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Pion polarizability from four-point functions in lattice QCD

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We study the electric polarizability of a charged pion from four-point functions in lattice QCD as an alternative to the background field method. We show how to evaluate the correlation functions under special kinematics to access the polarizability. The elastic form factor (charge radius) is needed in the method which can be obtained from the same four-point functions at large current separations. Preliminary results from the connected quark-line diagrams will be presented.

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