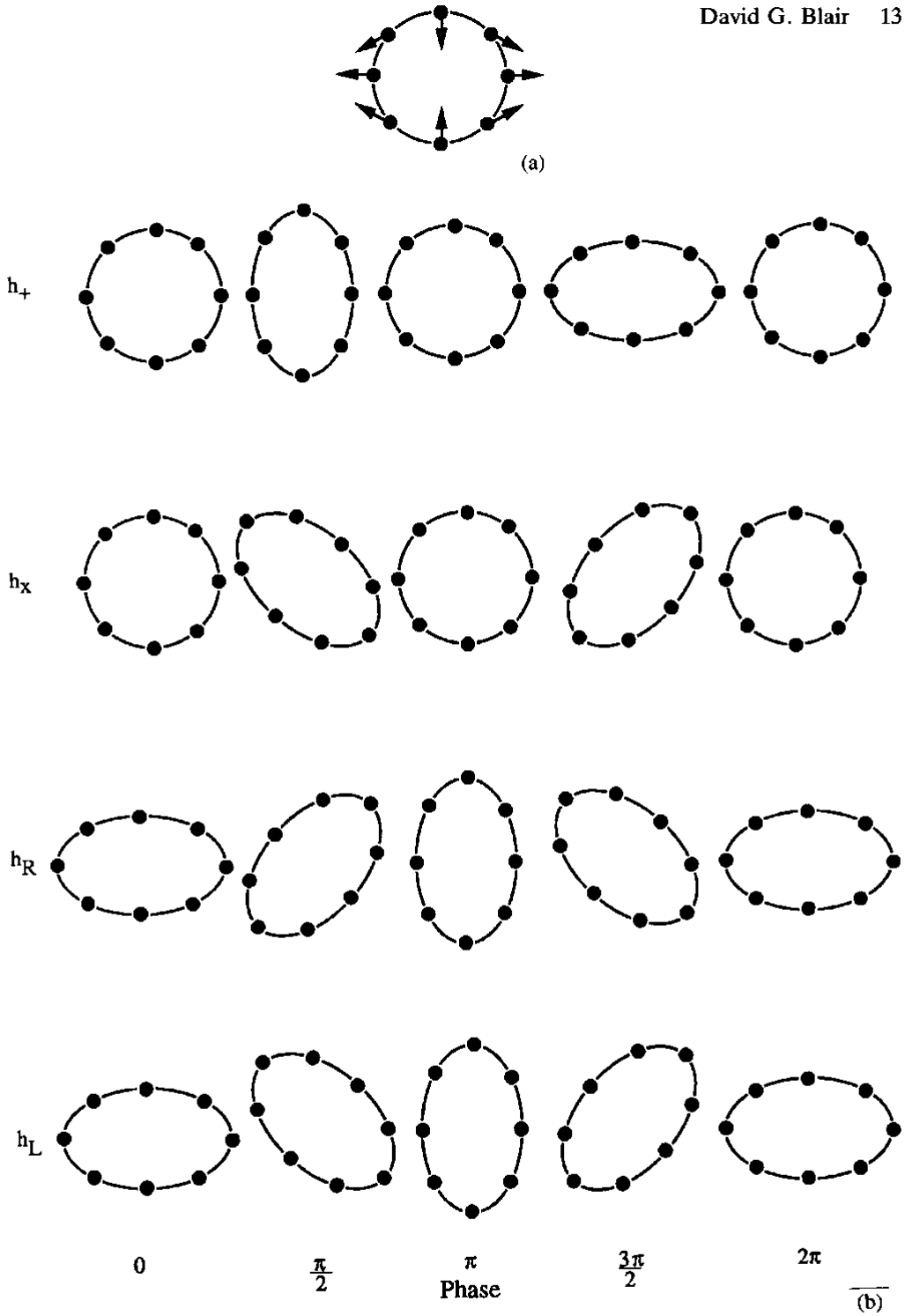

Figure 1.2. (a) The motion caused by a gravitational wave on a ring of test particles. (b) The deviation produced by a gravitational wave. The ring of test particles is successively distorted as shown, during one cycle of a plane gravitational wave. The diagram shows the two linear polarisations and the two linear combinations which give rise to left and right circular polarised waves.

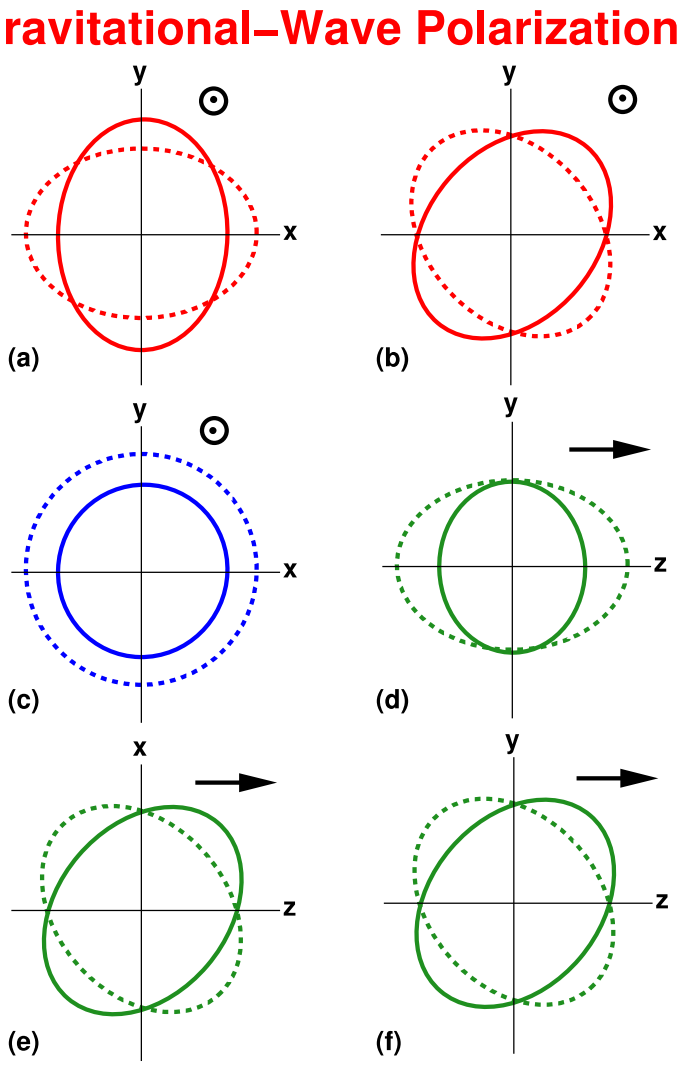

Figure 10: The six polarization modes for gravitational waves permitted in any metric theory of gravity. Shown is the displacement that each mode induces on a ring of test particles. The wave propagates in the $+z$ direction. There is no displacement out of the plane of the picture. In (a), (b), and (c), the wave propagates out of the plane; in (d), (e), and (f), the wave propagates in the plane. In GR, only (a) and (b) are present; in massless scalar–tensor gravity, (c) may also be present.