

Polarized ^3He Target Lab Status

Polarization Discrepancy

May 30, 2002

NMR-EPR Calibration Constant for Duke:

- $C_{nmr-epr} = 2.72 \text{ \%}/\text{mV}$
- $C_{nmr} = 100.0 / (\Phi_{He} * n_{He} * C_w)$
- For Duke, $\Rightarrow C_w = 0.07877$ and $\Phi_{He} = 39.62 \text{ cm}^2$,
or $\Phi_{He} = 52.48 \text{ cm}^2$ and $C_w = 0.05945$
- If Φ_{He} and S_w is correct $\Rightarrow \Phi_w = 32.85 \text{ cm}^2$,
or $\Phi_w = 43.52 \text{ cm}^2$ and S_w is not correct!

Cell (40cm)	Brunhilde	Exodus	Charly
C_w predicted	0.08661	0.08502	0.09055
C_w corrected	0.08558	0.08558	0.09106