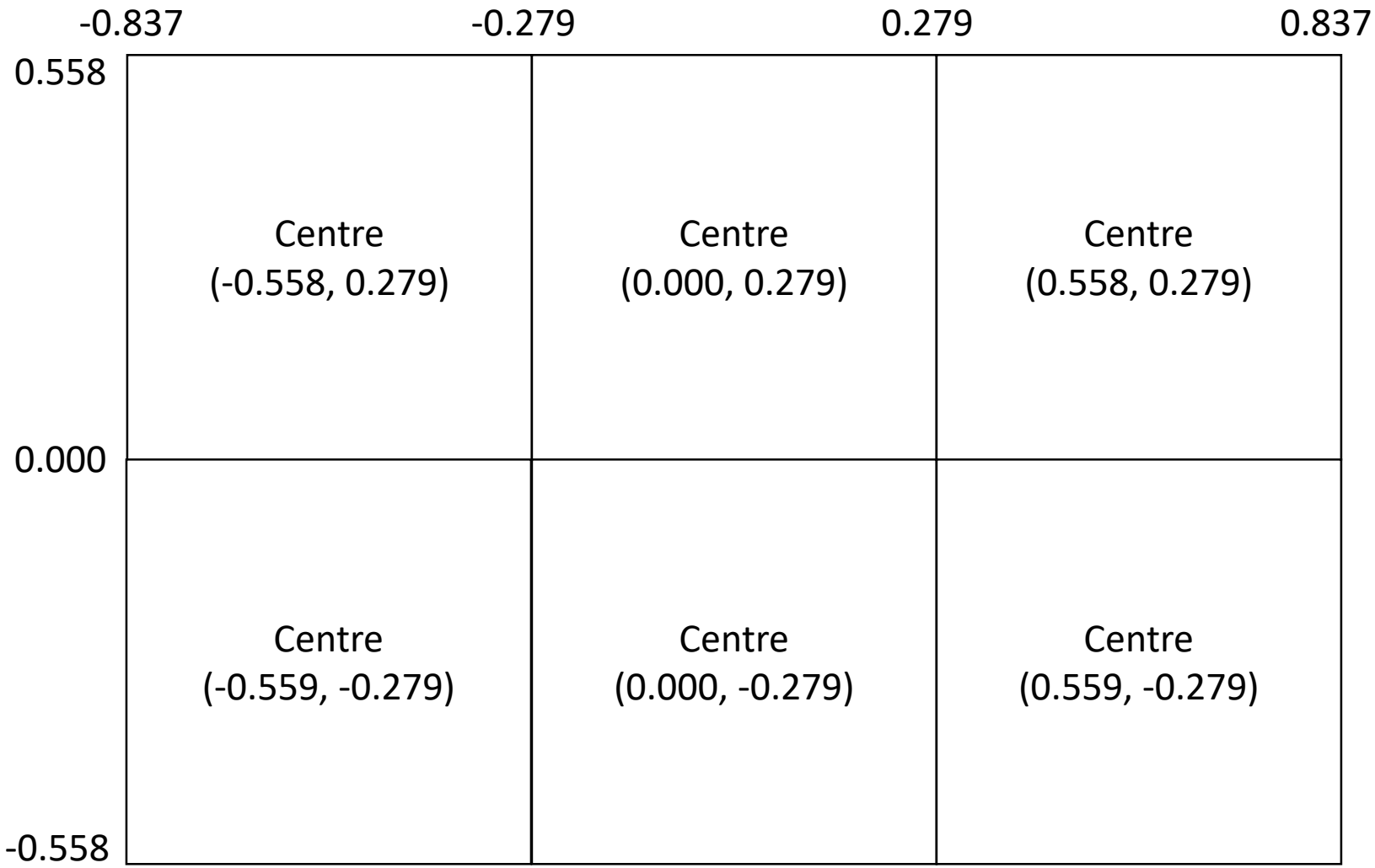
Properties of new lens: Target Depth (Z) of each CCD segment

