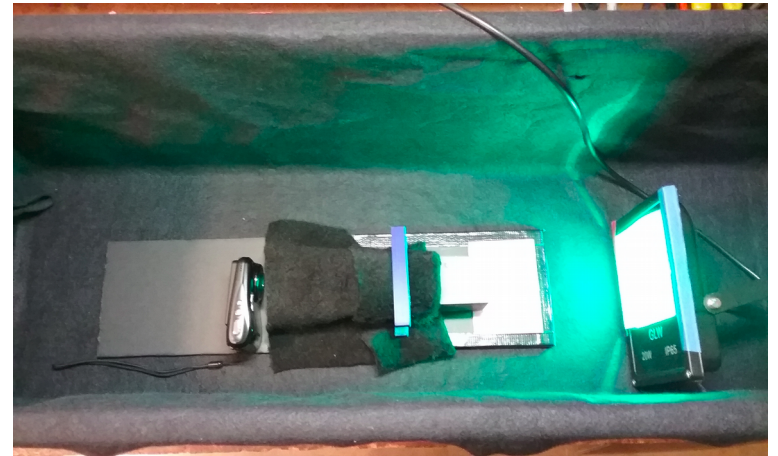
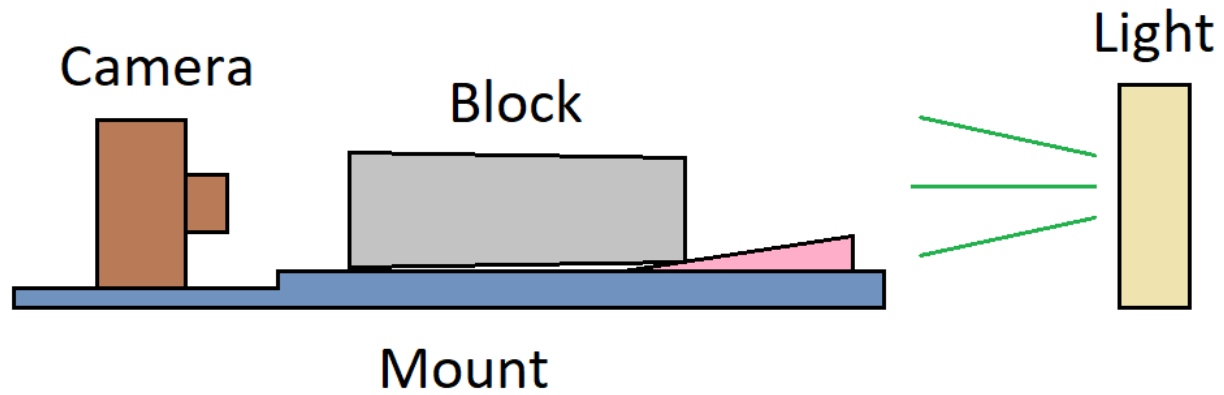


Light transmission test status

Anabel Romero Hernandez, Yongsun Kim
October 10, 2017

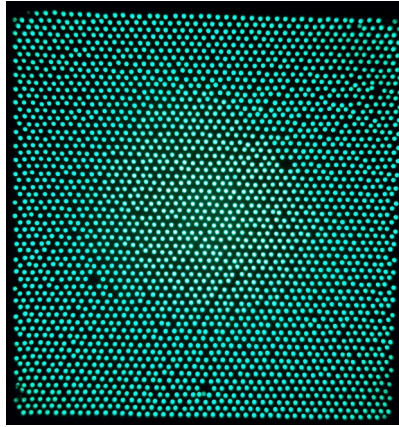
Previously



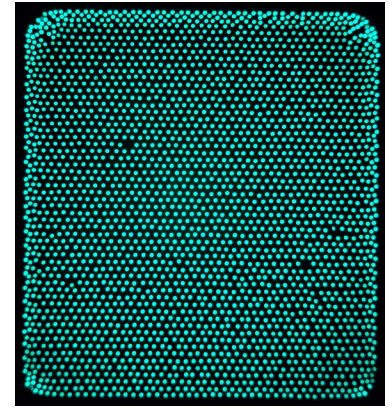
What's new?

- Database of pictures:
 - Both sides of blocks (narrow and wide).
 - Different colors.
 - Different intensities.
 - Different distances.

