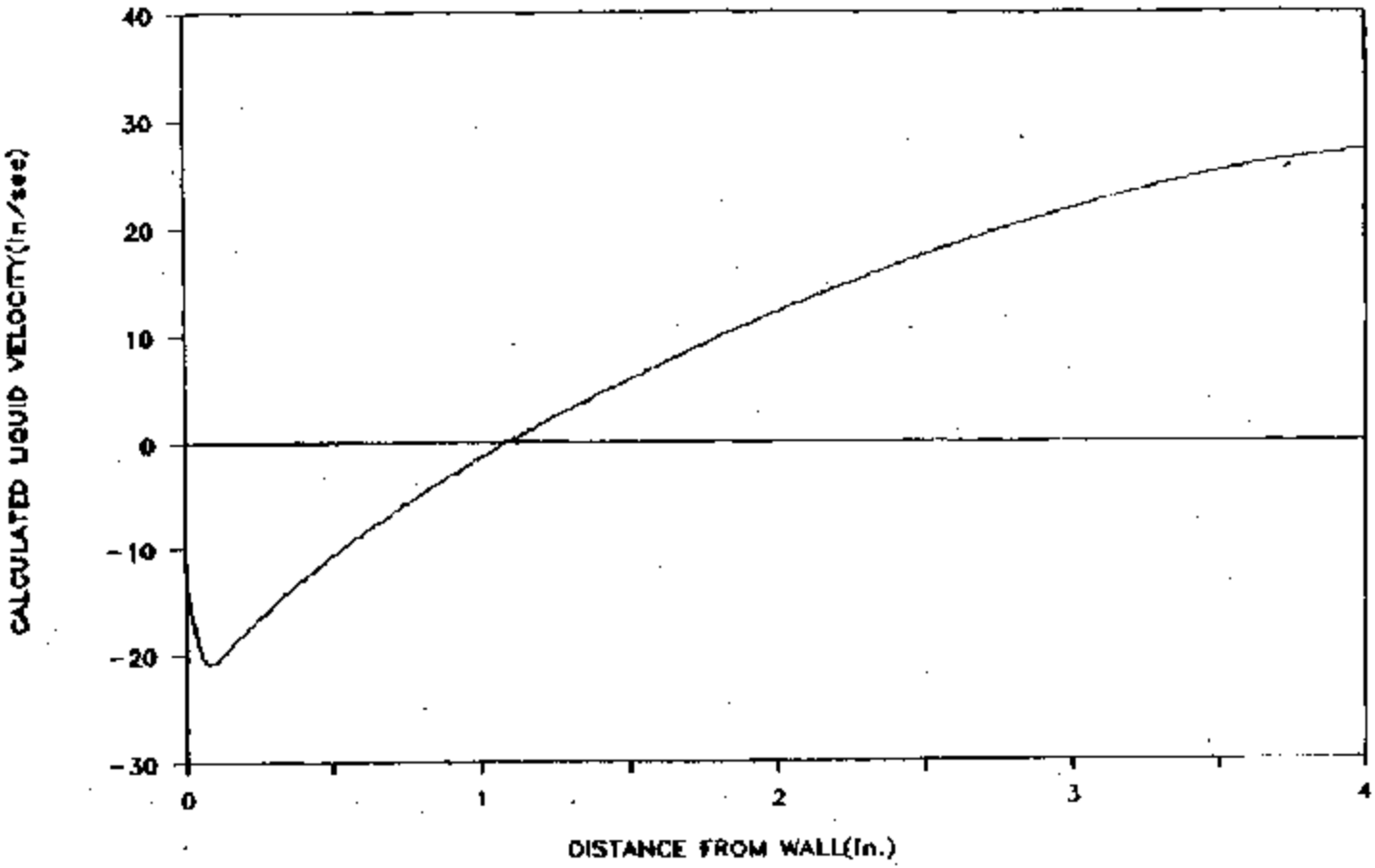

Figure 2.70 Calculated Liquid Velocity Profile with 3 ft. of Water, Probes - 36" above Distributor Plate, T_u = -2.69x10^{-4} psi, and Q_g = 7.3 CIN (Figure 4.24 is Corresponding Voltage Profile)