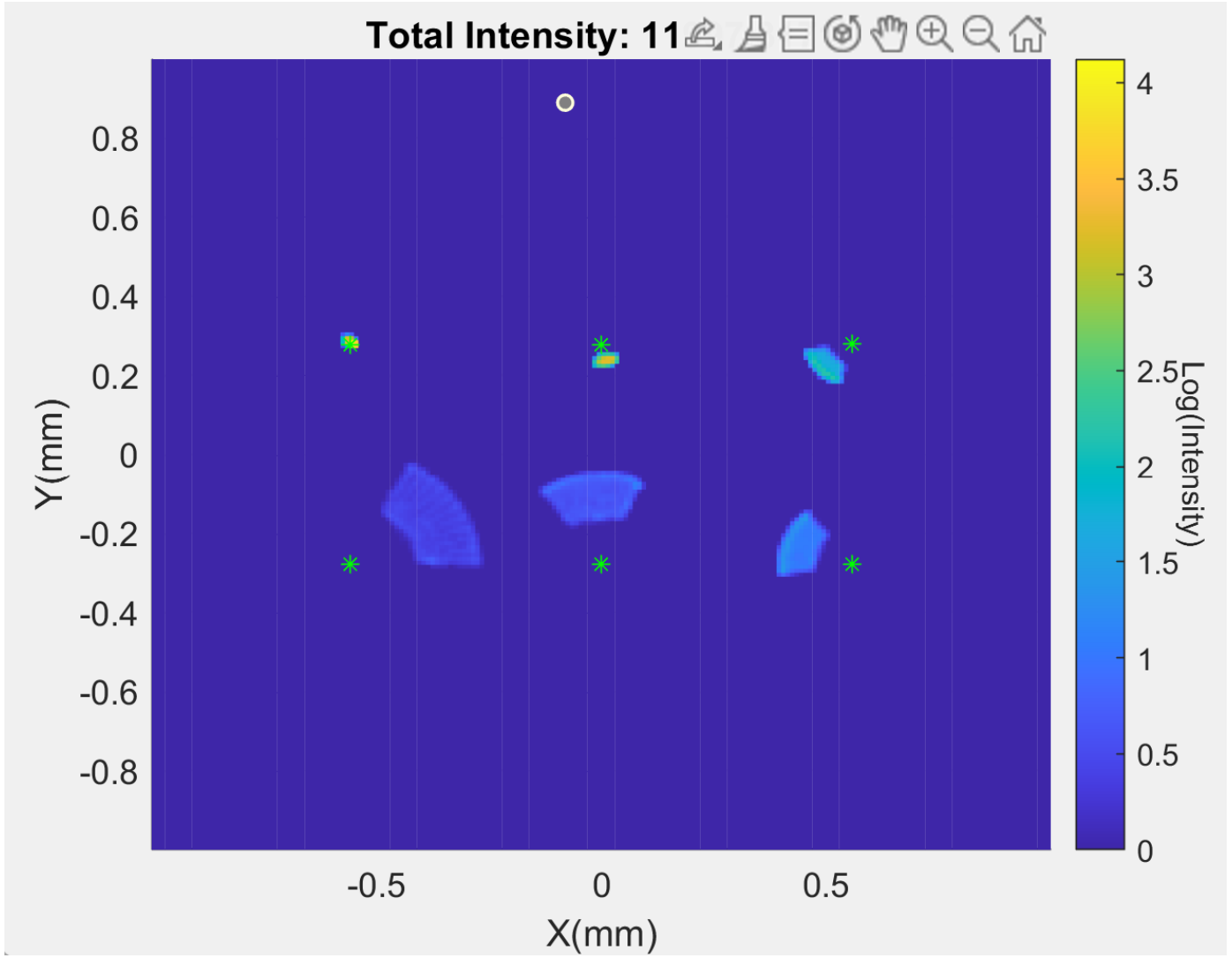
Segment 1 (Z = -5.75)	Segment 2 (Z = -5.85)	Segment 3 (Z = -5.95)
Segment 6 (Z = -6.25)	Segment 5 (Z = -6.15)	Segment 4 (Z = -6.05)

