

*Counting and spin analysis of ultra cold neutrons
in the nEDM experiment*

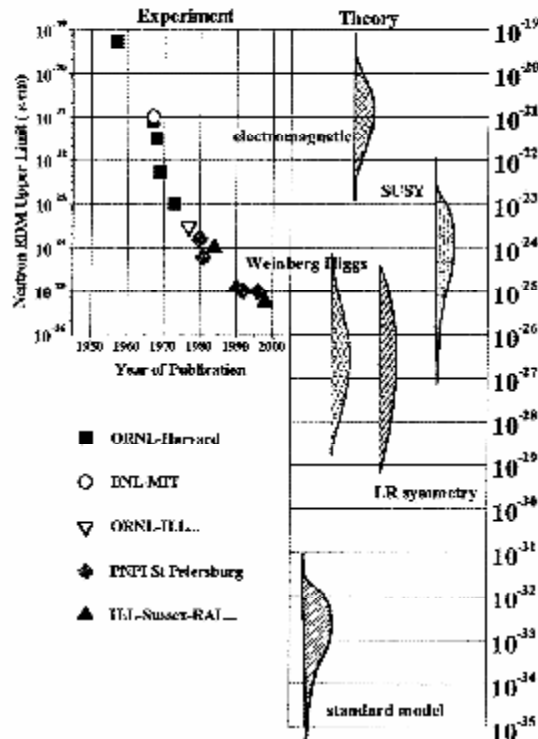
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- EDM : Electric Dipole Moment (of e, μ , τ ...)
- Search for time reversal symmetry violation : **T-violation**



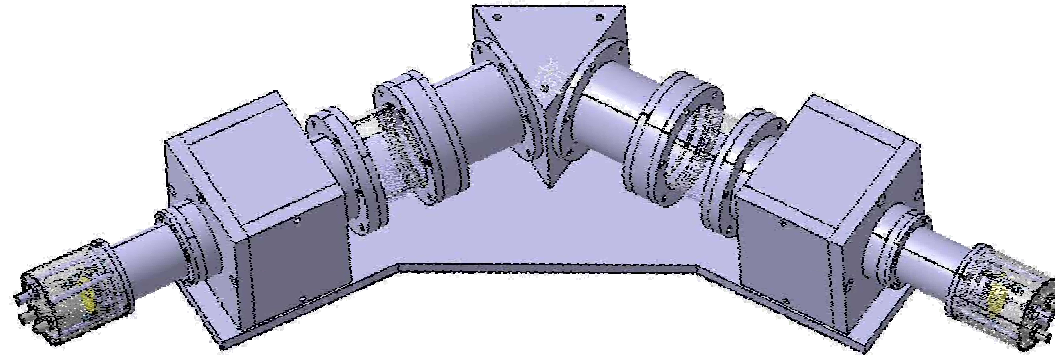
nEDM experiment : Search for a neutron Electric Dipole Moment

Current limit : $d_n < 2.9 \cdot 10^{-26} \text{ e.cm}$

How to measure the nEDM ?

the spin ($\mathbf{d}_n = d_n \hat{\mathbf{i}}$)

- Conception and test of a new spin analysis system



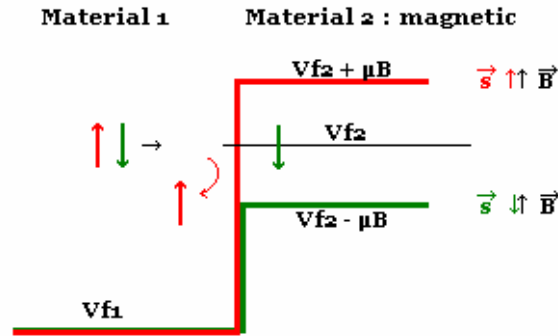
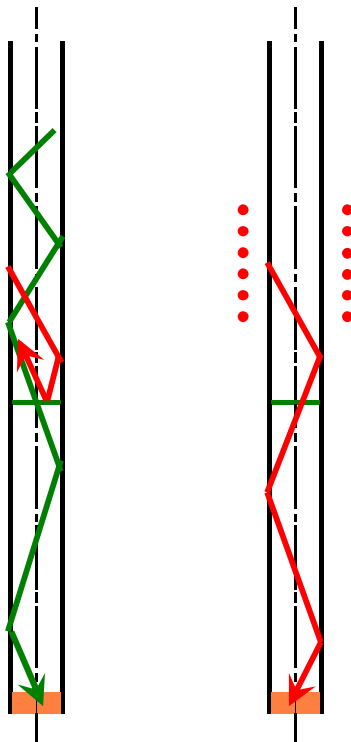
- Comparison of existing detectors for UCNs



