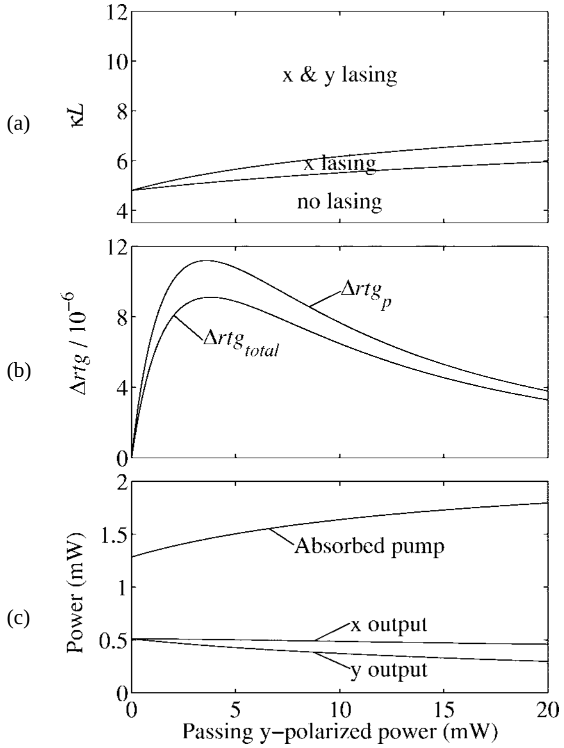

Fig. 9. Same information as in Fig. 2 plotted against passing cross-saturating power.

ions where $\sigma_\perp$ and $\sigma_\|$ are the ion cross sections for fields polarized parallel and orthogonal to the OA. Wagener *et al.* [2] uses a simpler model with an "averaged" projected ion anisotropy ϵ, taking random ion orientations in only two dimensions into account. By fitting simulations to measurements of PHB in EDFA's at moderate signal intensities $(P_s < P_{\rm sat})$, they estimate $A = 0.535$ or 2.17 and $\epsilon = 0.67$, respectively.

For moderate ion anisotropies, it is found that (1) can approximate the local PDG calculated with the aforementioned models quite well. When compared to Wysocki's model with $A = 0.535$ or 2.17, a best fit is obtained with $\eta = 0.059$. For Wagener's model with $\epsilon = 0.67$, a good fit is obtained with $\eta = 0.039$. The difference in estimated η may be due to the fact that the two models are fitted to different experiments and that Wagener assumes $D_p = 1$ everywhere along the test fiber, thus overestimating the EDFA PHB for the given ϵ. Fig. 1 shows $\Delta g_{\rm loc}/g_{\rm unsat}$, approximated by (1) with $\eta = 0.059$, and calculated from Wysocki's model with $A = 0.535$ and $A = 2.17$. The approximation error is within $+10\%$ and -18%.

The polarization-dependent gain and gain grating coefficients to be used in the DFB coupled-mode equations may be derived from (1) along the same lines as was used to derive (5) in our earlier paper.[1] After expressing the ratio $P_s/P_{\rm sat}$ in (1) in terms of its mean value $p_{\rm tot}$ and its standing wave component $2\,{\rm Re}(p_c e^{i\phi})$, Δg and $\Delta g_{\rm gr}$ are derived as the zeroth- and first-order Fourier components of $\Delta g_{\rm loc}(\phi)$. This leads to (2) in Section I.

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Corrections to "Amplified Spontaneous Emission—Application to Nd:YAG Lasers"

Norman P. Barnes and Brian M. Walsh

Several typographical errors were found in the above paper[1]. On p. 104, the fourth and sixth equations should read

$$\begin{aligned} N_2 =& 2R_2\tau_I(\tau_2/\tau_I)(1-\exp(-r\tau_I/\tau_2))/ \\ & [(r+1)+(r-1)\exp(-r\tau_I/\tau_2)] \end{aligned}$$

and

$$N_2 \rightarrow (R_2\tau_I)(\tau_2/\tau_I)(1-\exp(-\tau_I/\tau_2)).$$

That is, in all three cases, the ratio of the time intervals in the exponential term has been inverted, or τ_2/τ_I should actually be τ_I/τ_2. A factor of r is also missing in the first exponential argument. Note that the factor τ_2/τ_1 preceding the exponential factor in the expressions is correct. The latter equation contains the familiar storage efficiency factor, as noted in the text.

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