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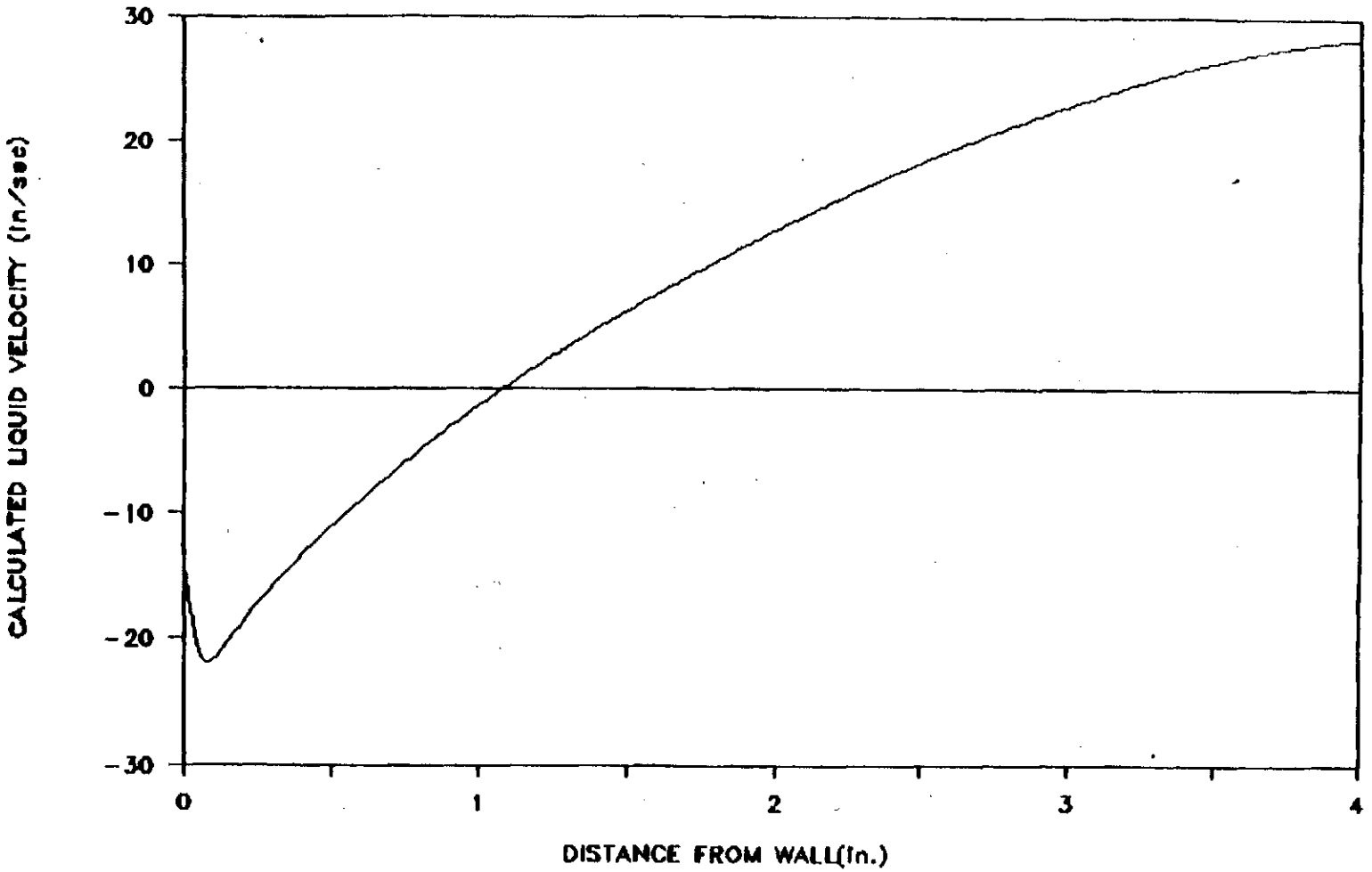

Figure 2.71 - Calculated Liquid Velocity Profile with 3 ft. of Water, Probes - 18" above Distributor Plate, $T_w = -2.87 \times 10^{-4}$ psi, and $Q_g = 10.4$ CFM (Figure 4.25 is Corresponding Voidage Profile)

