

APR08-2007-030092

Abstract for an Invited Paper
for the APR08 Meeting of
the American Physical Society

Axions and Their Possible Role as Dark Matter

LESLIE ROSENBERG, University of Washington

The axion is a hypothetical elementary particle whose existence would explain the baffling absence of CP violation in the strong interactions. Its properties in addition make it a good dark-matter candidate. Even though dark-matter axions would make up the overwhelming majority of mass in the universe, they are notoriously difficult to detect. Undaunted, groups around the world deploy exquisitely sensitive axion detectors. These instruments are elegant and beyond state-of-the-art in novel ways. I'll review the role of axions as dark matter and the methods employed in searches.