Wide end

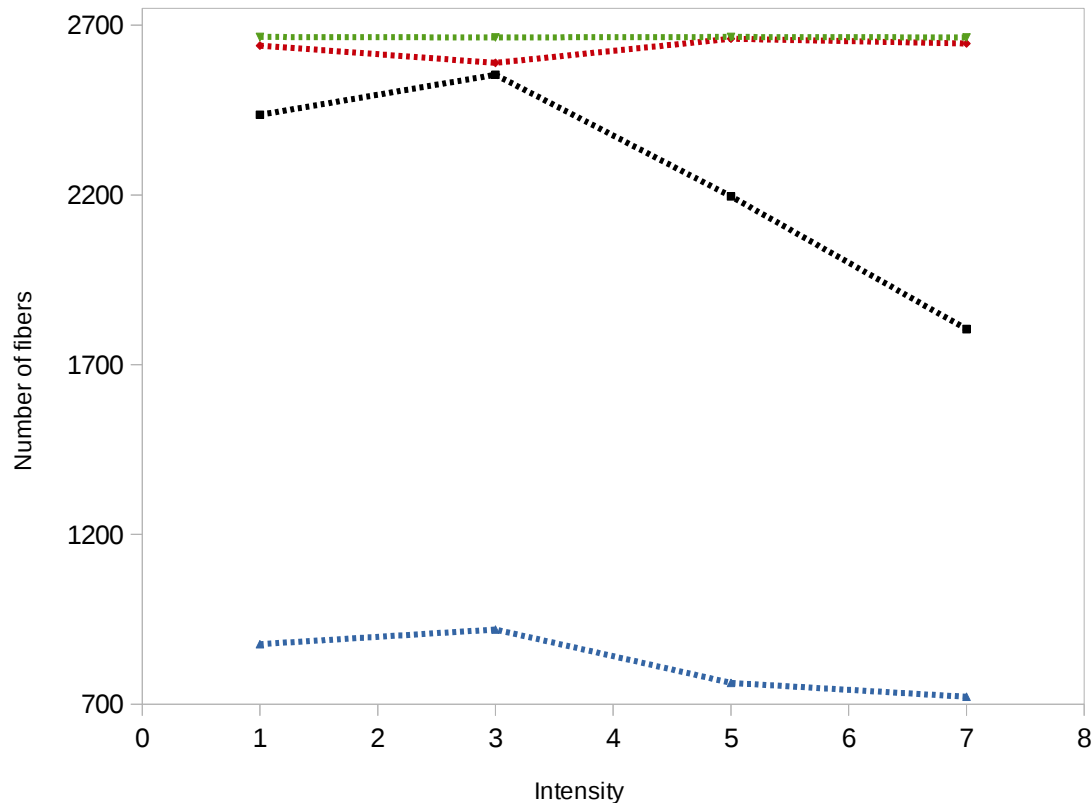


Narrow end



- Increased distance between block and light source, but not between camera and block.

Different colors and light intensities

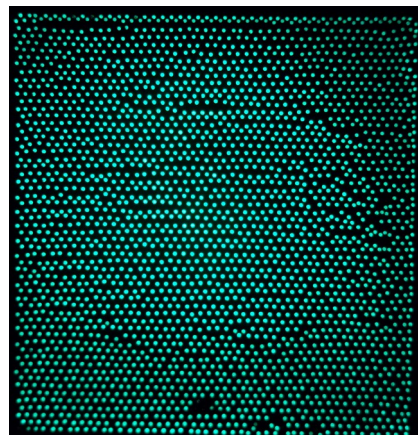
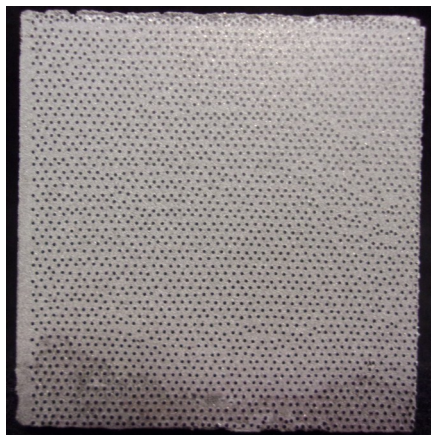


- For green light, the number of fibers seems to be independent of the intensity of light.
- For red, blue and white light, we have to tune the light intensity for optimal number of fibers.
- Green light always gives the maximum number of fibers.

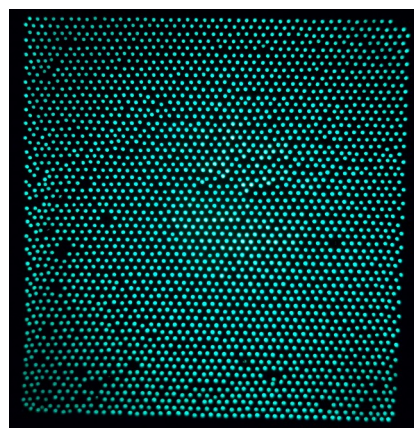
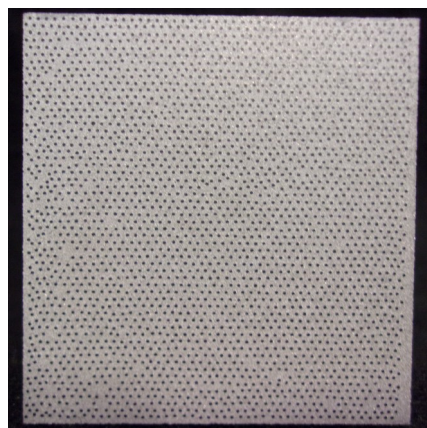
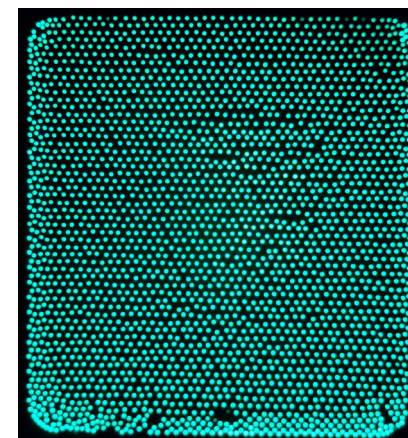
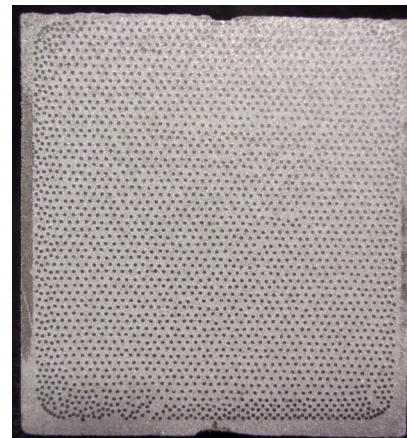
Pictures of blocks

