number with small integers for numerator and denominator, we have from II:

$$\boxed{a = \frac{3}{4} k_\infty} \tag{12}$$

or:

$$k_\infty = \frac{4}{3} a \quad . \tag{13}$$

Any similarity between the appearance of the fraction 4/3 in (13) and the index of refraction of water must be viewed as an amusing coincidence. Equation (13), incidentally, points up once again the kinship of k_∞ with the absorption mechanisms in optical media (see the discussion of (5) of Sec. 9.2 and (29) of Sec. 9.3).

10.9 Bibliographic Notes for Chapter 10

The developments of Secs. 10.1 to 10.4 are based on the work of [245].

The problem of the asymptotic light field in natural hydrosols was first clearly recognized by Whitney (re: [315] and [316]). The mathematical formulations and solutions of the problem as in Secs. 10.5, 10.6, and 10.7 are based on the researches in [224], [225], [244], and [226], respectively. Important references to the asymptotic radiance hypothesis in the hydrologic optics context may be found in [107], [108], and [209]. References to the asymptotic radiance hypothesis in the astrophysical context may be found in [43] and [147]; references to the neutron diffusion setting are made in [62]. Section 10.8 is based in the main on [230].

Experimental data in [298] exhibit clearly the asymptotic property of radiance fields in a real optical medium and were instrumental in the empirical establishment of the hypothesis.

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