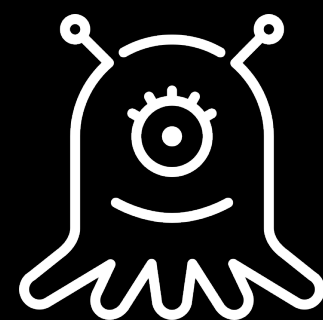
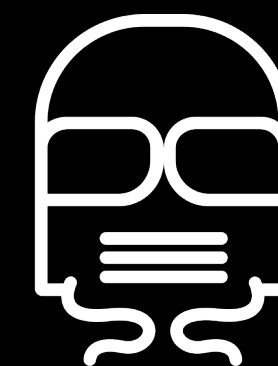


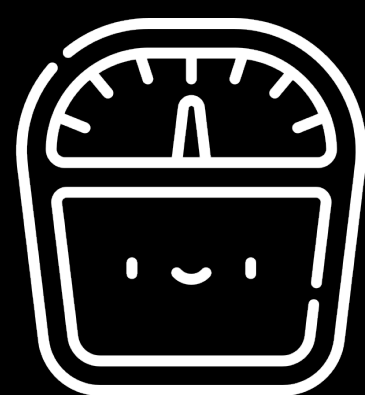
85% IS DARK MATTER



WITH WIMPS BECOMING LESS MOTIVATED,
ALTERNATIVE MODELS ARE GAINING TRACTION

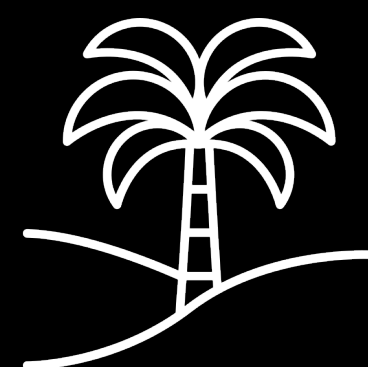


THE DARK PHOTON IS
ONE OF THEM



1.5 eV

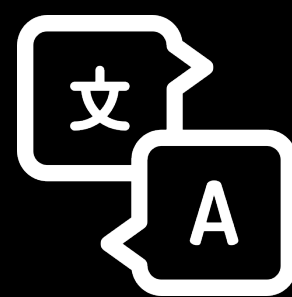
WE SEARCH FOR DP
WITH A MASS
AROUND 1.5 eV
USING A DIELECTRIC
HALOSCOPE



THE EXPERIMENT IS CALLED MUDHI, WHICH IN
ARABIC MEANS “LUMINOUS.” IT’S THE FIRST
DM EXPERIMENT EVER BEEN OPERATED IN THE
MIDDLE EAST!



A DIELECTRIC HALOSCOPE IS
COMPOSED OF THREE PARTS:
A STACK OF TWO
ALTERNATING DIELECTRICS,
A LENS, A PHOTODIODE.



THE STACK CONVERTS DARK
PHOTONS INTO ORDINARY
PHOTONS, WHICH GET
FOCUSSED AND DETECTED BY
THE PHOTODIODE.



WE DO NOT SEE AN EXCESS
OF SIGNAL EVENTS ABOVE
OUR BACKGROUND, SO WE
PLACE UPPER LIMITS ON
THE DARK PHOTON—PHOTON
COUPLING CONSTANT AT
90% C.L.