Wide

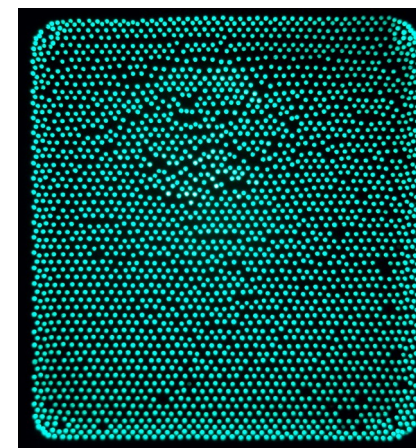
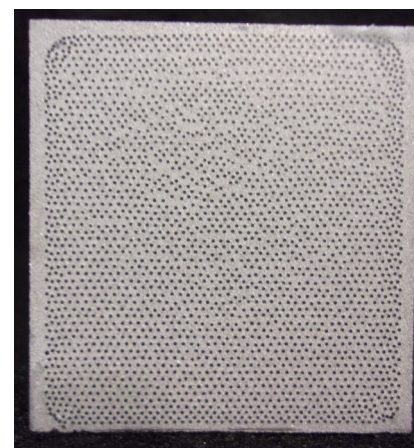
Narrow



DBN 6



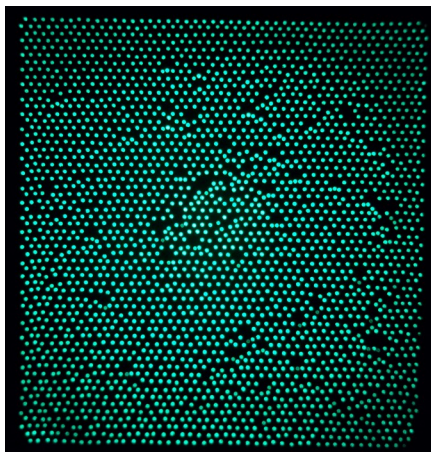
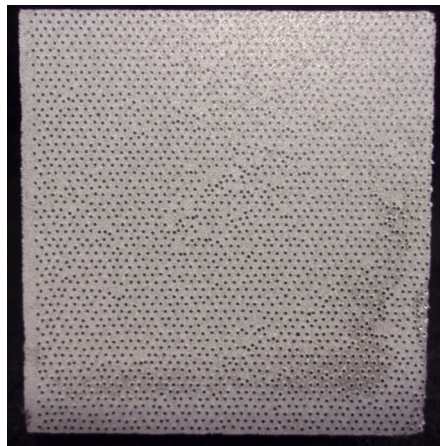
DBN 52



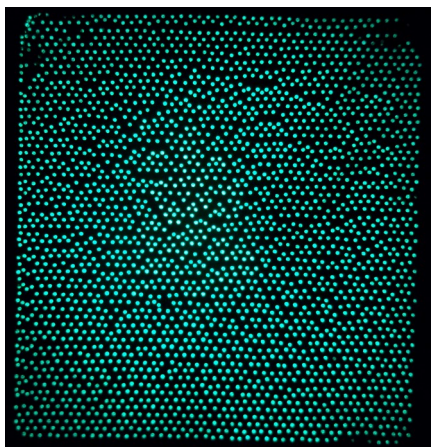
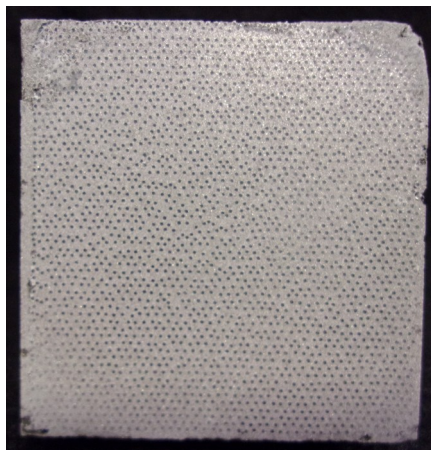
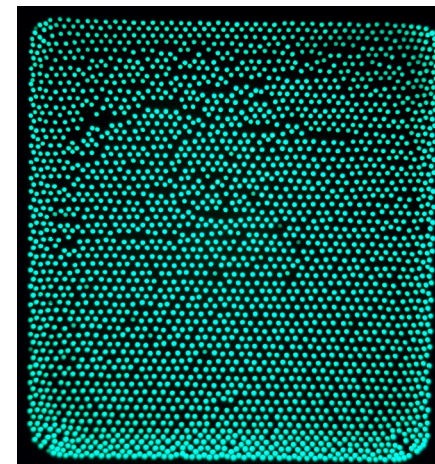
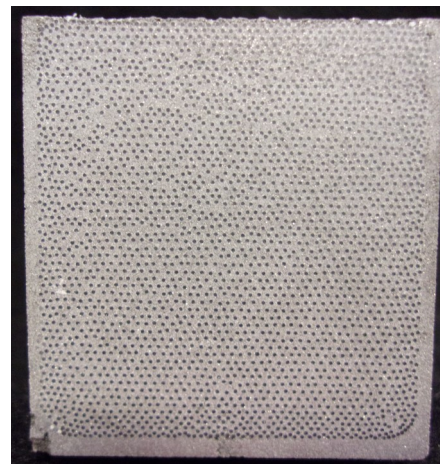
Eric will touch up some of the blocks

