

Abstract Submitted
for the APR09 Meeting of
The American Physical Society

The Search for Dark Matter: Detection Rates of Axion-like Particles as a Function of Mass in Ge and NaI Detectors ERIC GUTMAN, The University of Chicago — Theoretical derivations of the pseudoscalar and scalar dark matter (DM) particle counting rates by detectors with Ge and NaI targets have been put forth by the DAMA research team and other such groups, with those of the DAMA team being recently disputed. This research impartially performs a computation of counting rate versus DM particle mass using each of these theories, presents the final quantitative results, and analyzes their significance and mutual compatibility. A background of the physical context behind the derivations is given first, and an discussion of their potential impacts, should they be found correct, on the theoretical and experimental exploration of dark matter concludes.

Eric Gutman
The University of Chicago

Date submitted: 06 Jan 2009

Electronic form version 1.4