

Fig. 9.1. Joint probability density and marginal distributions for two bosons forming a system of coupled harmonic oscillators. The joint probability density $\rho_B(x_1, x_2, t)$ is shown as a surface over the x_1, x_2 plane, the marginal distribution $\rho_{B1}(x_1, t)$ as a curve over the margin parallel to the x_1 axis, and the marginal distribution $\rho_{B2}(x_2, t)$ as a curve over the other margin. The distributions are shown for various times $t_j = t_0, t_1, \dots, t_N$. The positions of the classical particles are indicated by dots in the plane and on the margins; their motion is represented by the trajectory in the x_1, x_2 plane.

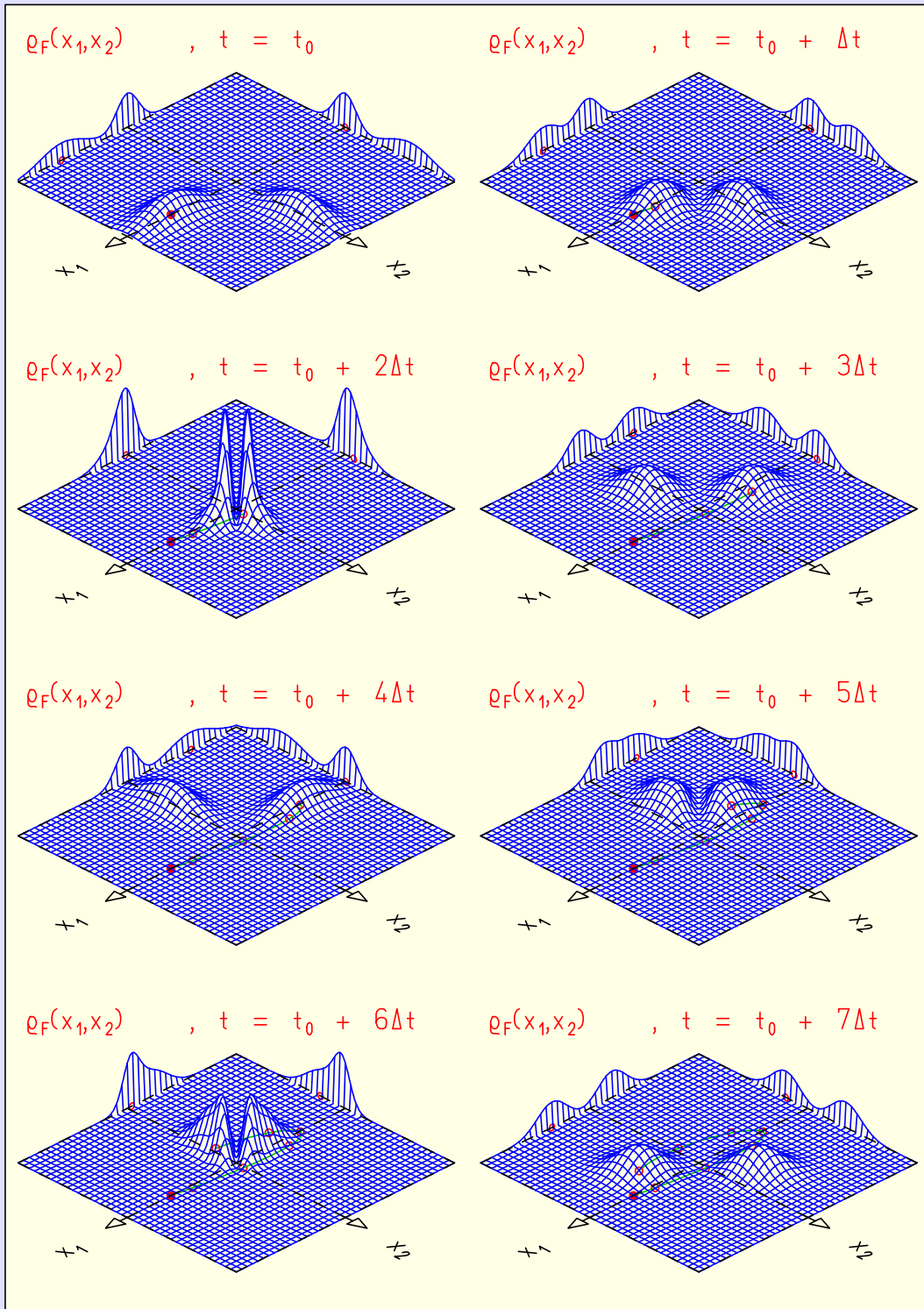


Fig. 9.2. Joint probability density and marginal distributions for two fermions. All initial conditions are the same as those for Figure 9.1.