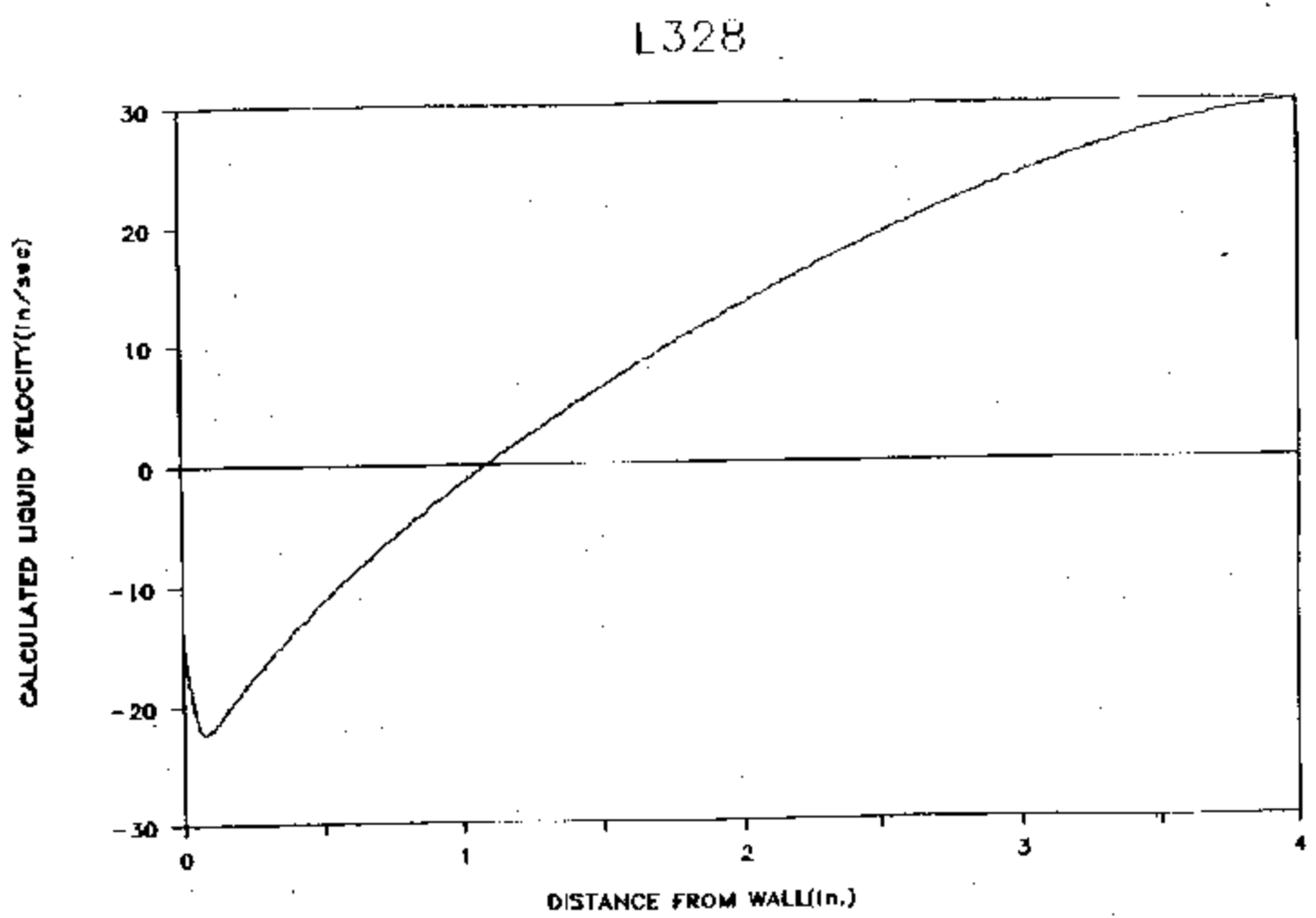

Figure 2.72 Calculated Liquid Velocity Profile with 3 ft. of Water, Probes - 24" above Distributor Plate, $T_v = -2.92 \times 10^{-4}$ psi, and $Q_g = 10.4$ CFM (Figure 4.26 is Corresponding Voidage Profile)

