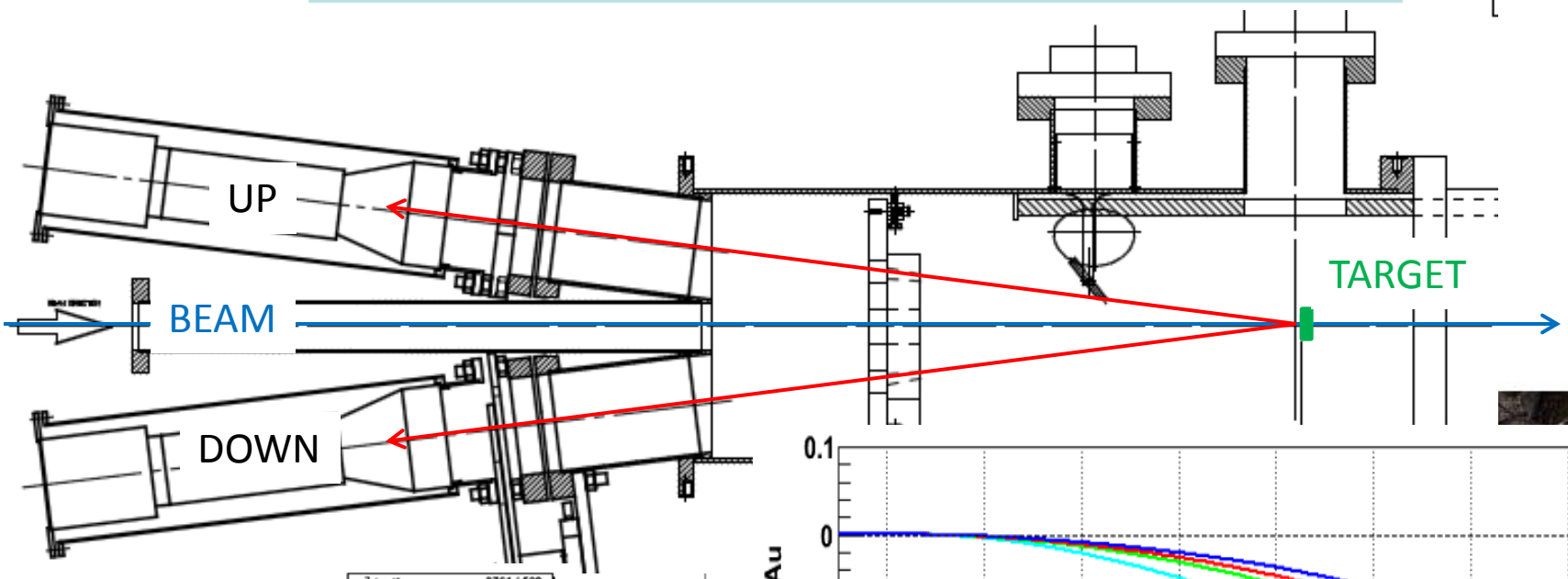
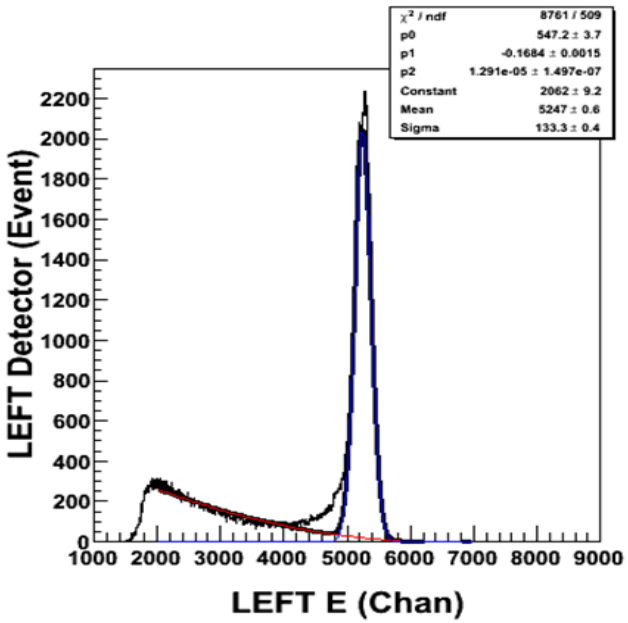
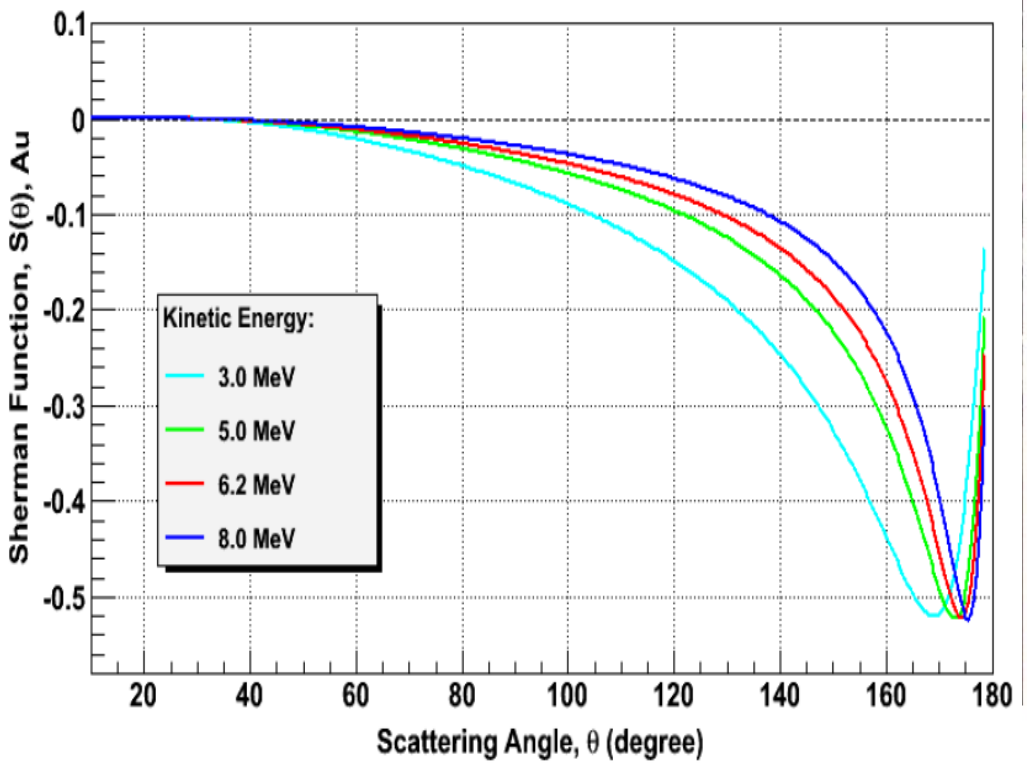
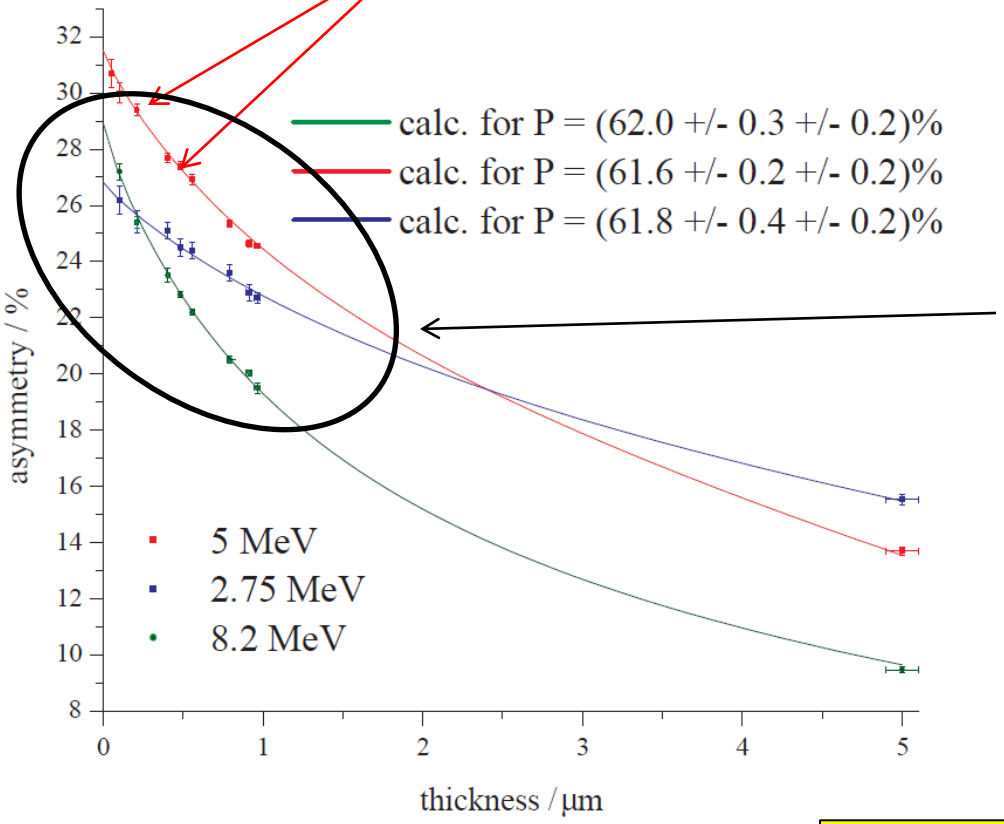
$$\sigma(\theta) = I(\theta)[1 + S(\theta)\vec{P} \bullet \hat{n}]$$