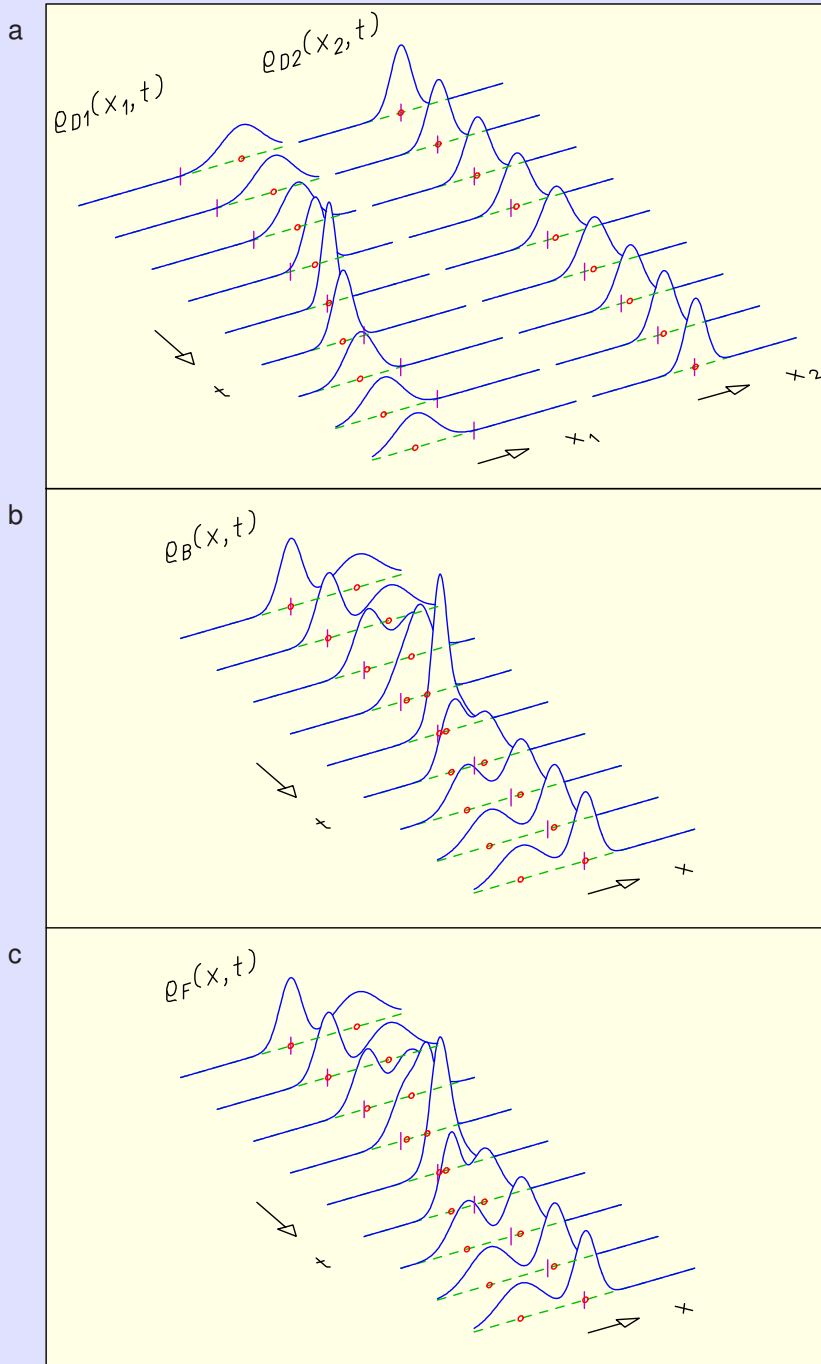


Fig. 9.3. (a) Time developments of the two marginal distributions for two distinguishable particles forming a system of coupled harmonic oscillators. Time developments of the marginal distributions $\rho_{B,F}(x, t)$ for the corresponding systems of (b) two bosons and (c) two fermions.