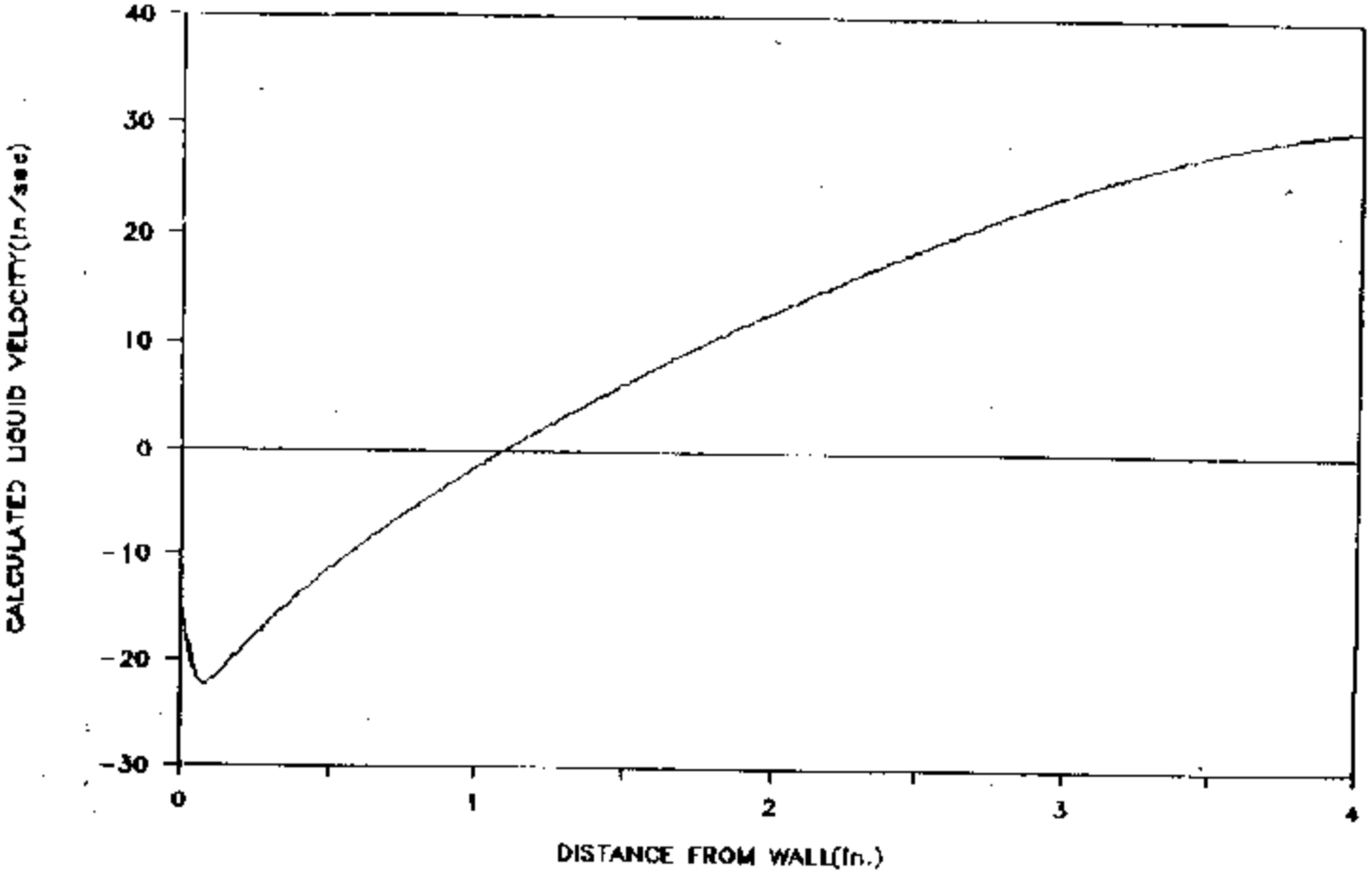

Figure 2.73 Calculated Liquid Velocity Profile with 3 ft. of Water, Probes - 36" above Distributor Plate, $T_w = -2.92 \times 10^{-4}$ psi, and Q_g = 10.4 CFM (Figure 4.27 is Corresponding Voidage Profile)

