Effective Mass of a Single π^0 Interacting With Itself J.M. EL-
DRIDGE, Union University, College of William and Mary, K. ORGINOS, College
of William and Mary — The effective mass of a single π^0 πon when interacting
with itself has been calculated. The calculation was done using C++ and It++, a
C++ library extension which attempts to emulate MATLAB. This calculation was
done by generating a matrix G from a database, and two meson state matrices M_0,
and M_1. G, M_0, and M_1 are each 1584×1584, however, careful algebra, know-
ing the properties of these matrices, enables only the top left 792×792 block of
each to be created, saving computation time and reducing numerical error. The π^0
self-interacting-effective-mass has been calculated to be 0.0755(190).

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