Wide

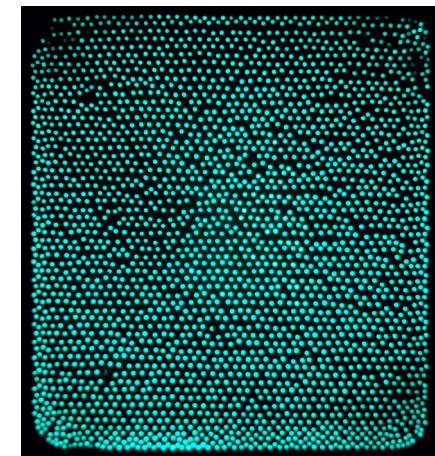
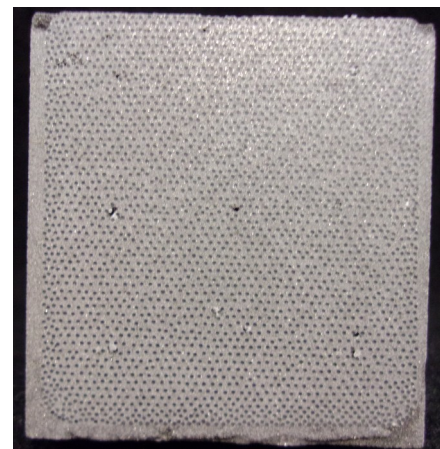
Narrow



DBN 57



DBN 59

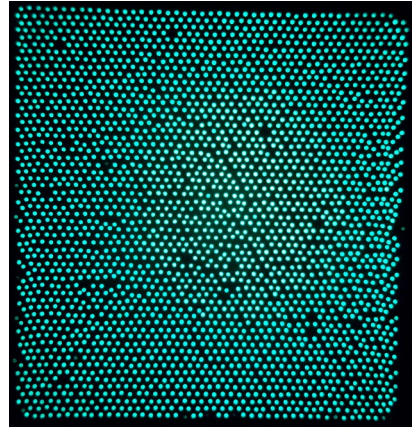
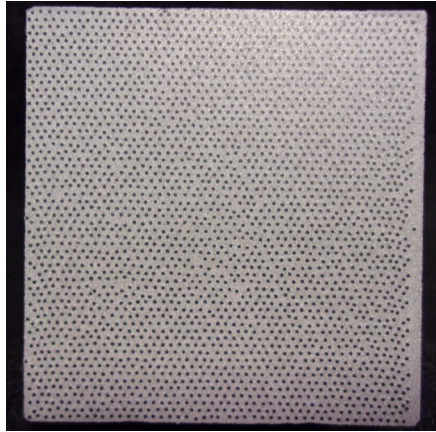


10/10/2017

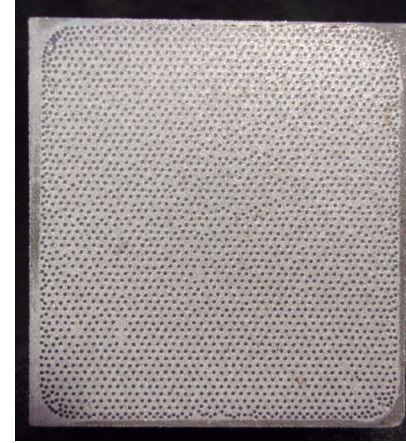


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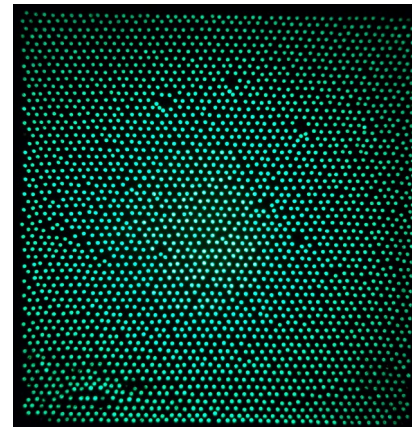
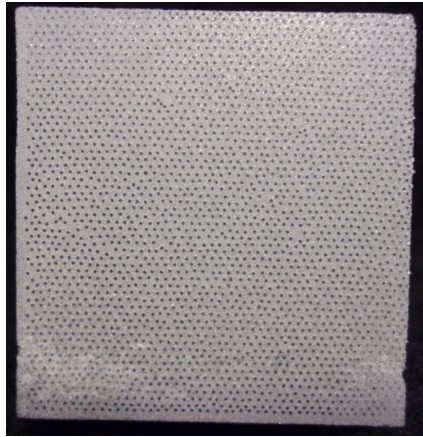
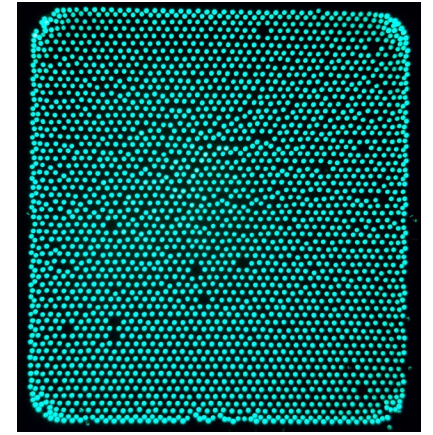
Wide



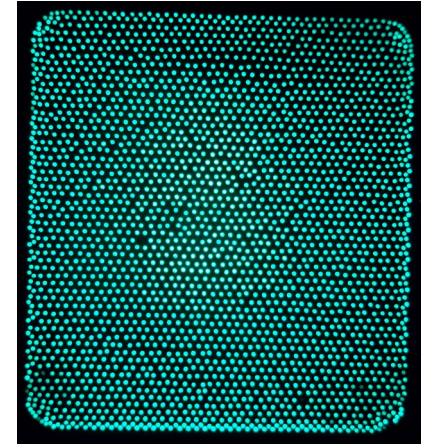
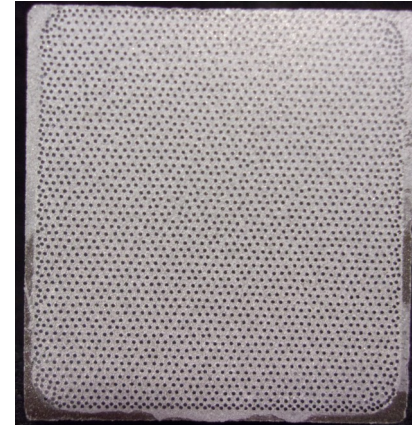
DBN 3



