Electric dipole moments (EDMs)

Most EDM experiments are small scale. The infrastructure required is typically available at a research university. Proposals using radioactive nuclei are an exception.

Electron:

- UK (YbF), Netherlands (BaF), Chicago (ThO^{*}), Boulder (HfF⁺). Several orders of magnitude improved sensitivity planned using laser cooling/trapping for YbF & BaF. ThO^{*} & HfF⁺ are underway as third generation experiments not using laser cooling.
- For the UK (Imperial College):
 - Laser cooled beam experiment is preparing to take data. Expect a measurement below the current world sensitivity by early 2026.
 - Trapped YbF (lattice) experiment is at the technological development stage. Expect several order of magnitude increase in sensitivity by 2028.
 - Costs are mainly for staff, PDRAs. University based experiments don't benefit from laboratory facilities or personnel.
- Future plans for polyatomic molecules, cryo-isolated molecules, exotic species. Several orders of magnitude in sensitivity seems possible.

Neutron:

• PSI experiment is the most advanced and currently has the best facility.

Nuclear:

- US experiment underway on TIF (mainly sensitive to proton edm), enabled by advances in UV laser technology.
- Magnetic quadrupole moment and Schiff moment experiments are being discussed, using heavy nuclei (e.g. Au/Ag containing molecules), including actinides. These have not reached the proposal stage.
- Storage ring experiments proposed for stable particles, e.g. proton, deuteron. GSI has perhaps the most advanced proposal. These require a dedicated precision storage ring.