Instructions to use the MATLAB Programs to Generate Plots

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- The MATLAB files are Scalars.m and Fermions.m for the massive scalar field and massive spin $\frac{1}{2}$ fields, respectively.
- The script files for these programs are scalars_2.m and fermions_2.m
- For Figs. 1 - 3 in Sec. IIIA, the parameters used were $mq = 10^{1/2}$, $E_0 = 10$ or $E_0 = 50$ and $t0 = 0$.
    1. The value of $j0$ determines the profile of the classical current. For these plots $j0 = 0$ was chosen in the scripts files for the programs.
    2. The value $Za(N) = -E0$ was chosen in the initial conditions sections of the programs.
    3. In the initial conditions sections values for the error tolerances and upper and lower limit cutoffs for the momentum integrals must be chosen. Example: $d = 0.05$, $Kmax = -Kmin = 400$ and $opts = odeset(`RelTol', 1e-12, `AbsTol', 1e-12);$.
- For the figures in Sec. V:
    1. The value of $j0$ determines the profile of the classical current. It it set in the scripts files. To reproduce Figures 5, 6, 7, 8 and 9 choose $j0 = -E0./(1+t).\hat{}(2)$. To reproduce Figure 10 choose $j0 = 2 * E0 * w0 * sech(w0. * t).\hat{}2. * tanh(w0. * t)$.
    2. The value $Za(N) = 0$ was chosen in the initial conditions sections of the programs.
    3. The following values were also chosen in the initial conditions sections of the programs: $d = 0.01$, $opts = odeset(`RelTol', 1e-14, `AbsTol', 1e-14);$.
    4. The value of $t0$ wad $t0 = 0$ for all Figures except for Figure 10, where $t0 = -10$.
    5. The values of the cutoffs depend on the Figure, but for all figures $Kmin = -Kmax$ and $Kmax \geq 500$.
    6. The values of $E0$ and mq depend on the specific figure and can be obtained from the paper.