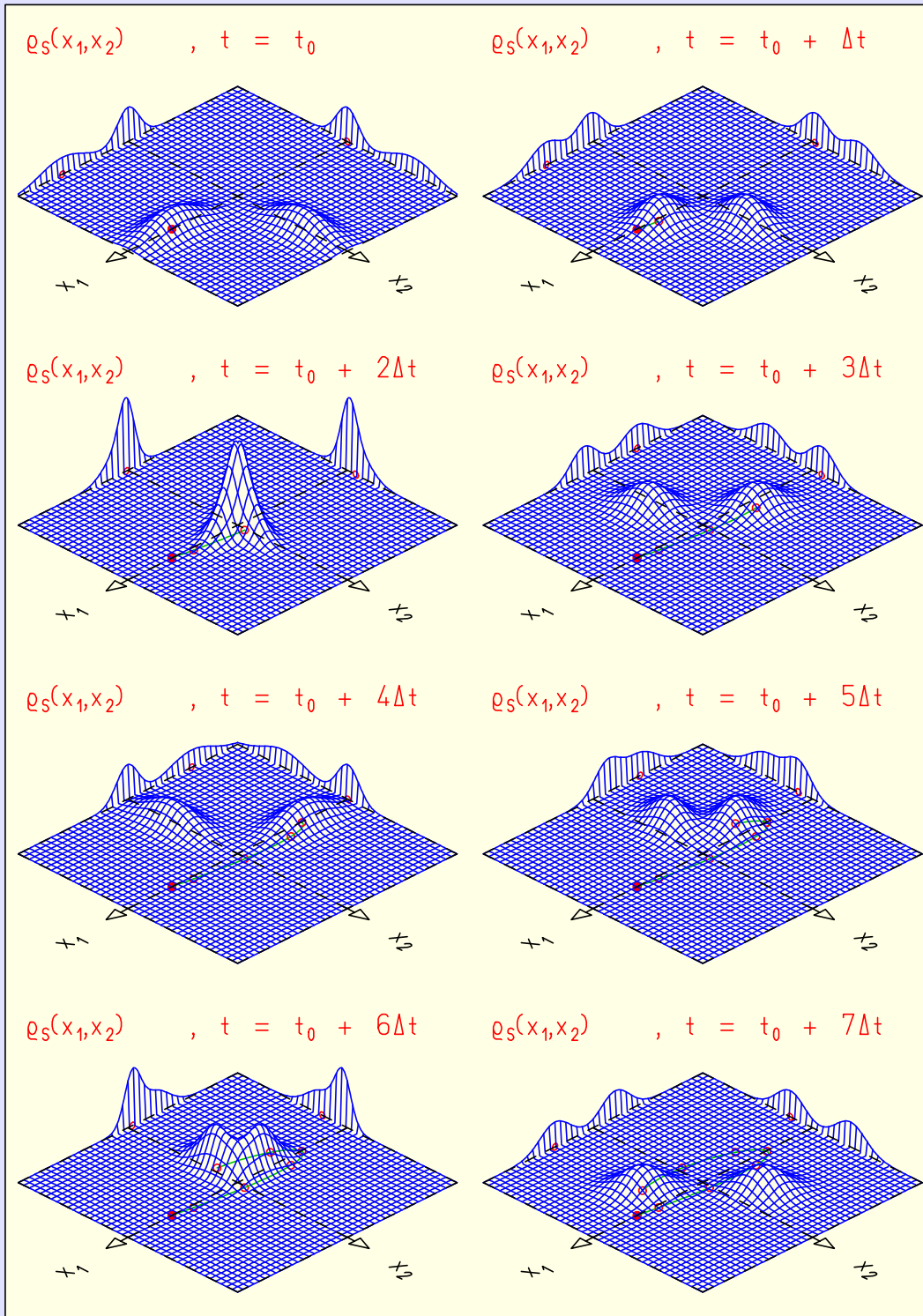


Fig. 9.4. Symmetrized probability density for two distinguishable particles forming a system of coupled harmonic oscillators. All initial conditions are the same as those for Figure 9.1.