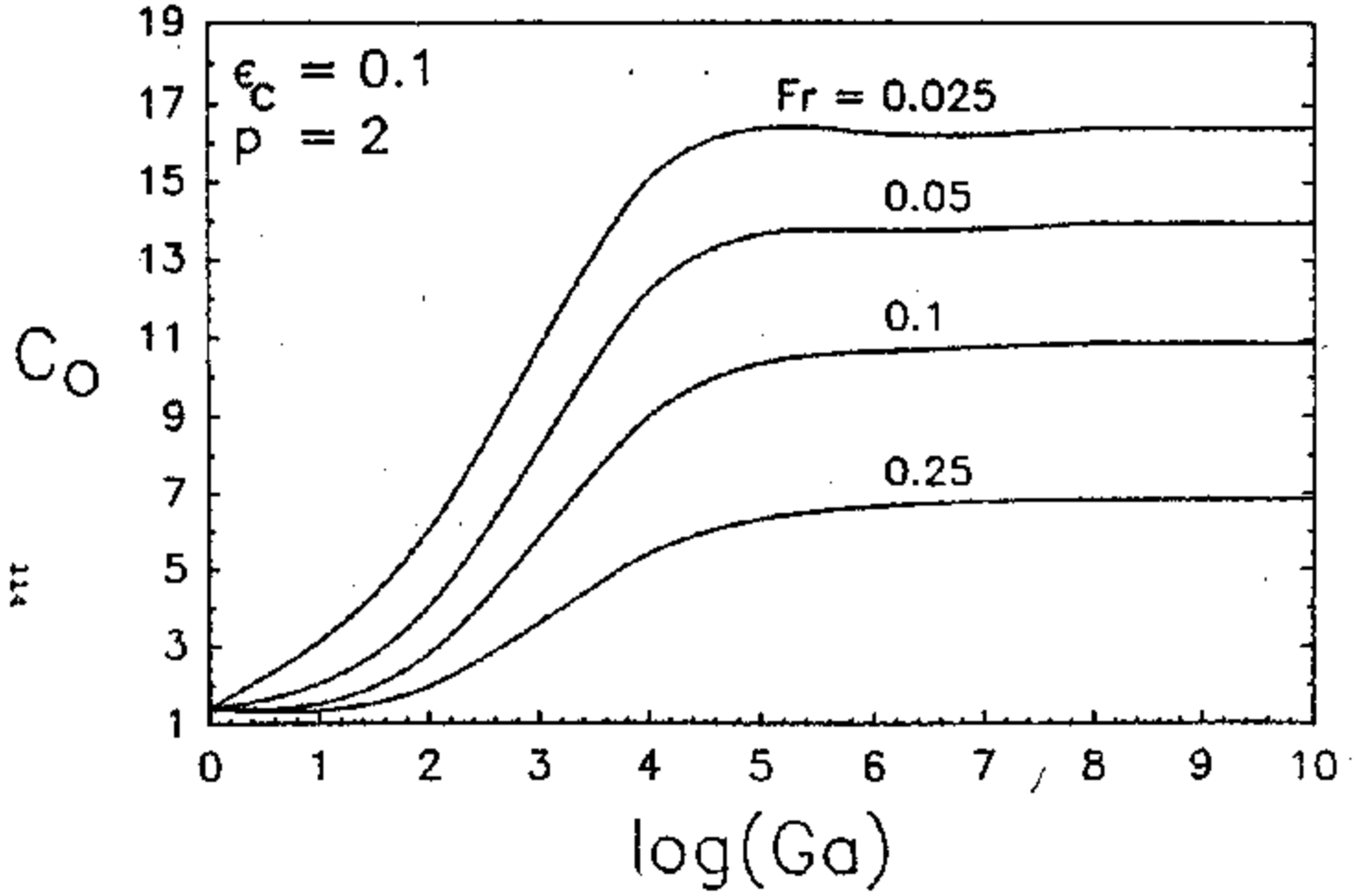

Figure 2.74. Profile constant C_o for various Fr and Ga for void distributions given by [1] with $\epsilon_c = 0.1$ and $p = 2$. Fr = 0.25 would correspond to a typical bubble rising in a 100 mm dia column of water. Fr = 0.05 would correspond to a 2.5 m dia column of water. Laboratory scale air-water bubble columns would have Ga = 10^4 to 10^6 and the industrial scale would extend to Ga = 10^9. Ga < 10^3 would occur for viscous systems. The void fraction used here is lower than in an industrial column.

