



University
of Regina

Luminosity Study for the LD2 Target

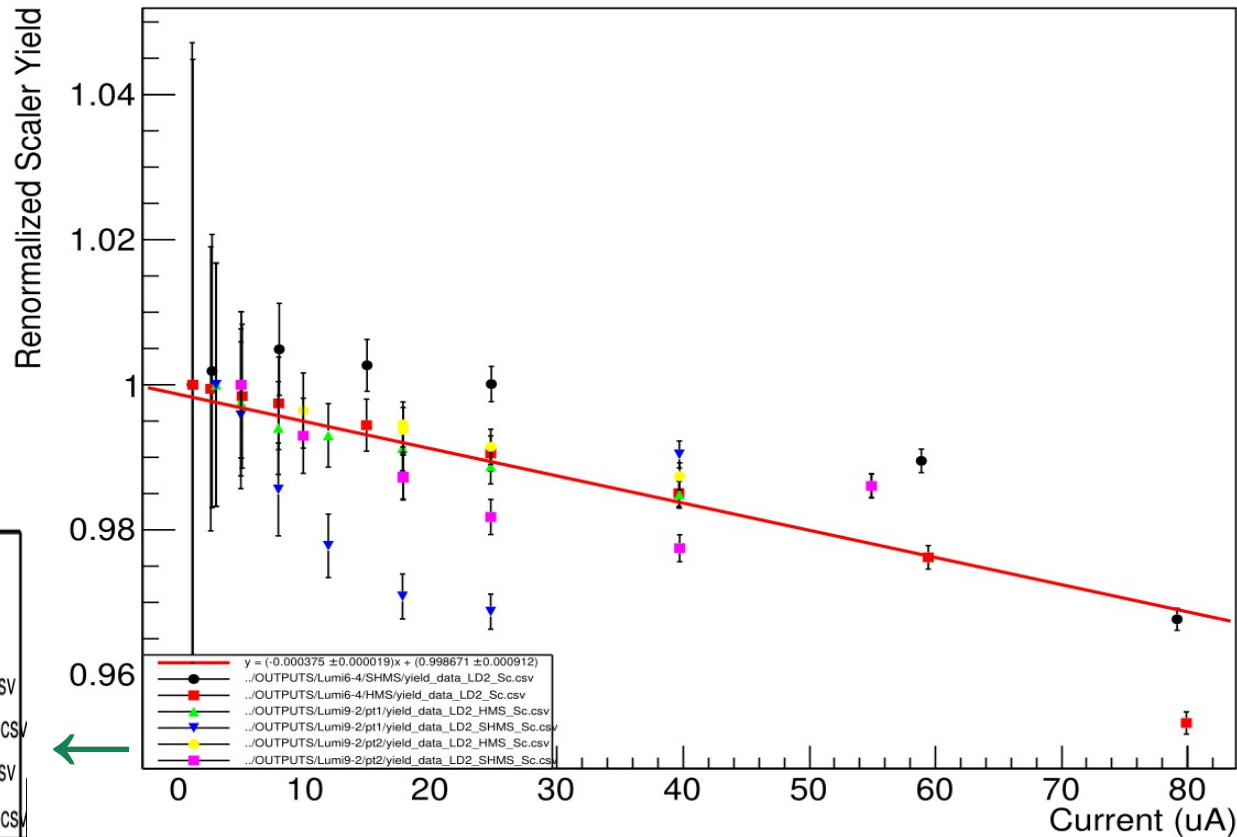
Nermin Sadoun

Jun 5, 2026

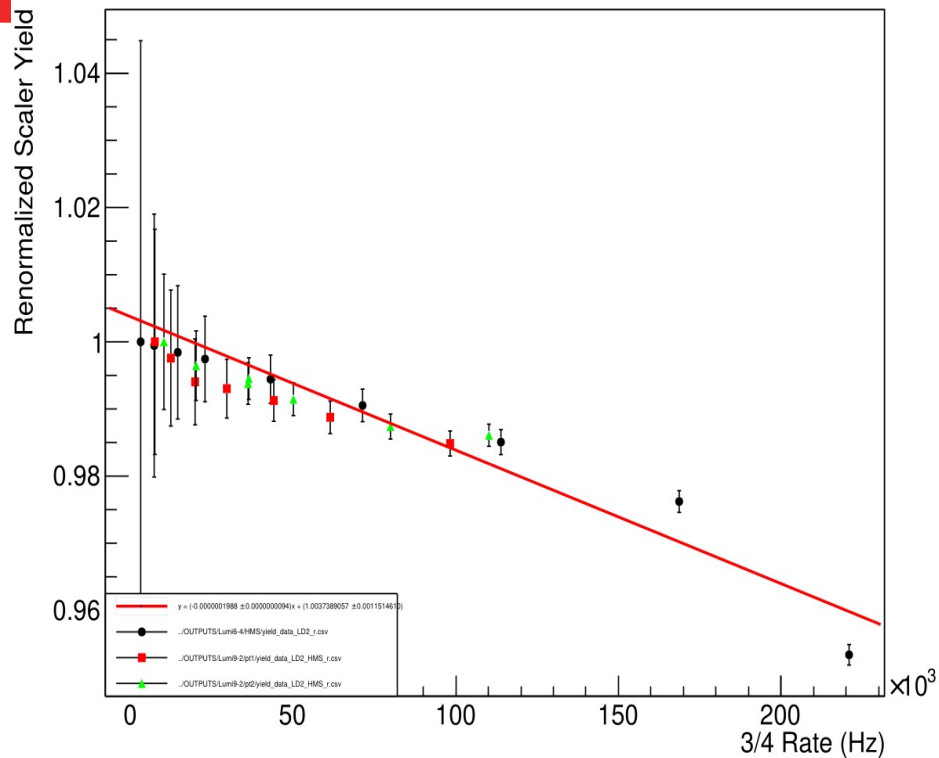
