

**Parity and time reversal violation in atoms and nuclei and
test of the Standard Model.**

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In this talk I want to present two different topics:

1. Parity and time invariance violating nuclear forces produce P,T-odd nuclear moments. In turn, these moments can induce electric dipole moments (EDM) in atoms. EDM of diamagnetic atoms is induced by nuclear Schiff moment. We explain the origin of Schiff moment and mechanism of collective enhancement (up to 1000 times) in deformed nuclei, describe electric field produced by the Schiff moment, perform atomic calculations of EDM in atoms of experimental interest and present tests of CP violation models. Suggestion of new experiments: EDM of odd isotopes of Ra and Rn may exceed EDM of lighter atoms by 3-4 orders of magnitude!

2. Recent measurements of Cs weak charge by Boulder group indicated possible deviation from the Standard Model predictions. We performed new calculations of parity violation in Cs including all-orders summation of dominating diagrams in many-body theory and strong Coulomb field radiative corrections. The theoretical error was reduced two times. Conclusions for the Standard Model and possible "new physics" will be discussed.