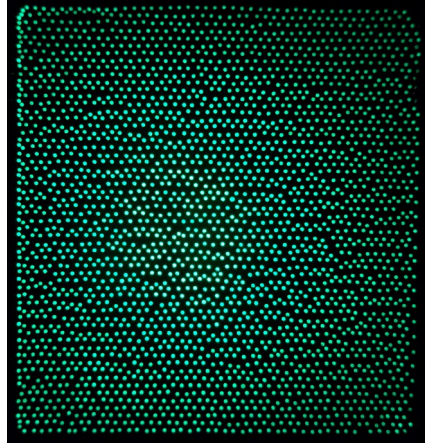
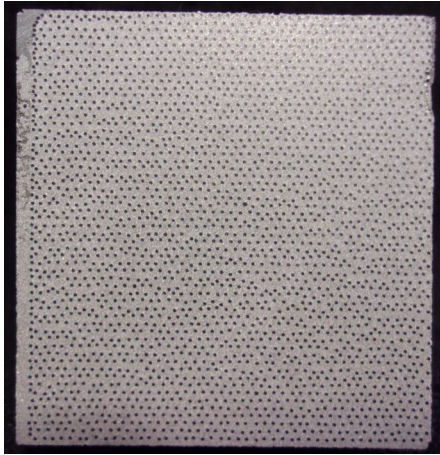
Narrow



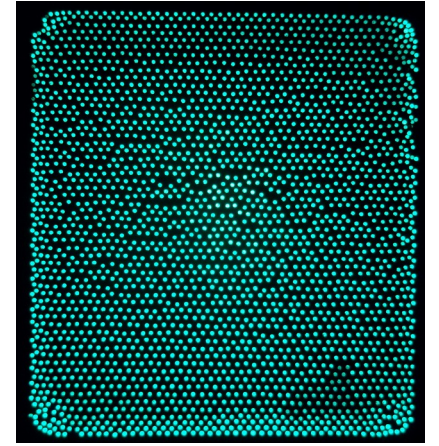
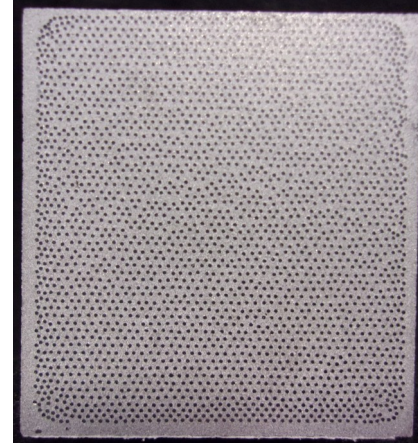
DBN 60



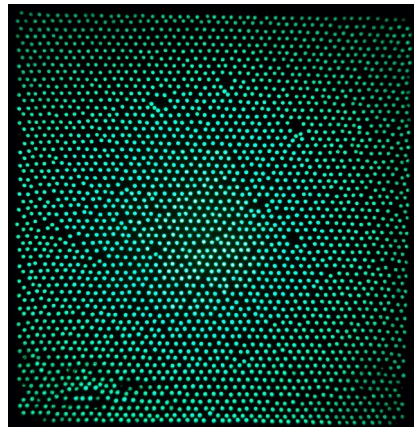
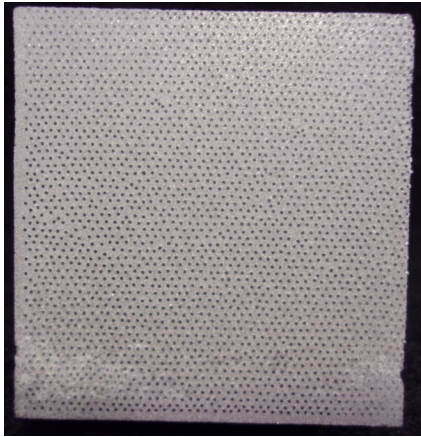
Wide



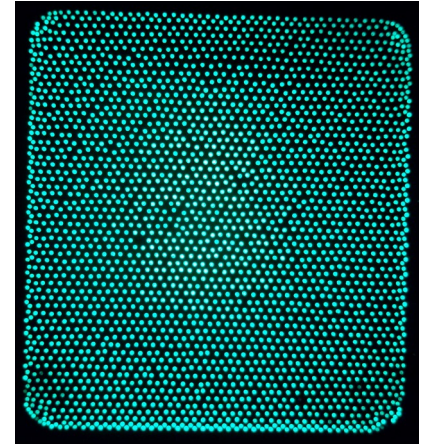
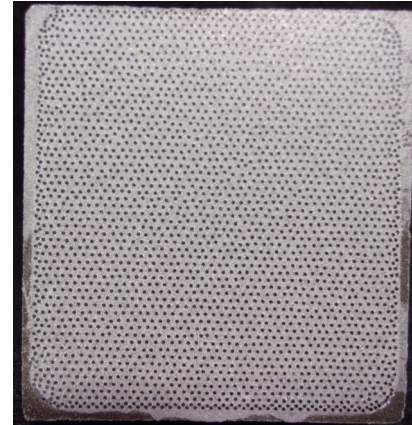
DBN 61