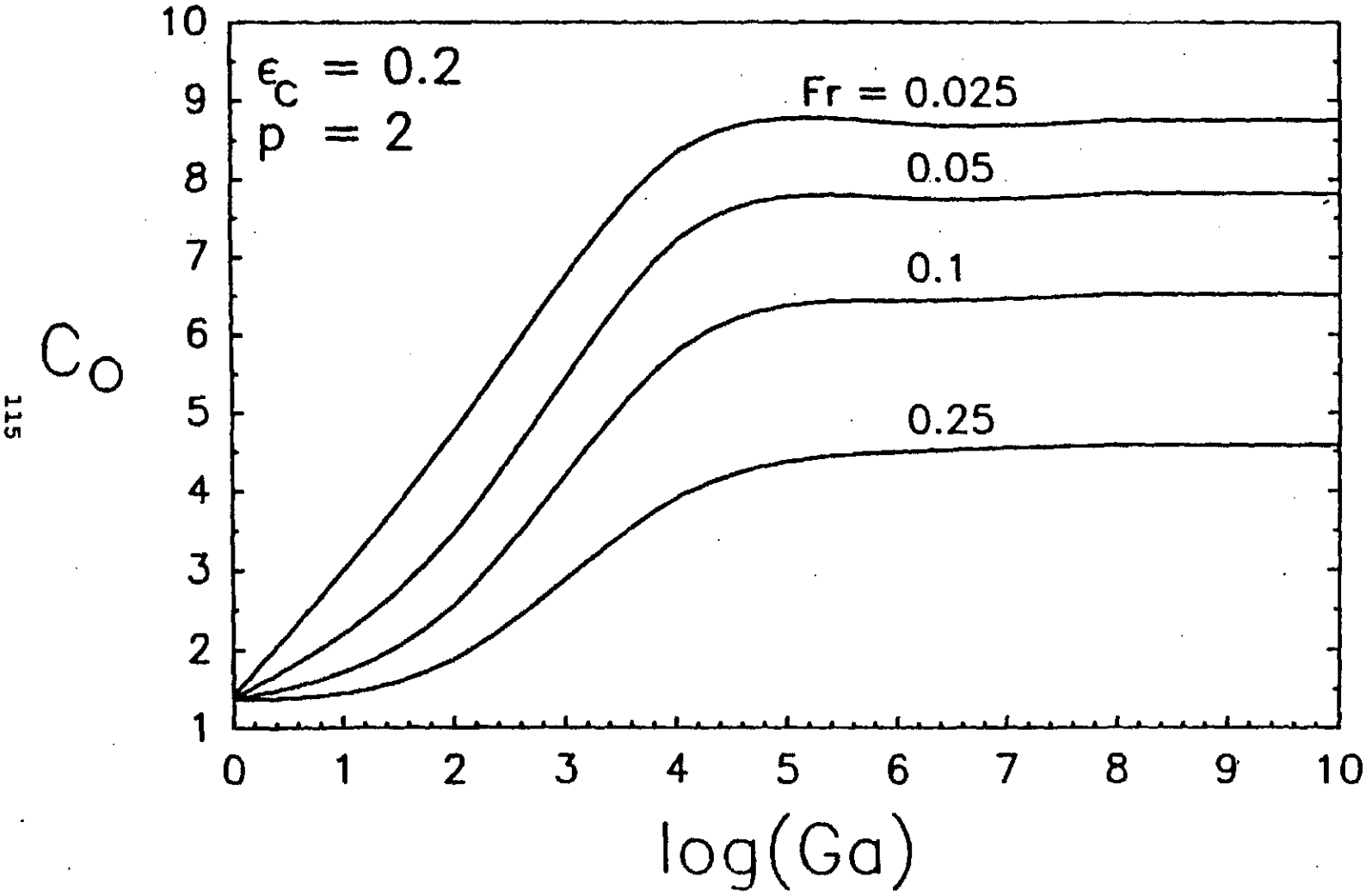

Figure 2.75. Profile constant C_o for various Fr and Ga for void distributions given by [1] with $\epsilon_c = 0.2$ and $p = 2$. The comments on Fr and Ga in the legend to figure 2.74 apply.