LD2: Scaler (HMS&SHMS)

LD2_ALL Data Combined

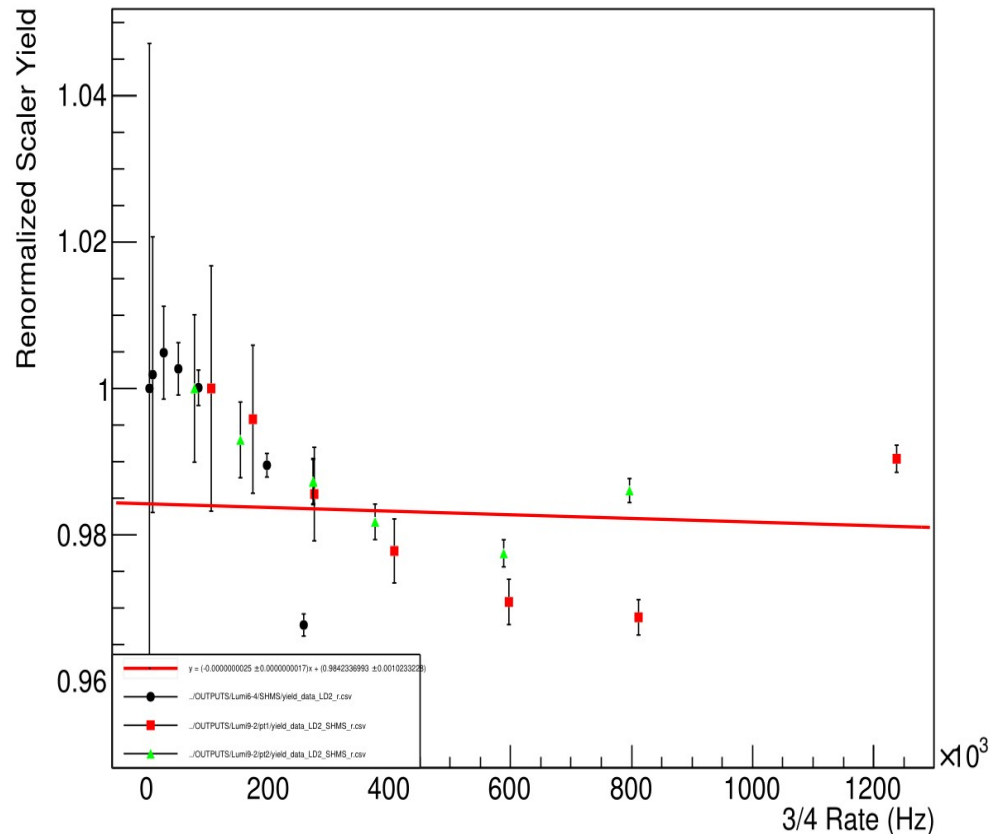
Slope:
 $(-3.75 \pm 0.19) \times 10^{-4} (\mu\text{A})^{-1}$



