

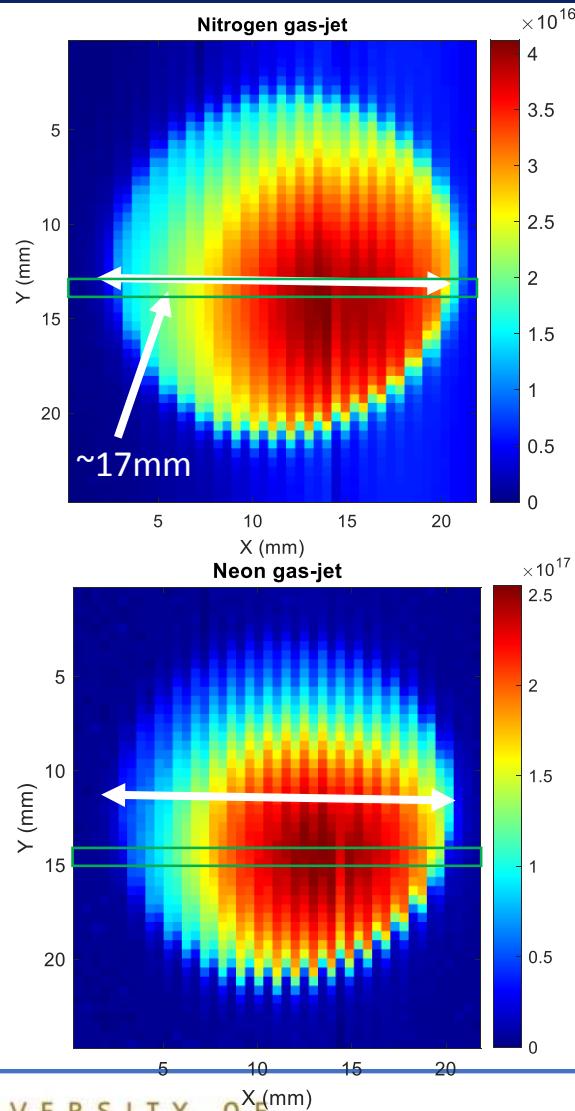
# CI update

CI team



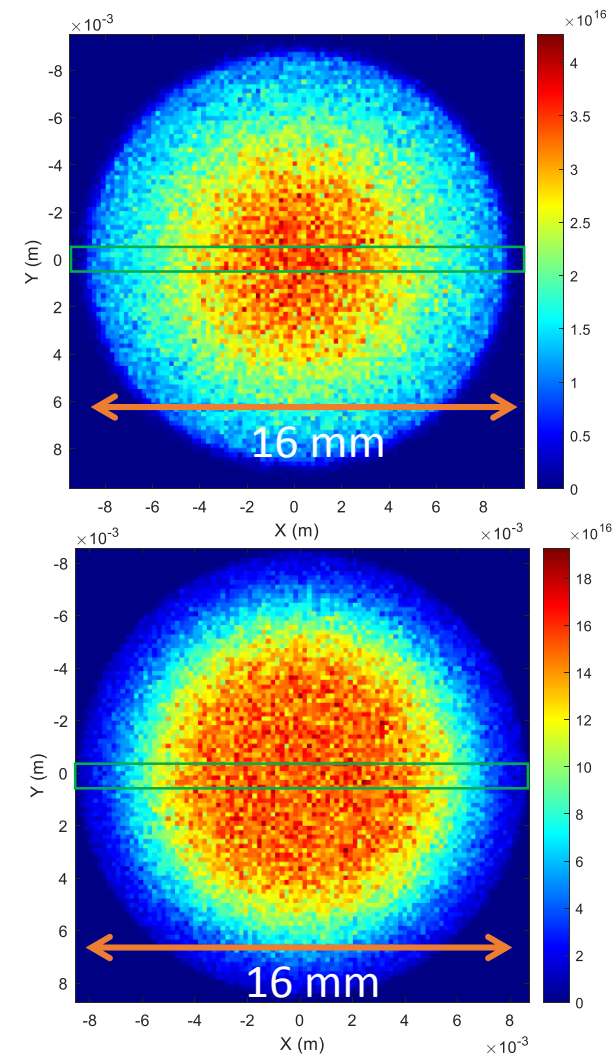
UNIVERSITY OF  
LIVERPOOL

# Experiment vs Preliminary simulation

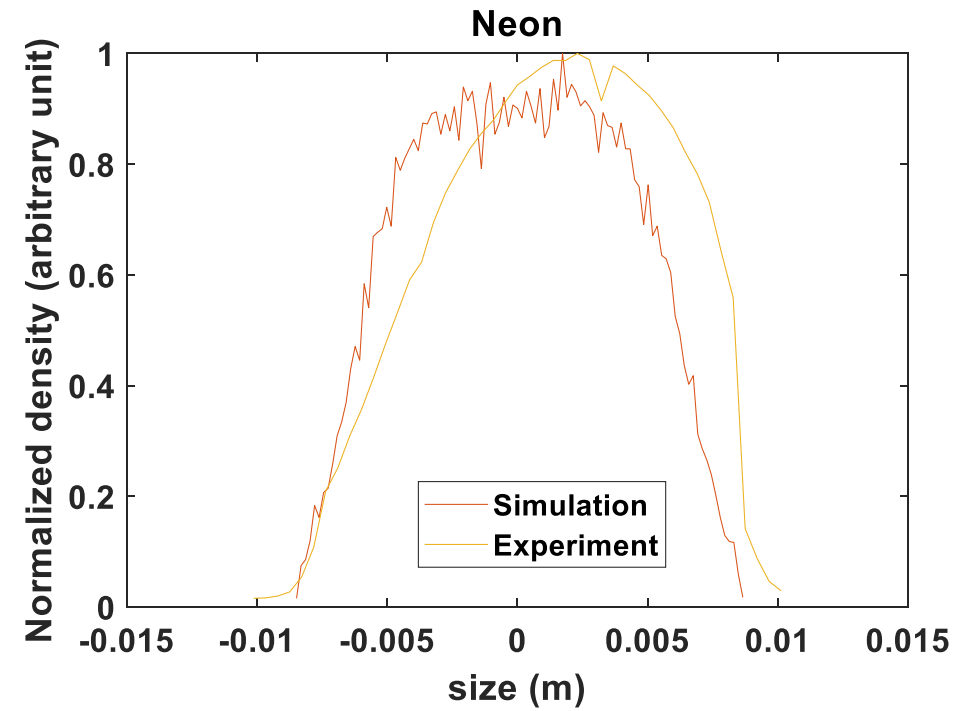
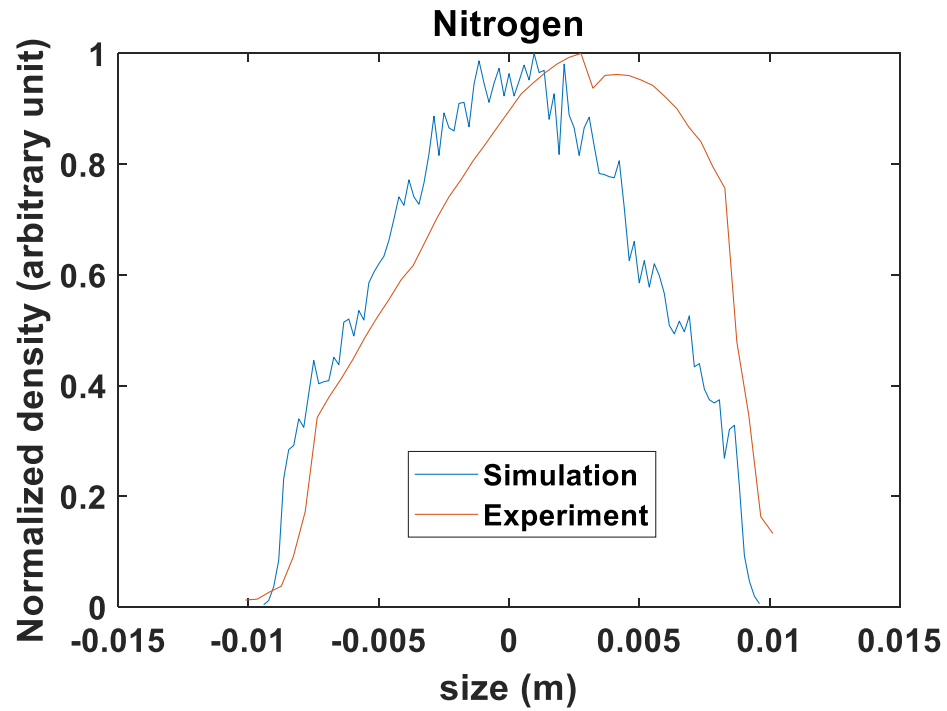


- Density and its distribution match very well.
- Nitrogen has a slightly higher spread than Neon, which is showing in both cases.
- 5-time higher density for neon showed in both cases.
- Clearly there is a misalignment in experimental data.

Need to carefully examine the simulation code. Master student Bethany is dedicatedly working on this.