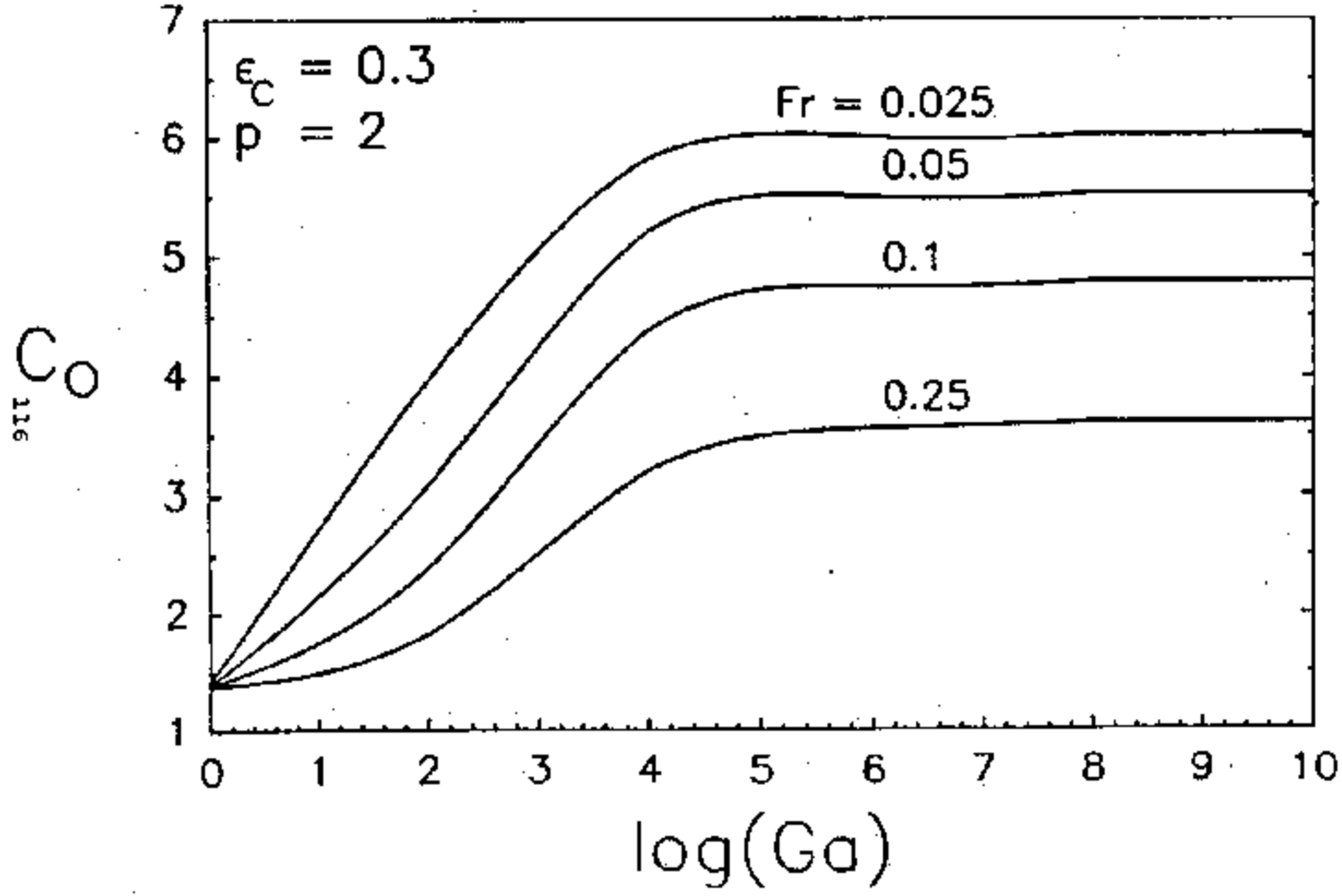

Figure 2.76. Profile constant C_o for various Fr and Ga for void distributions given by [1] with ϵ_c = 0.3 and p = 2. This would be a realistic void fraction for an industrial column. The comments on Fr and Ga in the legend to figure 2.74 apply.

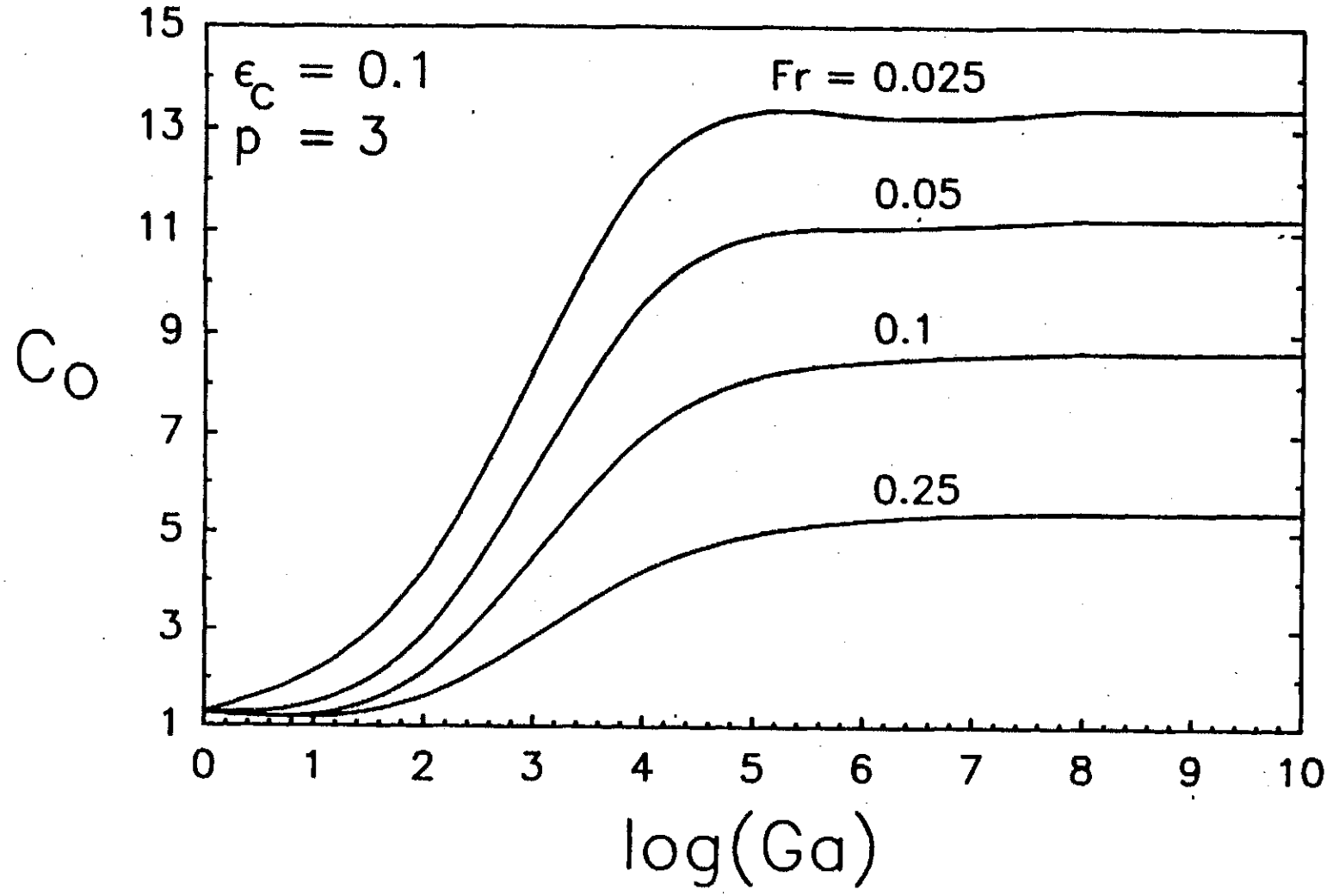

Figure 2.77. Profile constant C_o for various Fr and Ga for void distributions given by [1] with $\epsilon_c = 0.1$ and $p = 3$. The comments on Fr and Ga in the legend to figure 2.74 apply.