LD2: Renorm Rel Scaler Yield vs Rate (ELT correction issues above 200 KHz)



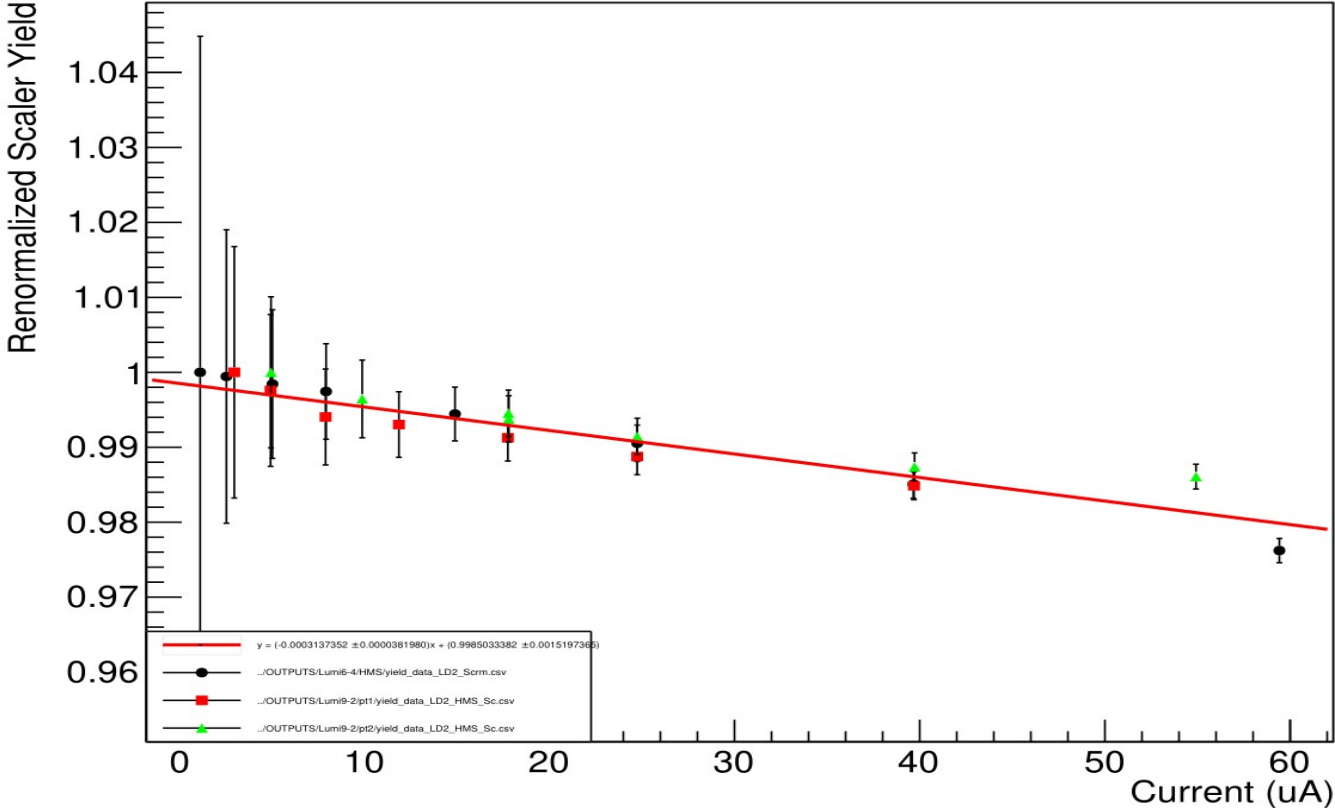
Combined HMS Rel. Scaler Yield vs $\frac{3}{4}$ Rate



