{\frac{\sin\frac{1}{2}(\omega'+\gamma)t\cos\frac{1}{2}(\omega'+\gamma)t}{\omega'+\gamma}-\frac{\sin\frac{1}{2}(\omega'-\gamma)t\cos\frac{1}{2}(\omega'-\gamma)t}{\omega'-\gamma}\right\}. \quad \text{(A6)}$$

Now, for $t\gg\mu^{-1}$ (we recall that $t=0$ corresponds to the onset of coupling between TLS and LM), the main contribution in the integration of Eq. (A4) comes from the immediate neighborhood of $\omega'=\mu$, and since $\xi(\omega')$ is a slowly varying function in the neighborhoods of $\omega'=\omega$ and $\omega'=\nu$, we have

$$X(\mu)\approx\frac{2}{\pi}\xi(\mu)\int_{-\infty}^{\infty}d\omega'\frac{\sin\frac{1}{2}(\omega'-\mu)t\cos\frac{1}{2}(\omega'-\mu)t}{\omega'-\mu}=\xi(\mu), \quad \text{(A7)}$$

where μ stands for ω or ν. As stated in the inequality (22), the driving field frequency ν under consideration is close to ω. For the sake of simplicity, we assume that there is a negligible difference between $\xi(\omega)$ and $\xi(\nu)$, so that

$$X(\omega)-X(\nu)\approx 0. \quad \text{(A8)}$$

By arguments similar to those used to obtain Eq. (A7), it follows that

$$\begin{aligned}\lambda(\gamma)&\approx\xi(|\gamma|), \quad \gamma>0,\\ \lambda(\gamma)&\approx-\xi(|\gamma|), \quad \gamma<0.\end{aligned} \quad \text{(A9)}$$

Since $\lambda(0)=0$, and $\xi(|\gamma|)$ approaches zero as γ approaches zero, this is a continuous function of γ. As are as κ is concerned, it is seen that for sufficiently large t, the cosine terms in the integrand of Eq. (A5) make a negligible contribution to the integral except at the points $\omega'=0$, $|\gamma|$. Since $\xi(0)=0$, the contribution at $\omega'=0$ is also negligible; at $\omega'=|\gamma|$, the cosine terms have the effect of converting the integral into a principle value integral, yielding

$$\kappa(\gamma)=\frac{2}{\pi}\int_0^\infty d\omega'\xi(\omega')\left[\frac{1}{\omega'}-\omega'\frac{\mathcal{P}}{\omega'^2-\gamma^2}\right]. \quad \text{(A10)}$$

The derivation of Eq. (23a) has thus been outlined. Equations (23b) and (23c) are obtained similarly.

The behavior of κ and λ under time inversion may be observed in Eqs. (A5) and (A6). κ is invariant while λ changes sign. This indicates that κ is a reactive constant and λ is a resistive constant.

Errata

Mössbauer Cross Section of Fe^{57} in Iron, S. S. HANNA AND R. S. PRESTON [Phys. Rev. **139**, A722 (1965)]. The second sentence in the third paragraph from the end should read: "With $f_a=0.79$, one obtains $\sigma_0=(2.42\pm0.19)\times10^{-18}$ cm^2." This numerical change in σ_0 does not affect any of the other numbers in the paper.