Properties of new lens: Target Range (X/Y) of each CCD segment



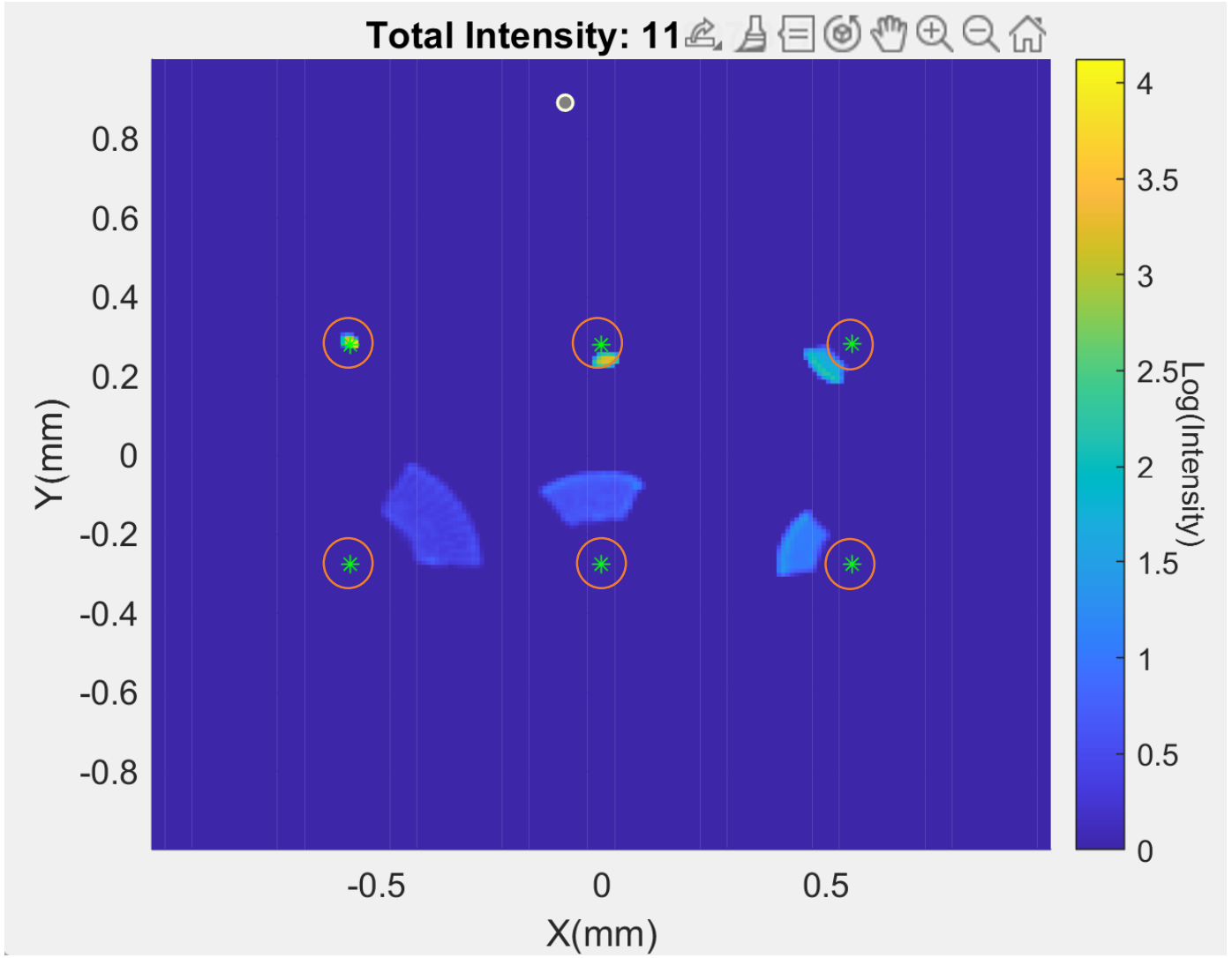
Illumination produced by object point placed at (0,0,-5.75)

PROBLEM: Even so the object is placed at (X=0,Y=0), it is centered only for the brightest peak!
(i.e: the peak and green cross are at same location)