Narrow



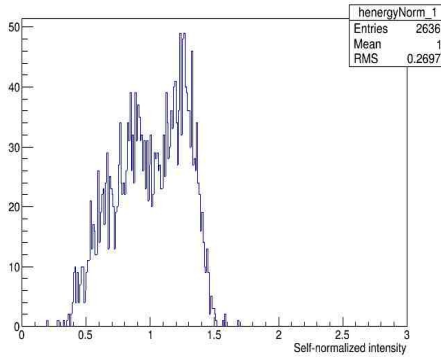
DBN 62



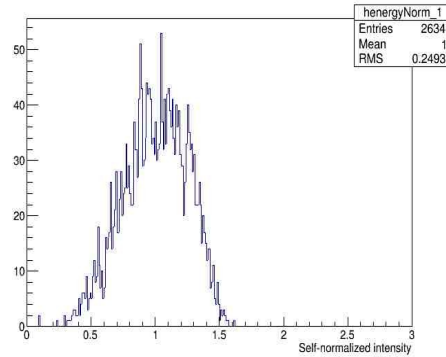
Intensity histograms

Wide side:

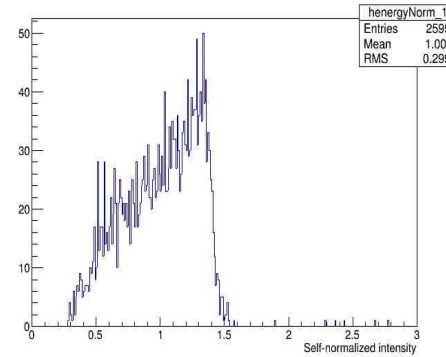
DBN 6



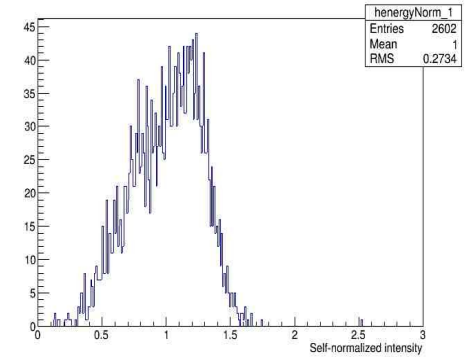
DBN 52



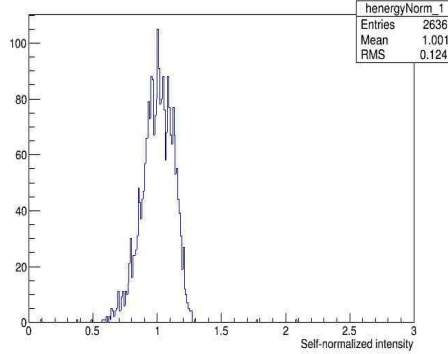
DBN 57



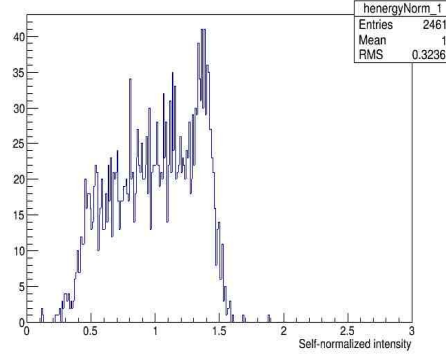
DBN 59



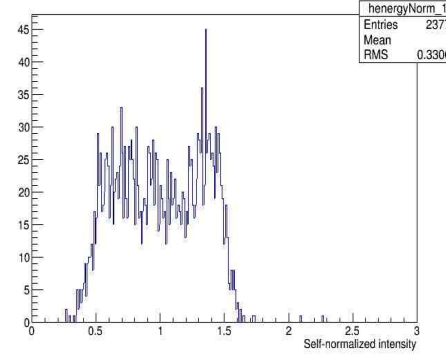
DBN 3



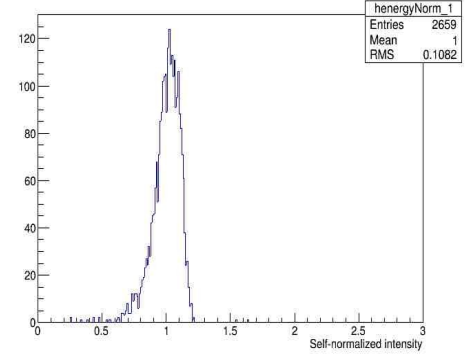
DBN 60



DBN 61

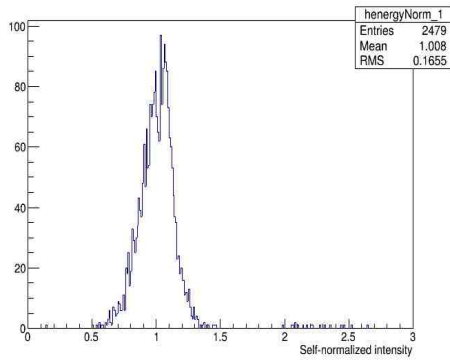


DBN 62

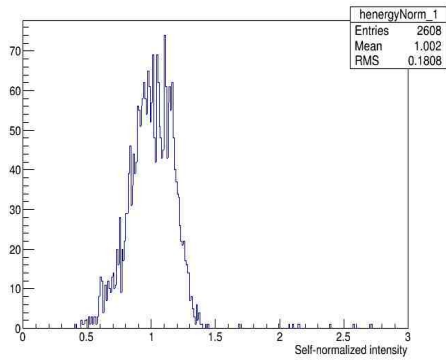


Narrow side:

