

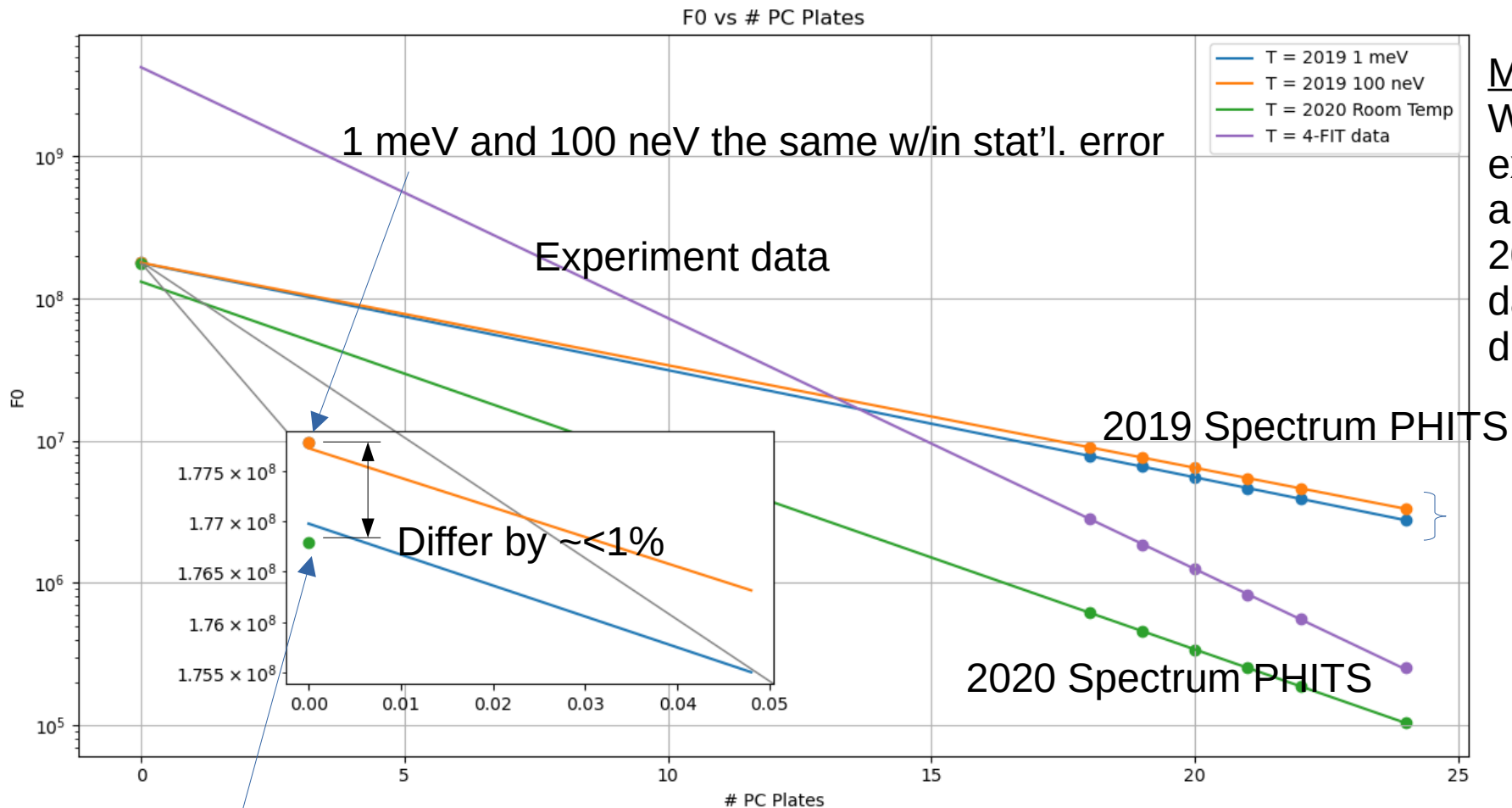
Simulations Update

UT – ORNL n → n' Group Meeting
07/20/2023
Cary Rock

Running PHITS simulations

- 2019 and 2020 Spectrum simulation
- 2019: 100 neV and 1 meV
 - 100 neV: {0, 2, 4, 8, 12, 16, 18 – 24}\{23}
 - 2 – 16 not included in this presentation
 - 1 meV: {0, 18 – 24}\{23}
- 2020: Room Temperature (assumed ~25 meV)
- All: 0 PC point is at room temperature

