

Update 01/17/2016

Shaun Alsum

P&ID

- Look at it...
- 14 RTDs right now
- 3 LS (where to represent the other two?)
- Gas bypass line, (move to electronic instrumentation section?)

EFT Steps

- Obtain dR/dE_R for each operator

$$\frac{dR}{dE_R} = \frac{\rho_0}{32\pi m_\chi^3 m_p^2} \int_{v > v_{min}} \frac{f(\vec{v})}{v} (c_i^{(N)})^2 \sum_{k=M, \Sigma'', \Sigma', \Delta, \Phi'', \tilde{\Phi}'} a_{iik} F_k^{(N,N)}$$

- Tables of a_s and F_s available
- Obtain spatial distribution (uniform) in $S2$ space for different times.
- Create signal models in PLR using these two pieces of information.
- Ensure backgrounds are known at the correct energies for all operators.

Approach

- Find dR/dE_R for O_1 (spin independent).
- Get spatial distribution (should only have to be done once, could be reused for each).
- Create O_1 specific signal model
- Compare C_1 to cross section result from recent paper.
- Make a function to determine dR/dE_R for all Os.
- Based on signal model experience, either make a bunch of separate ones, or one customizable one that can take a variable dR/dE_R