

$$\begin{aligned}
 6) \quad C_d(t, t-z) &= E(d(r) \mid d(r-z)) \\
 &= E\left(\frac{1}{2} s(r) (1 + \cos(4\pi f_0 t - \phi)) \cdot \frac{1}{2} s(r-z) (1 + \cos(4\pi f_0 (r-z) + 2\phi))\right) \\
 &= \frac{1}{4} E(s(r) s(r-z)) \cdot E\left((1 + \cos(4\pi f_0 r + 2\phi)) \cdot (1 + \cos(4\pi f_0 (r-z) + 2\phi))\right)
 \end{aligned}$$

$$\begin{aligned}
 &= \frac{1}{4} C_s(z) \cdot \left[ E(1) + E(\cos(4\pi f_0 r + 2\phi)) \right] + E(\cos(4\pi f_0 (r-z) + 2\phi)) + E(\cos(4\pi f_0 r + 2\phi) \cos(4\pi f_0 (r-z) + 2\phi)) \quad (7.2) \\
 &\quad + E(\cos(4\pi f_0 (r-z) + 2\phi)) + E(\cos(4\pi f_0 r + 2\phi) \cos(4\pi f_0 (r-z) + 2\phi))
 \end{aligned}$$

$$= \frac{1}{4} C_s(z) \left( 1 + \frac{1}{2} \cos 4\pi f_0 z \right) \quad \text{independant de } t.$$

$$\begin{aligned}
 \textcircled{x} \quad E(\cos a \cdot \cos b) &= E\left(\frac{1}{2} \cos(a-b) + \frac{1}{2} \cos(a+b)\right) \\
 &= E\left(\frac{1}{2} \cos 4\pi f_0 z + \frac{1}{2} \cos(4\pi f_0 (2r-z) + 4\phi)\right) \\
 &\quad \text{independant de } \phi \\
 E(\cdot) &= \frac{1}{2} \int_0^{2\pi} \cos(2\pi f_0 (2r-z) + 4\phi) \frac{d\phi}{2\pi} \\
 &= 0
 \end{aligned}$$