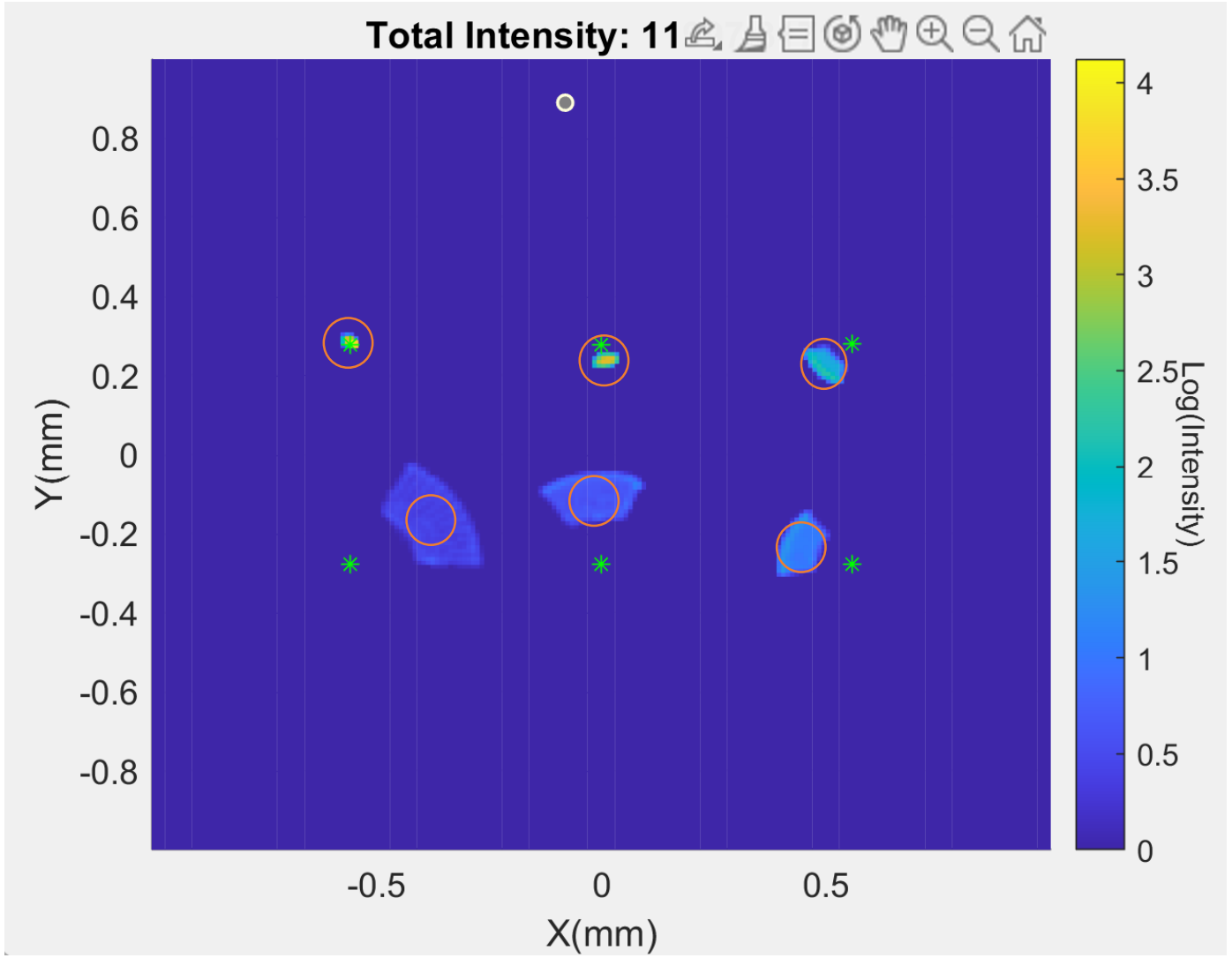
Illumination produced by object point placed at (0,0,-5.75)

PROBLEM: When searching for peaks belonging to the same group, the peaks are quickly out of the search range.