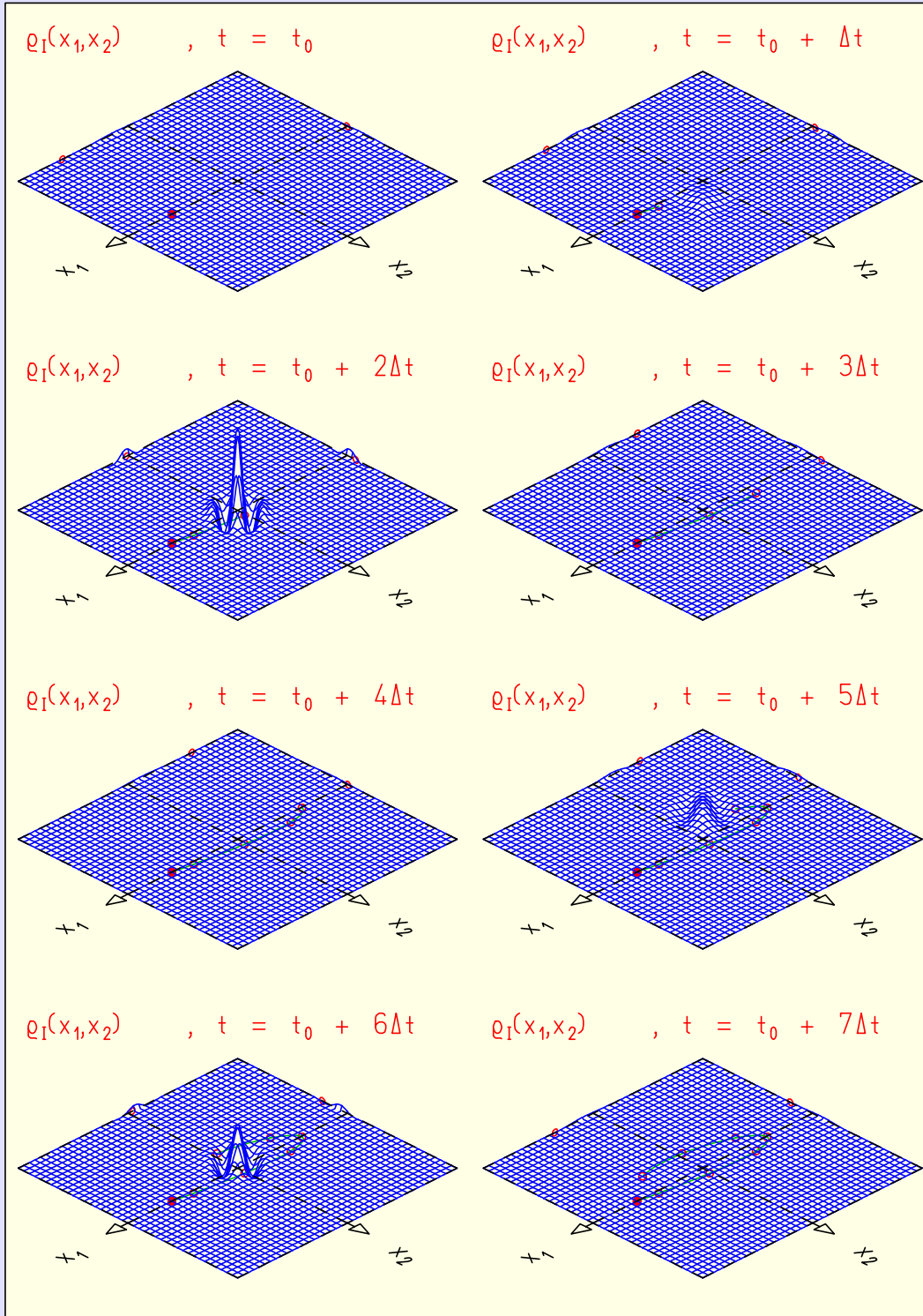


Fig. 9.5. The interference term for two indistinguishable particles forming a system of coupled harmonic oscillators. The distribution is shown for various times $t = t_0, t_1, \dots, t_N$. All initial conditions are the same as those for Figure 9.1.

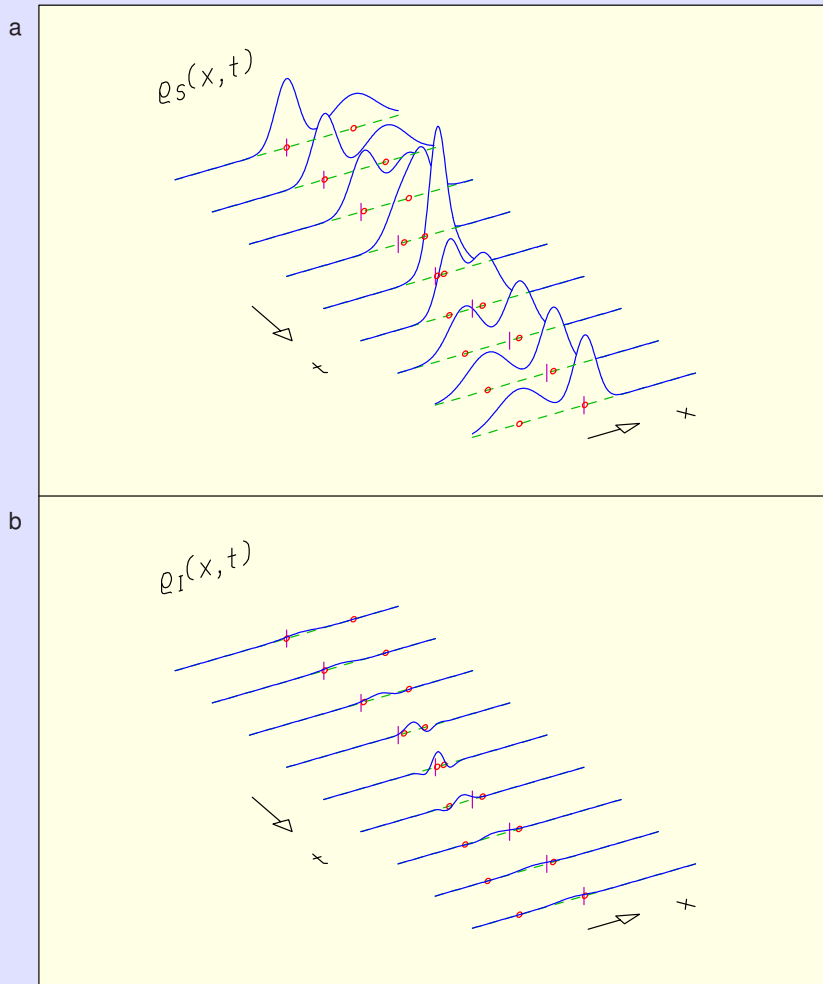


Fig. 9.6. Time developments of (a) the marginal distribution for the symmetrized probability density for two distinguishable particles and (b) the marginal distribution for the interference term for two indistinguishable particles. The particles form a system of coupled harmonic oscillators. All initial conditions are the same as those for Figure 9.3.