SUPL Neutron Flux M easurem ents

- \circ Previous m easurem ents with BF₃ detectors:
 - $^{\rm Y}$ 2.66 x 10-6 cm $^{-2}\text{S}^{-1}$ fastneutrons
 - $^{\rm Y}$ 4.73 x 10⁻⁶ cm ⁻²s⁻¹ therm alneutrons
 - Y Assumption: The BF₃ had 100% therm aldetection efficiency; so the flux is just the count rate/surface area.
 - ⁰ Is this realistic?
 - Y Backgrounds?
 - ^ΰ Gamma
 - ° Aþha,n in housing



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[°] Inconsistent results:

- Y Trend in therm aldata?
- Y W hy is fast flux greater at deeper site?

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- ° CLYC measurements (using SUPL flux):
 - $^{\gamma}$ 1†x1†(ANSTO)crystal:
 - ⁰ 17 cpd therm alneutrons.
 - ⁰ 27 cpd therm al+ fastneutrons.
 - Y 1.5†x 1.5†crystal:
 - ⁰ 58 cpd therm alneutrons.
 - ⁰ 91 cpd therm al+ fastneutrons.
 - Y Arbitrary minimum statistics of 10K events:
 - 11x1+ (ANSTO) crystal: 1.6 years (therm al), 2.7 years (fast).
 - $^{\circ}$ 1.5†x1.5†crystal: 172 days (therm al), 312 days (fast).