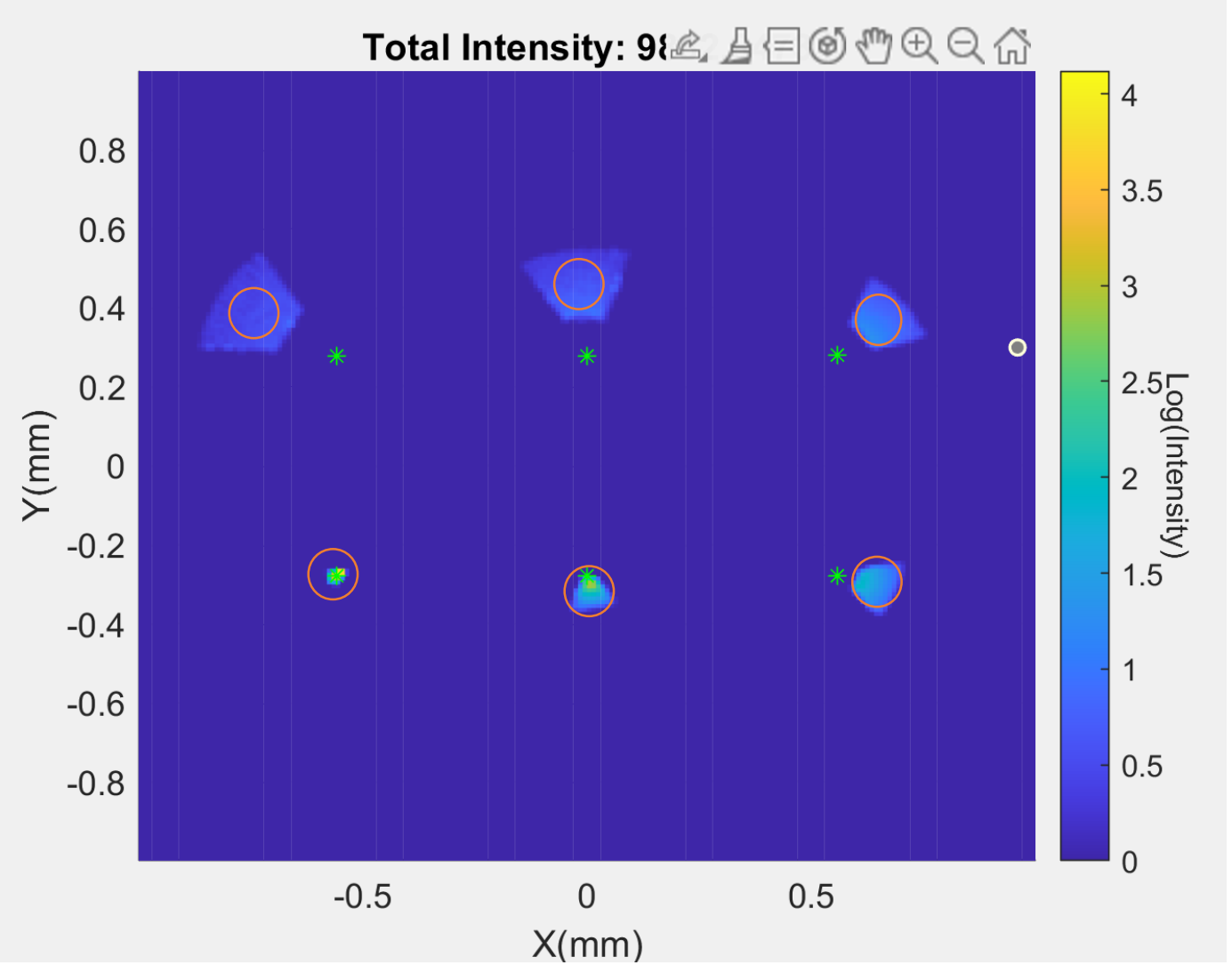
Illumination produced by object point placed at (0,0,-5.75)

SOLUTION: After selecting a bright peak, it is necessary to offset the search zone when looking for the other peaks



Illumination produced by object point placed at (0,0,-6.25)

SOLUTION: After selecting a bright peak, it is necessary to offset the search zone when looking for the other peaks



Tasks for next week:

1. Using the 6 images in the archive called “calibration.zip”:
   - Read each calibration image then perform the Gaussian blurring.
   - Detect the position of all 6 peaks (**WITHOUT** threshholding)
   - For each peak, save the offset between the peak position and center of segment in a table, as follows:

	Calib 1	Calib 2	Calib 3	Calib 4	Calib 5	Calib 6
Object	(0,0,-5.75)	(0,0,-5.85)	(0,0,-5.95)	(0,0,-5.75)	(0,0,-5.75)	(0,0,-5.75)
Segment 1	0.000, 0.000	?	?	?	?	?
Segment 2	?	0.000, 0.000	?	?	?	?
Segment 3	?	?	0.000, 0.000	?	?	?
Segment 4	?	?	?	0.000, 0.000	?	?
Segment 5	?	?	?	?	0.000, 0.000	?
Segment 6	?	?	?	?	?	0.000, 0.000

Tasks for next week:

2. Analyse the images in the archive scanXYZ.zip:
   - Read each image then perform the Gaussian blurring.
   - Detect the peaks positions (**WITH** 10% threshholding)
   - Select the brightest peak and record it coordinates (x_p, y_p) and segment number as $Calib_p$.
   - Search for associated peaks in another segment "n" at the coordinates: ($x_p + x_{offset}$, $y_p + y_{offset}$). Where (x_{offset},y_{offset}) corresponds the value $Calib_p$/$Segment_n$ in previous table.