

Abstract Submitted
for the APR13 Meeting of
The American Physical Society

The ADMX-HF (High Frequency) Experiment¹ K.W. LEHNERT,
U. of Colorado, ADMX COLLABORATION, ADMX-HF COLLABORATION —
For many years, the Axion Dark Matter eXperiment (ADMX) has searched for
dark-matter axions by their resonant conversion to photons in a high-Q microwave
cavity embedded in a strong magnetic field; to date focusing on the ~ 1 GHz range, or
 $m_a \sim$ few micro-eV. A second platform, ADMX-HF is now being constructed at Yale
University which will focus on technology development and a first look at data in the
 ~ 10 GHz range. Consisting of a 9T superconducting magnet (40 cm long x 14 cm
diameter), a dilution refrigerator and a quantum-limited receiver based on Josephson
Parametric Amplifiers (JPA) ADMX-HF is projected to achieve sensitivity within
the axion model band, despite its smaller volume than ADMX. ADMX-HF is a
collaboration of Yale, JILA/Colorado, UC Berkeley and LLNL, and by agreement
will create a unified data set with ADMX.

¹Supported by DOE Grants DE-FG02-97ER41029, DE-FG02-96ER40956, DE-
AC52-07NA27344, DE-AC03-76SF00098, NSF Grant 1067242, and the Livermore
LDRD program.

K. W. Lehnert
U. of Colorado

Date submitted: 10 Jan 2013

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