Combined SHMS Rel. Scaler Yield vs $\frac{3}{4}$ Rate

HMS: Removing runs of a rate higher than 200 KHz

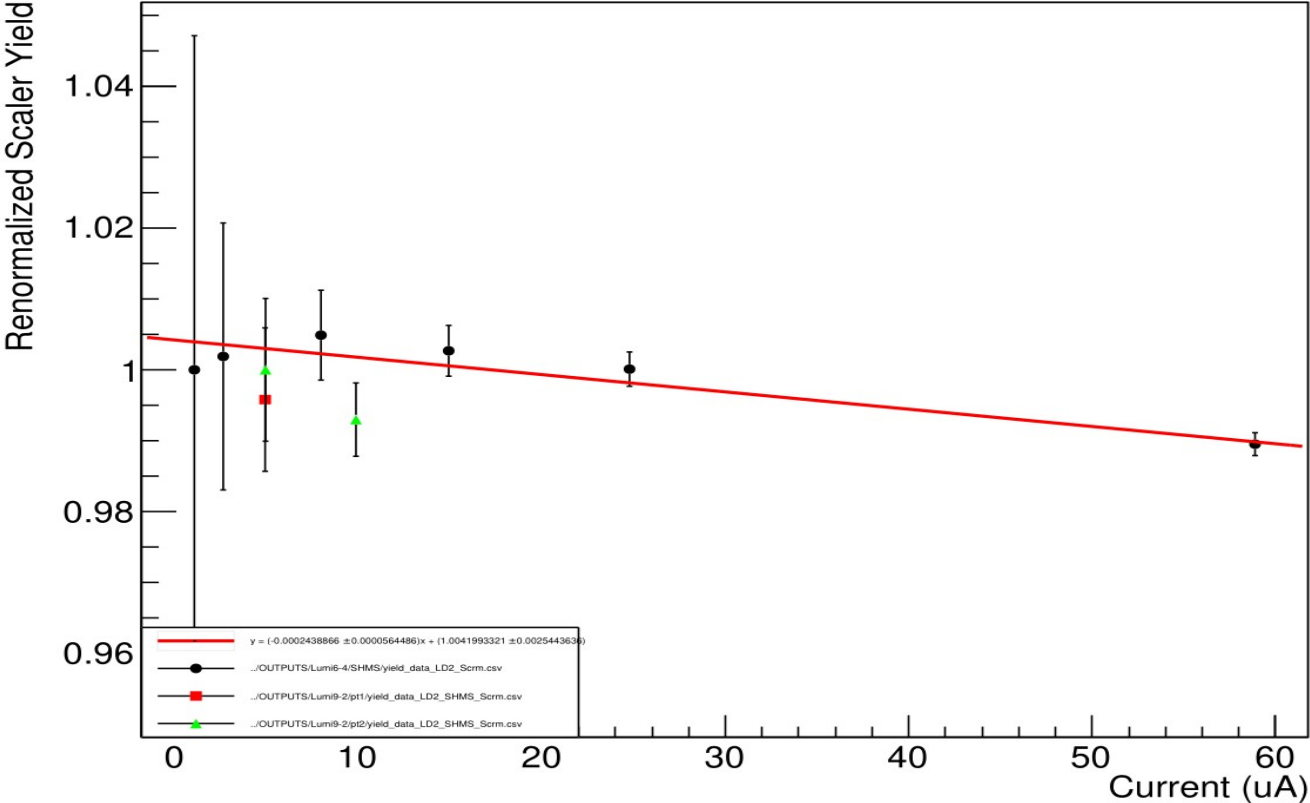
HMS_LD2 Data Combined



Slope:
 $(-3.137 \pm 0.382) \times 10^{-4} (\mu\text{A})^{-1}$

