## Dark matter mass aeV feV μeV zeV peV neV meV **PQ Scale** [GeV] $10^{27}\ 10^{26}\ 10^{25}\ 10^{24}\ 10^{23}\ 10^{22}\ 10^{21}\ 10^{20}\ 10^{19}\ 10^{18}\ 10^{17}\ 10^{16}\ 10^{15}\ 10^{14}\ 10^{13}\ 10^{12}\ 10^{11}\ 10^{10}\ 10^{9}\ 10^{8}\ 10^{7}$ Frequency = $m/2\pi$ μHz mHz Hz kHz MHz **GHz** THz Coherence time $\sim (mv^2)^{-1}$ $10^4 \, \mathrm{yr}$ century week hr min yr S ms Coherence length $\sim (mv)^{-1}$ 100 km AU $R_{\oplus}$ $R_{\odot}$ km mpc pc $\mathbf{m}$ cm Black Fuzzy hole DM spins **Axion-photon** Cavities Birefringent cavity Dish/reflector **Earth** Lumped element Dielectric haloscope **CMB** SRF upconversion Plasma **Axion-fermion** Magnons Comagnetometers **NMR Axion-EDM Nucleon EDMs NMR** Dark photon **Cavities** Dish/reflector **Earth** Dielectric haloscope Lumped element SRF upconversion Plasma **Scalars** Mechanical resonators Atom interferometry Atomic/nuclear clocks **Vectors Torsion balance Optomechanical**

Optical interferometers

**Atom interferometry** 

Dark matter mass [eV]

detectors