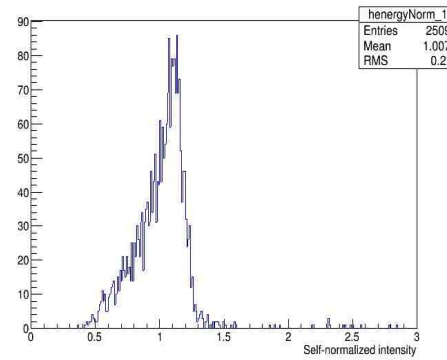
DBN 6



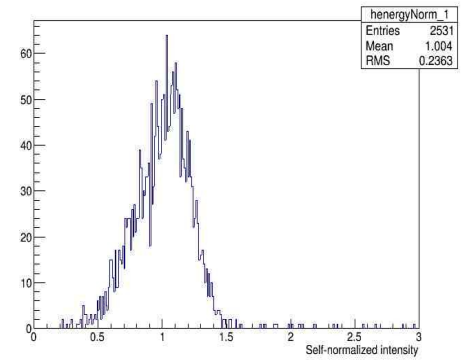
DBN 52



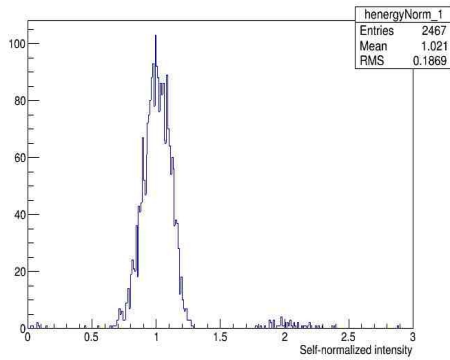
DBN 57



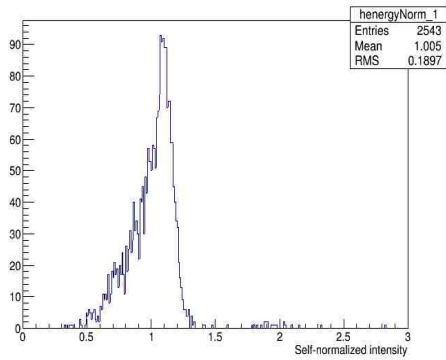
DBN 59



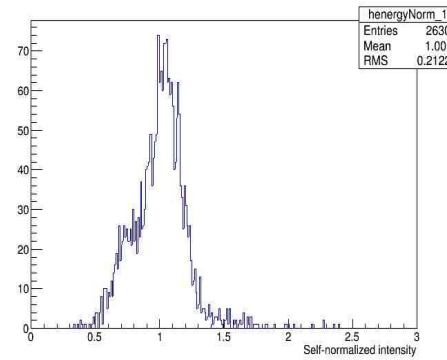
DBN 3



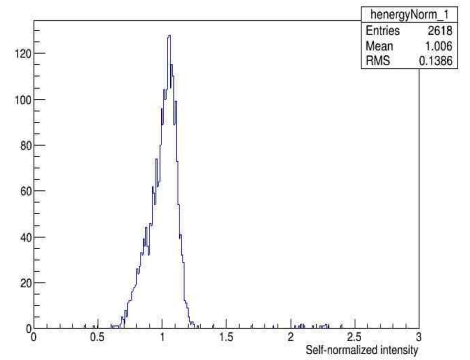
DBN 60



DBN 61



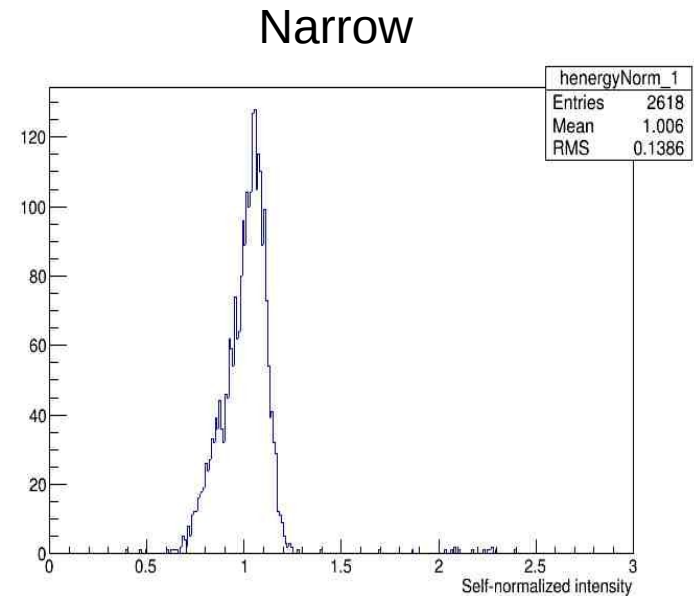
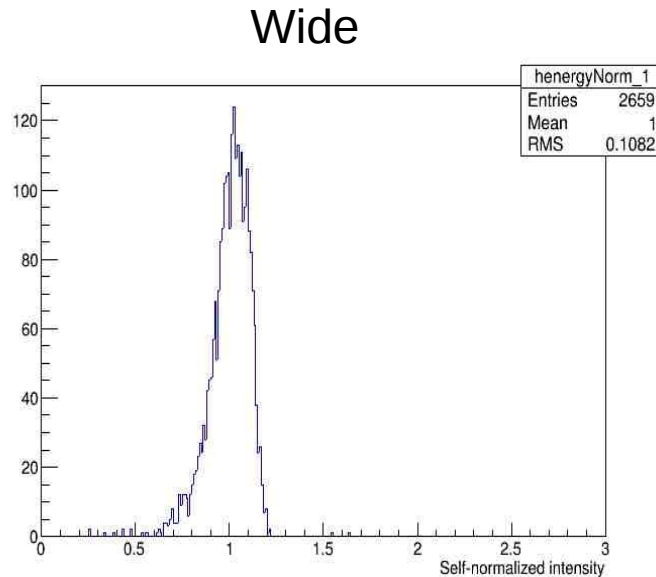
DBN 62