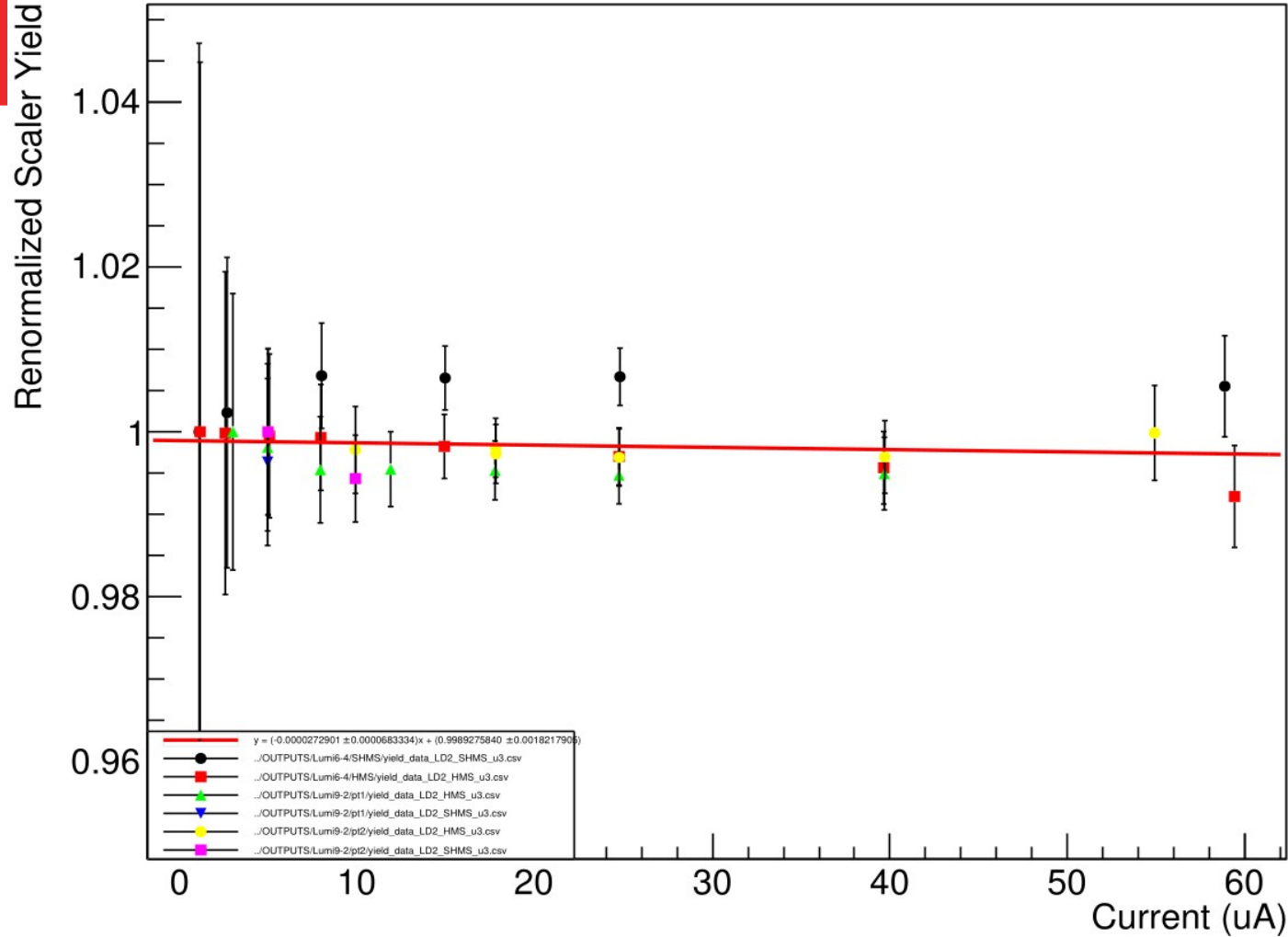
SHMS: Removing runs of a rate higher than 200 KHz

SHMS_LD2 Data Combined



Slope:
 $(-2.439 \pm 0.564) \times 10^{-4} (\mu\text{A})^{-1}$

LD2_ALL Data Combined



Slope:
 $(-0.273 \pm 0.683) \times 10^{-4} (\mu\text{A})^{-1}$