

Elastic $^3\text{H}/^3\text{He}$ Ratio

(Myers/Higinbotham/Arrington PR12-14-009)

Precise χEFT calculations of $A=3$ radii to better than 1%
(Piarulli et al., Phys. Rev. C 87 014046)

Previous data on ^3H “limited”

We can do better!

Measure relative to ^3He

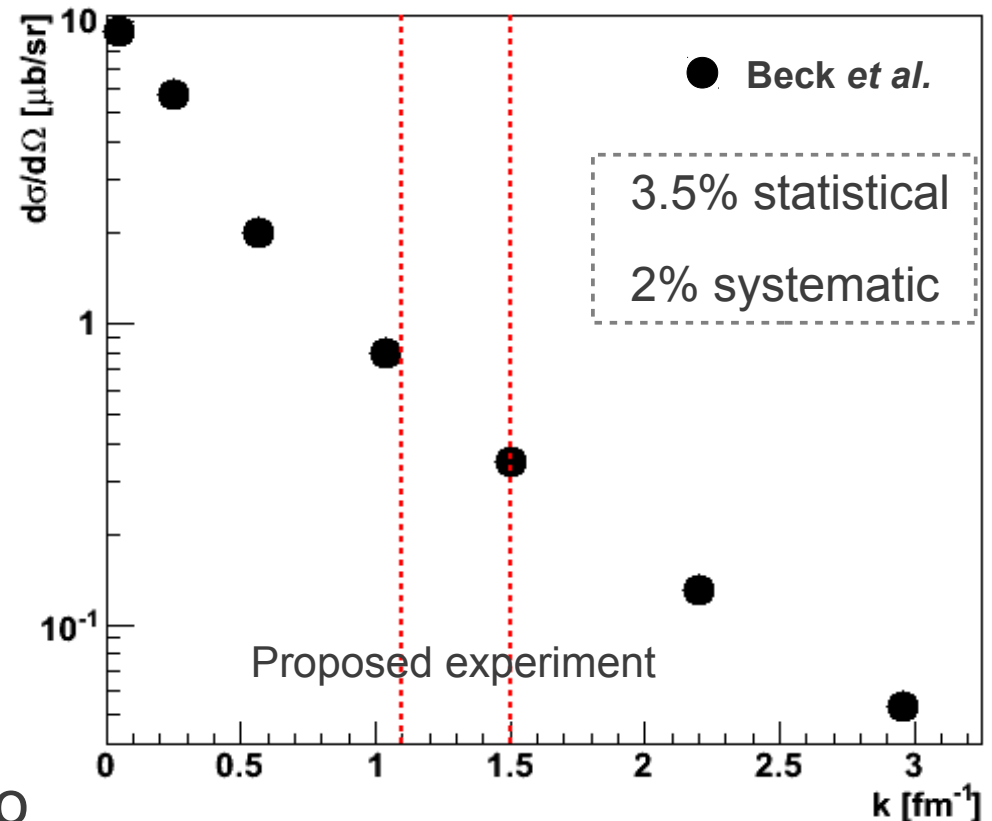
$$r_{^3\text{He}} = 1.9642(11) \text{ fm}$$

2% total uncertainty in $^3\text{H}/^3\text{He}$ ratio

$$\Delta r = 0.20 \pm \mathbf{0.10} \text{ fm (current)}$$

$$\Delta r = 0.20 \pm \mathbf{0.02} \text{ fm (proposed)}$$

^3H Cross Sections



Only 36 hours