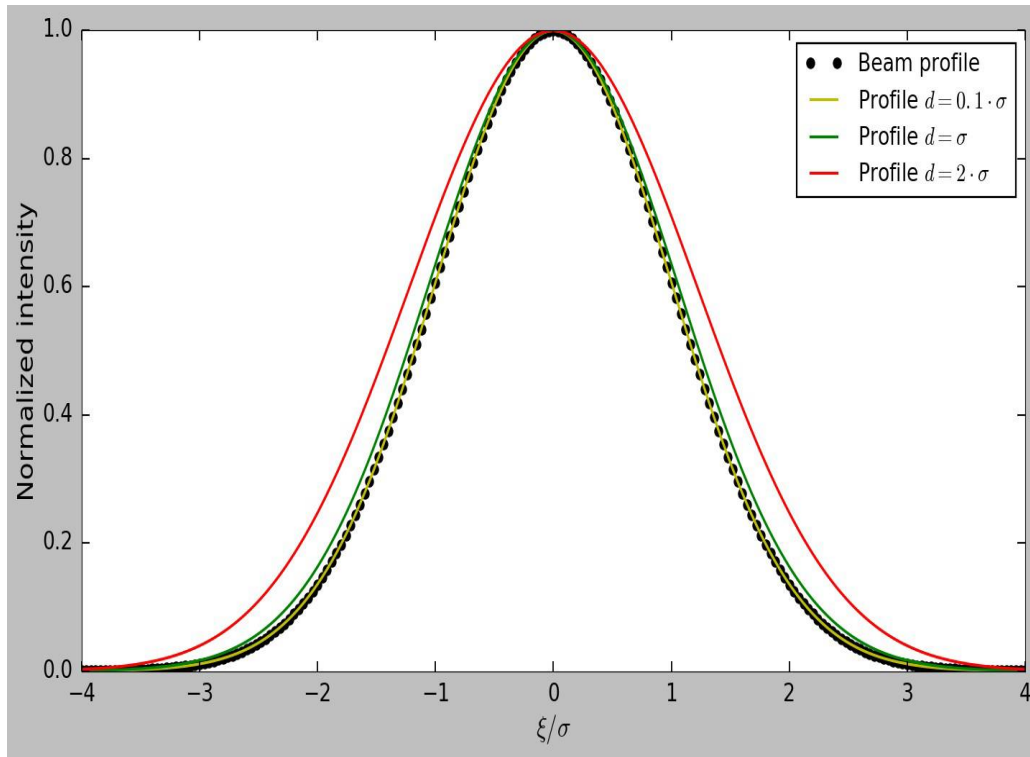
# Line plot



# Investigate alignment

- Redo the alignment with 2mm round skimmer this week
- Just close chamber for test Tomorrow or Monday.

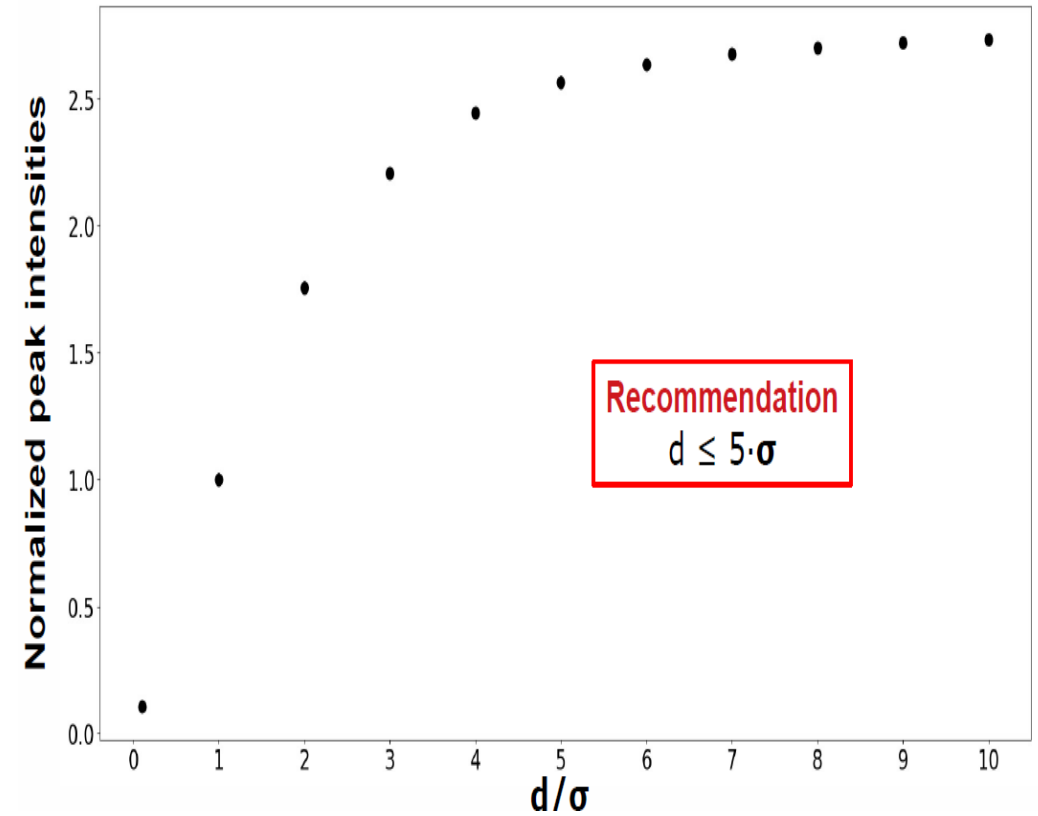
# gas jet thickness => 3<sup>rd</sup> skimmer size



Curtain profile:

$$\rho(y) = \rho_0 \cdot \left( \frac{d^2}{4} - y^2 \right), -\frac{d}{2} < y < \frac{d}{2}$$

Computations performed for a Gaussian beam profile



From Serban's talk

# Discussion

- Our current 3<sup>rd</sup> skimmer is 0.7mm, which is to produce a  $d = 5 * \sigma$
- In this setting, it will have higher signal strength.
- It might give a larger error in the y profile measurement.