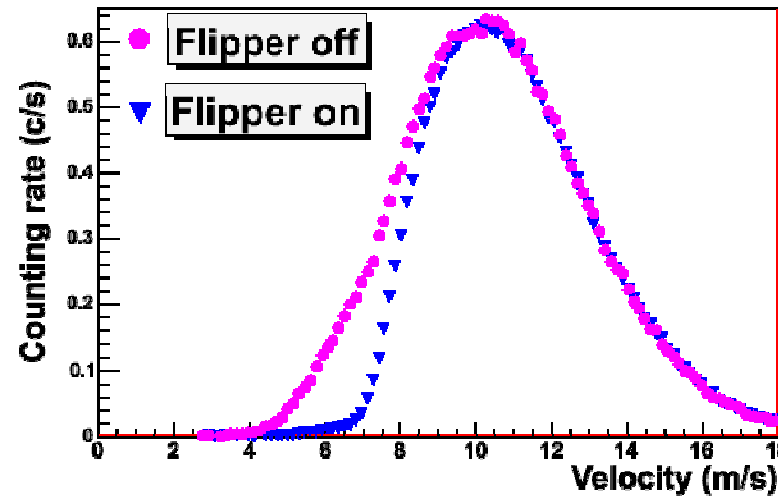
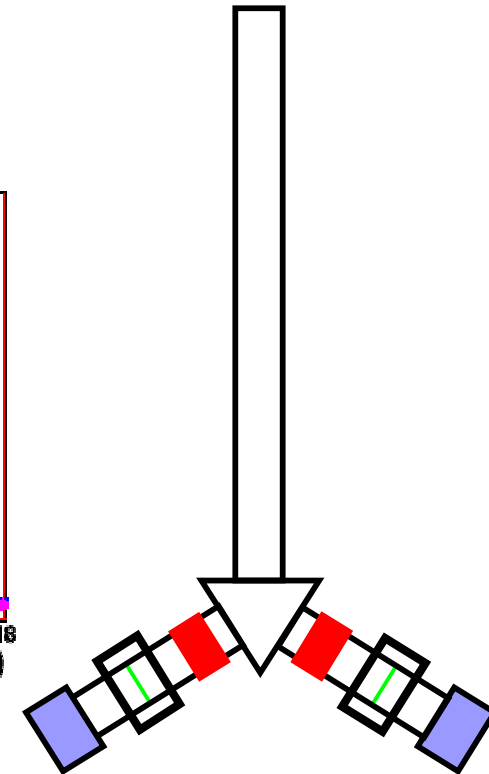
GS10 detector developed
by LPC (^6Li doped)

Principle of spin analysis

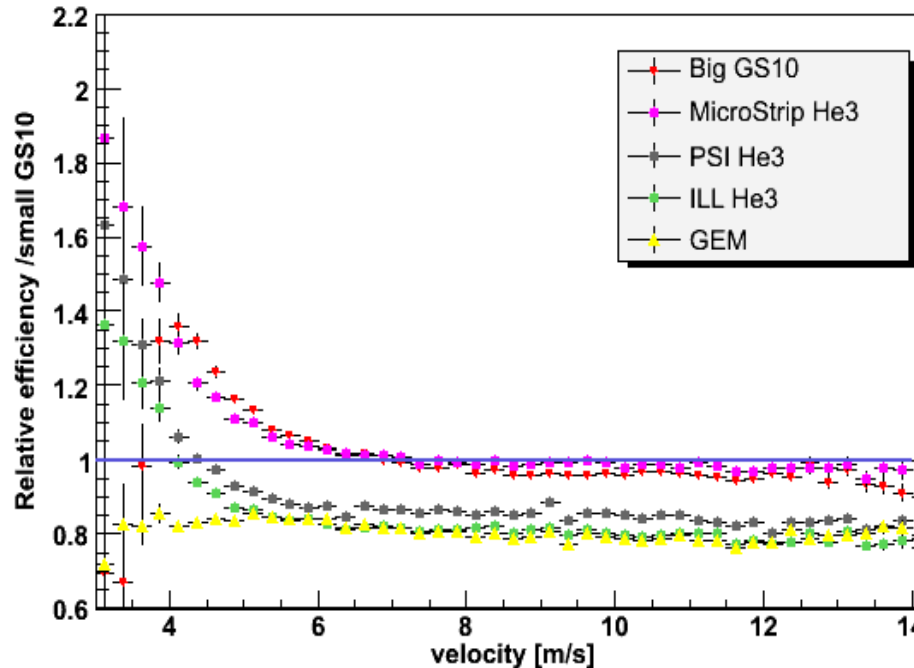
Sequential way



Simultaneous way



Measured velocity spectra @ILL PF2



GS10 and He3 seem to give the best results in terms of efficiency

The "V" system works but need to work on the transmission