Plot

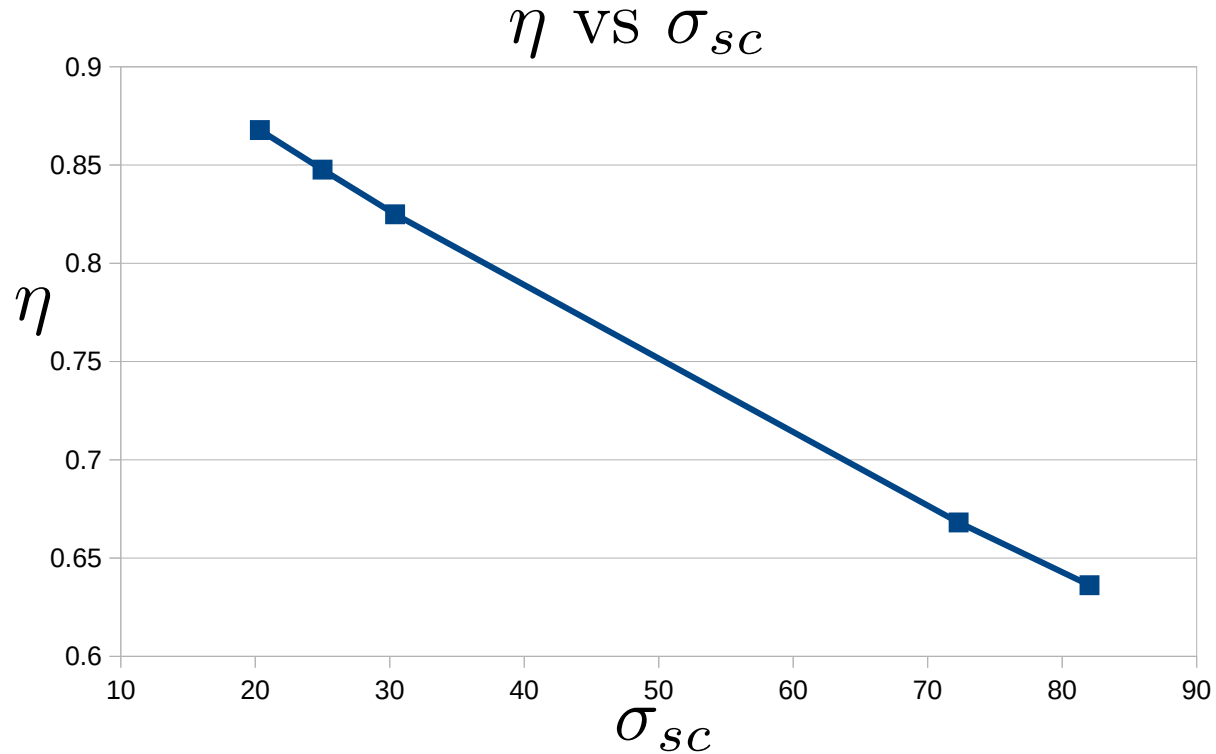


Major question:
Why are the experimental and 2019 (or 2020) Spectrum data so different?

Mult. by 10 for statistics

Scattering Cross Sections

- PHITS (probably) uses ENDF data for determining relevant cross-sections based on temperature
 - sig ~ 30 b via ENDF
- NIST taken at ~thermal
 - sig ~ 73 b via guess and check to match experiment



END