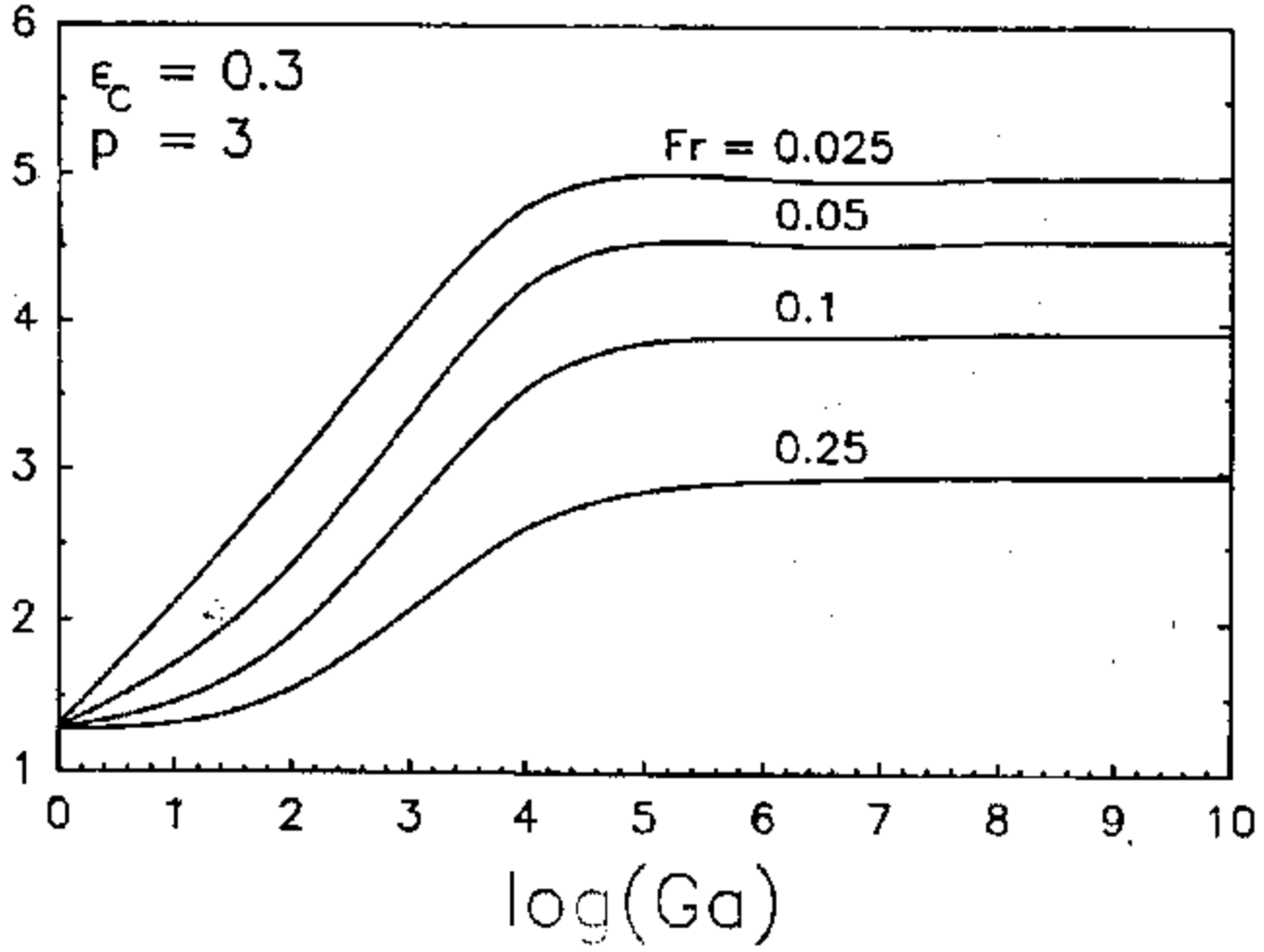

Figure 2.79. Profile constant C_o for various Fr and Ga for void distributions given by [1] with $\epsilon_c = 0.3$ and $p = 3$. The comments on Fr and Ga in the legend to Figure 2.74 apply.