Effective analyzing power depends on foils thickness

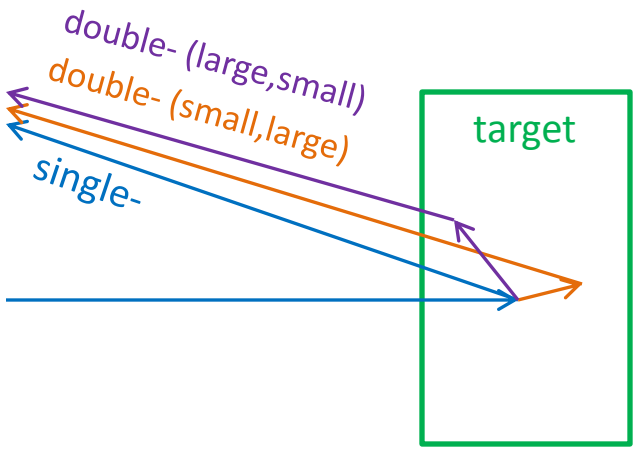


In late 90's Mott was calibrated and with help of Charles Horowitz a model-dependency was successfully tested.

The results and analysis were not well documented or published in a peer reviewed journal.

We would like to repeat the calibration & model-dependent analysis, ensuring sound theoretical treatment and exploring improvements in simulation

Our goal is to demonstrate high precision ~1%.



<u>Theory Collaboration or Support</u>

Input on proposed model and simulation strategy
⇒ (multiple-scattering, energy loss, 90 deg scattering)

Provide and develop (σ, S, T, U) code/tables
⇒ (Corrections, Geant4 implementation)

Input on level of precision, size of uncertainty in model
⇒ (soundness or model, approximations, unknowns?)