Comments

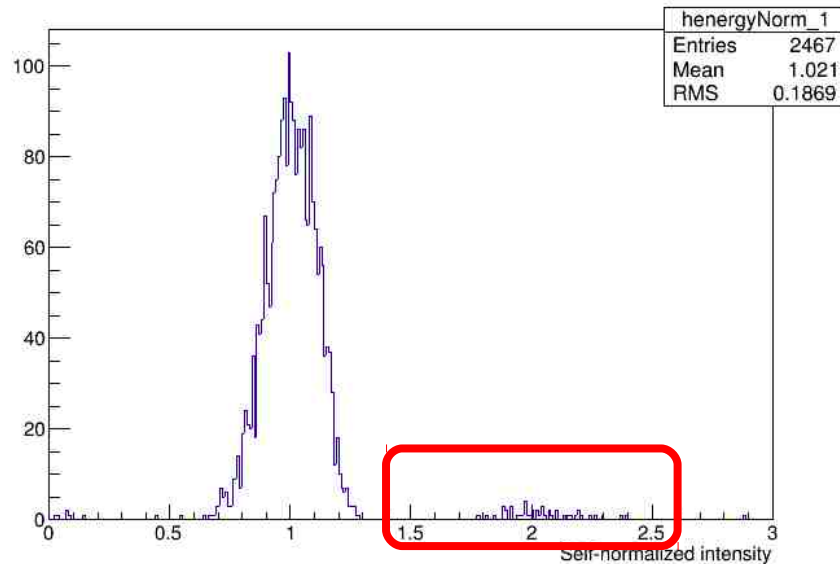
- Compared to previous results (Yongsun's slides from last week), distributions seem to be left-skewed.

DBN 62

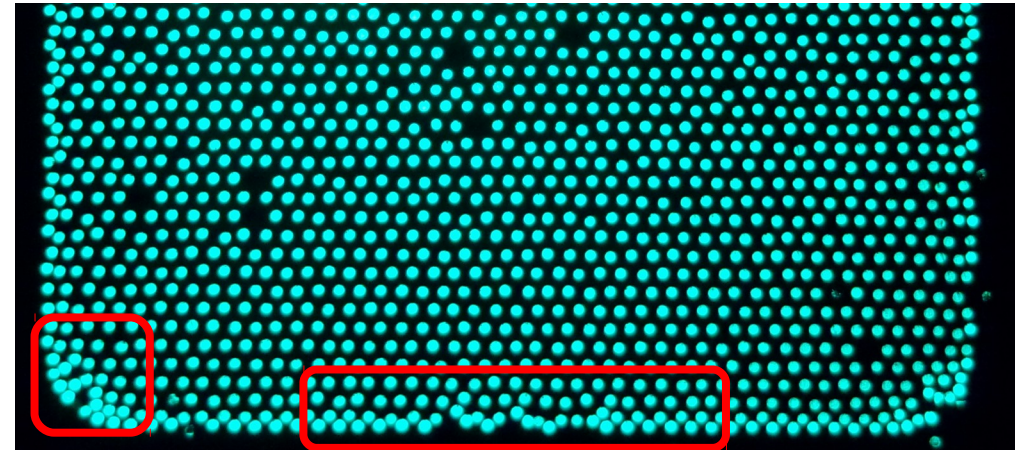


Possible sources of error

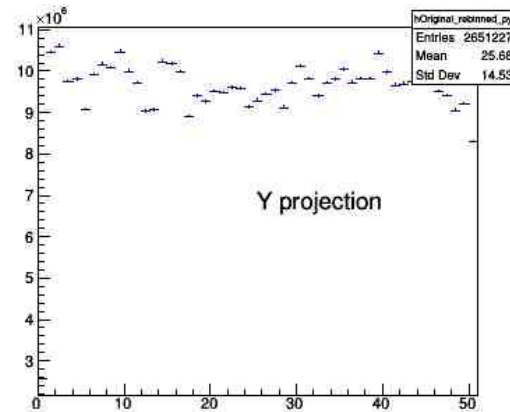
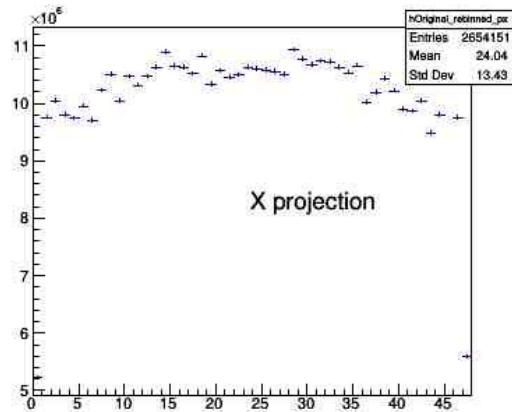
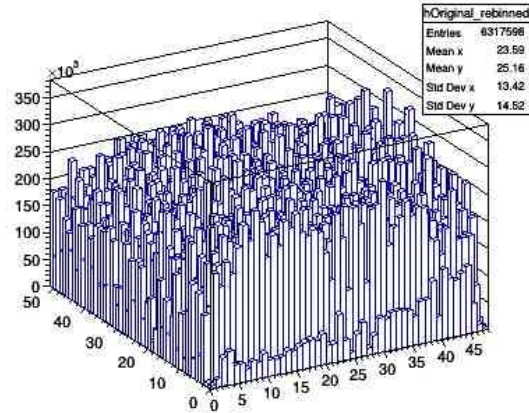
- Tune the code to get total number of fibers and minimize errors.
- Distance camera-block is too short.
- If fibers are too close, they might be counted as a single cluster with twice the energy.



DBN 3 Narrow



2D distributions



Next

- Get total number of fibers.
- 2D distributions.
- Changing distance camera-block.
- Touch up the ends of the blocks.
- More blocks.
- Tolerances.