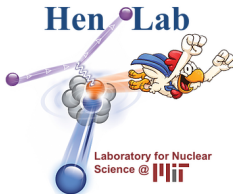


Searching for BSM forces in the neutrino energy spectrum from ^8Li decay at IsoDAR

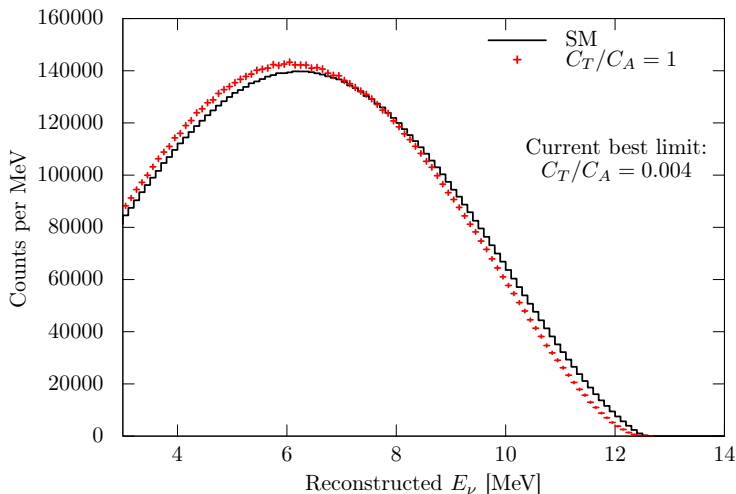
Axel Schmidt

MIT

January 16, 2018



Can the neutrino energy spectrum say anything about BSM currents in β -decay?



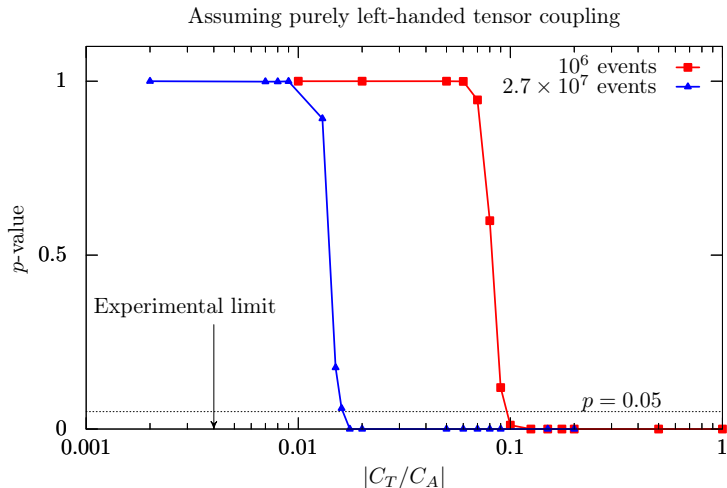
^8Li β -decay with IsoDAR

Everything is SUPER-PRELIMINARY

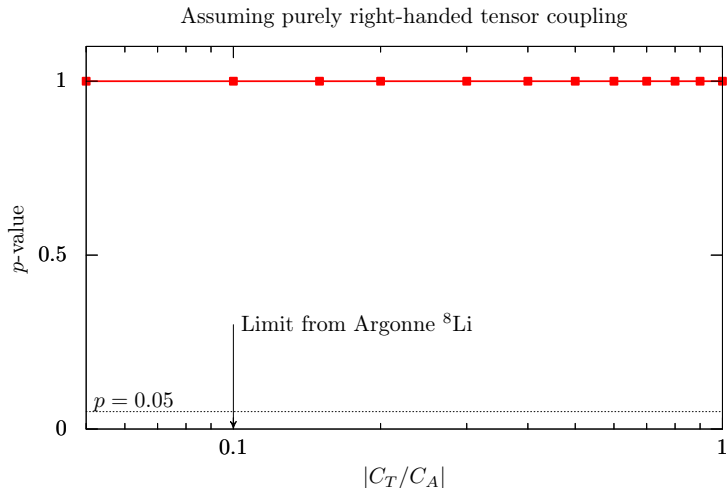
- Assume pure Gamow-Teller
- Assume general tensor coupling: C_T, C'_T
- Assume $\sigma_E/E = 0.3\%/\sqrt{E}$
- Assume 3 MeV threshold

Can a spectrum measurement reject $C_T = C'_T = 0$?

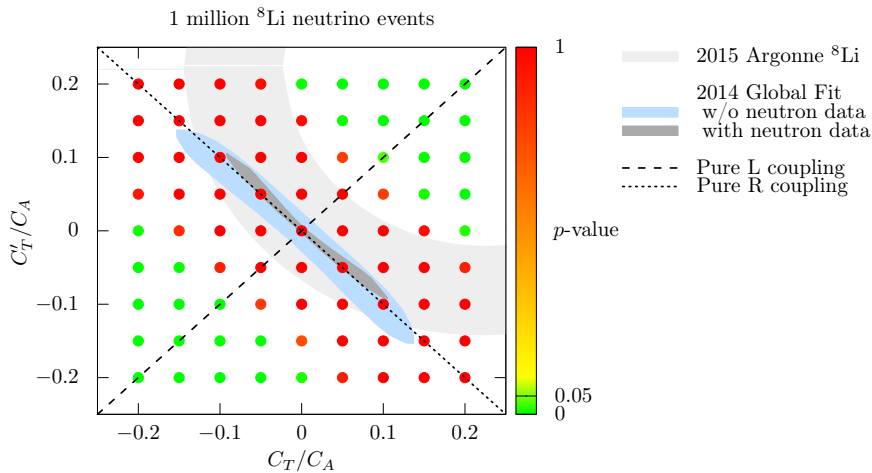
Assuming $C_T = C'_T$



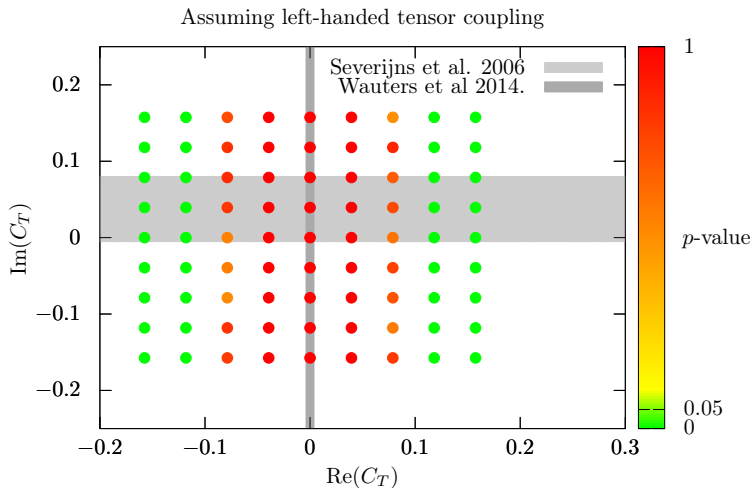
Assuming $C_T = -C'_T$



Assuming real C_T, C'_T



Assuming complex $C_T = C'_T$



Assuming complex $C_T = -C'_T$

