

1 Axion-photon

Haloscopes

- ABRACADABRA [1, 2]
- ADMX [3, 4, 5]
- ADMX-Sidecar [6]
- ADMX-SLIC [7]
- CAPP [8, 9, 10]
- BASE [11]
- HAYSTAC [12, 13]
- ORGAN [14]
- QUAX [15, 16]
- RADES [17]
- RBF [18]
- SHAFT [19]
- UF [20]
- UPLOAD-DOWNLOAD [21]
- ABRACADABRA (projection) [22]
- ADBC (projection) [23]
- ADMX (projection) [24]
- aLIGO (projection) [25]
- ALPHA (projection) [26]
- BRASS (projection) [27]
- DM-Radio (projection) [28]
- DANCE (projection) [29]
- LAMPOST (projection) [30]
- MADMAX (projection) [31]
- KLASH (projection) [32]
- ORGAN (projection) [14]
- TOORAD (projection) [33]

LSW/Helioscopes

- ALPS [34]
- CAST [35, 36]
- CROWS [37]
- OSQAR [38]
- PVLAS [39]
- ALPS-II (projection) [40]
- IAXO (projection) [41]
- IAXO (Galactic SN) [42]

Astro

- Chandra (Hydra) [43]
- Chandra (M87) [44]
- Chandra (NG7 1275) [45]
- Chandra (H1821+643) [46]
- Diffuse SN ALPs [47]
- Distance ladder [48]
- Fermi-LAT (NGC 1275) [49]
- Fermi-LAT (Extragalactic SNe) [50]
- HESS (PKS 2155-304) [51]
- Horizontal branch [52]
- Mrk 421 (ARGO-YBJ+Fermi): [53]
- Neutron Stars (Foster et al.) [54]
- Neutron Stars (Darling) [55]
- Neutron Stars (Battye et al.) [56]
- Solar neutrinos [57]
- SN1987A- γ [58]
- SN1987A- γ (low mass ALPs) [59]
- SN1987A- γ, ν (high mass ALPs) [60]
- Star clusters [61]
- Telescopes (MUSE) [62]
- Telescopes (VIMOS) [63]
- Fermi galactic SN (projection) [64]
- THESEUS (projection) [65]
- eROSITA (projection) [66]
- White dwarf initial-final mass relation [67]

Cosmology

- Ionisation fraction, EBL, X-rays [68]
- BBN+ N_{eff} [69]

2 Axion-electron

- EDELWEISS [70]
- Magnon non-demolition [71]
- LUX [72]
- Panda-X [73]
- SuperCDMS [74]
- XENON1T [75, 76]
- XENON1T (Solar basin) [77]
- Red giants (ω Cen) [78]
- Solar neutrinos [79]
- Magnons (projection) [80]
- Polaritons (projection) [81]
- DARWIN (projection) [82]
- LZ (projection) [83]
- QUAX [84, 85]
- Semiconductors (projection) [86]
- White dwarf hint [87]

3 Axion-nucleon

Note: CASPER and nEDM limits account for stochastic correction reported in [88]

- CASPER-ZULF-Comagnetometer [89]
- CASPER-ZULF-Sidechain [90]
- nEDM (ultracold neutrons and mercury) [91]
- NASDUCK [92]
- K-3He comagnetometer [93]
- Old comagnetometers [94]
- Torsion balance [95]
- Hot Neutron Star (HESS J1731-347) [96]
- SN1987A Cooling [97]
- SNO (deuterium dissasociation) [98]
- Proton storage ring (projection) [99]
- DM comagnetometer (projection) [94]
- CASPER-wind (projection) [90]

4 Axion-EDM

- CASPER-electric [100]
- nEDM [91]
- SN1987A [101]
- CASPER-electric (projection) [102]
- Storage Ring EDM (projection) [102]

5 Axion mass versus f_a

- BBN [103]
- Binary pulsars and Solar core constraint on $\bar{\theta}$ [104]. I include minor numerical corrections made by [105, 106].
- GW170817 [107]
- nEDM [91]
- SN1987A [108]
- Neutron stars (projection) [104].
- NS-NS and NS-BH Inspirals (projection) [104].

6 CP-violating couplings

Combined constraints [109]

Scalar-nucleon

- Red giants [110]
- MICROSCOPE [111].
- Eot-Wash [112, 113, 114]
- Irvine [115]. Corrected to 2σ limit by [116]
- HUST [117, 118, 119, 120].
- Stanford [121]
- IUPUI [122].
- Wuhan [116]

Pseudoscalar-electron

- Red giants [110]
- Eot-wash [123]
- NIST [124]
- SMILE [125].
- QUAX [126, 127]
- Washington [128, 129].
- XENON1T [130]
- Magnon (projection) [81]
- QUAX (projection) [126].

Pseudoscalar-nucleon

- Neutron star cooling [96]
- Washington [131]. Limit taken from [132].
- SMILE [125].
- Mainz [133]
- ARIADNE (projection) [134]
- CASPEr-wind (projection) [102]
- DM comagnetometer (projection) [94]

7 Black hole superradiance

- Baryakhtar et al. [135] (just Stellar mass BHs)
- Mehta et al. [135] (Stellar mass and SMBHs)
- Stott [136]
- Cardoso et al. [137] (dark photon)

8 Dark photons

Combined constraints [138]

SM photon-DP transitions

- Coulomb [139, 140, 141, 142, 143],
- Plimpton & Lawton's experiment [144, 143]
- Atomic spectroscopy [145]
- Atomic force microscopy (AFM) [143]
- Static magnetic fields of the Earth [146]
- Static magnetic fields of the Jupiter [147].
- ALPs [34]
- SPring-8 [148]
- UWA-LSW [149, 150]
- ADMX-LSW [151]
- CROWS [37].
- TEXONO [152]
- Crab nebula [153]
- COBE and FIRAS [154]

Production in stars

- CAST [155]
- SHIP [156]
- HB and RG stars [157]
- Neutron stars [158]
- Solar neutrinos [159]

Dark matter cosmology/astro

- Arias et al. [160]
- Witte et al. [161, 162]
- Caputo et al. [163, 154],
- IGM [164],
- Leo T dwarf [165]
- Gas clouds [166]

Dark matter experiments

- Reinterpreted axion limits [138]
- DAMIC [167]
- Dark E-field Radio [168]
- DM Pathfinder [169]
- FUNK [170]
- SENSEI [171]
- SHUKET [172]
- SuperCDMS [173]
- SuperMAG [174, 175]
- SQuAD [176],
- Tokyo dish antennae experiments [177, 178, 179]
- WISPDMS [180]
- XENON1T/XENON100 [86, 130, 181, 182].

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