

# Analysis of the dot position

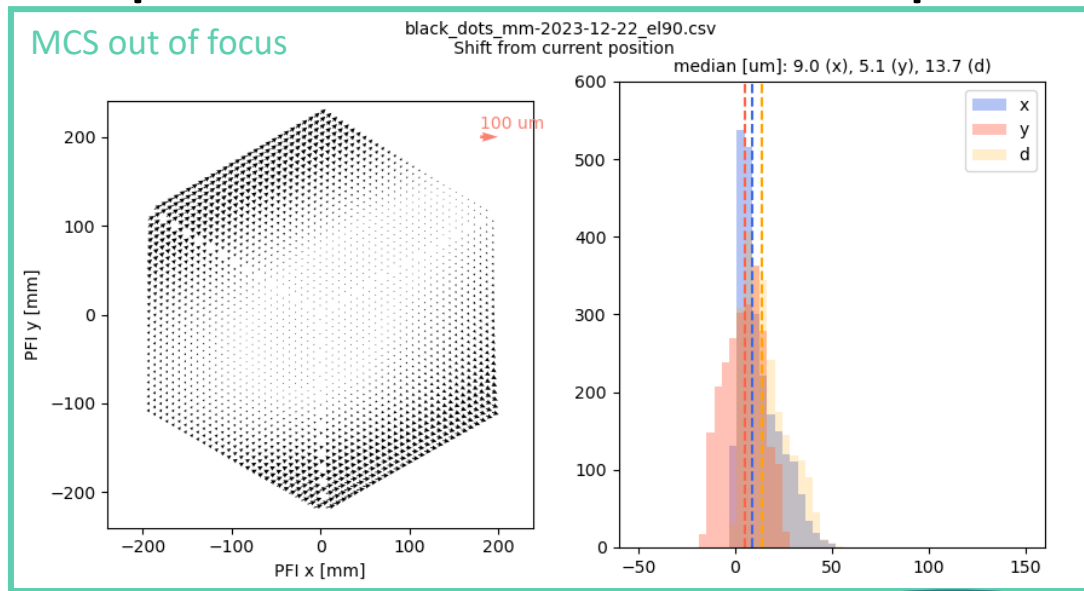
Yuki Moritani

# Contents

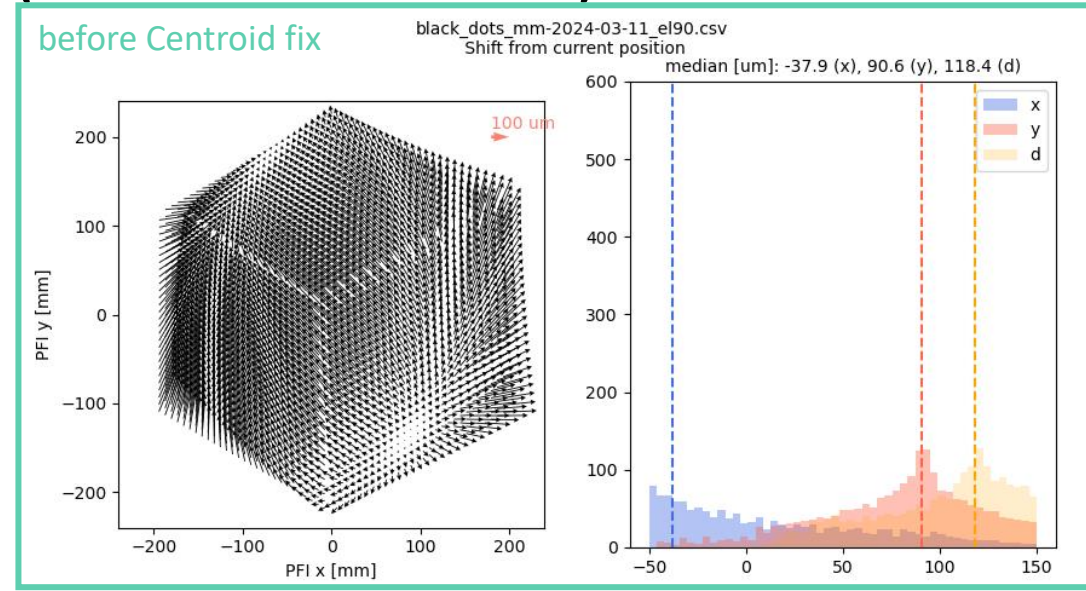
- Measured dot position since the run 14 (December 2023) was analyzed.
- The measured position at EL=90, InR=0 shows
  - Standard deviation of 10 samples are 10-15um.
    - Here, one measurement taken when MCS centroid had an issue was excluded, because measured position looks different from the others.
    - Another measurement in the same run shows similar result to the others.
  - Compared to the current position, the new position looks shifted in the direction of (+x, +y) more or less.

Position at  $EL=90$ ,  $InR=0$

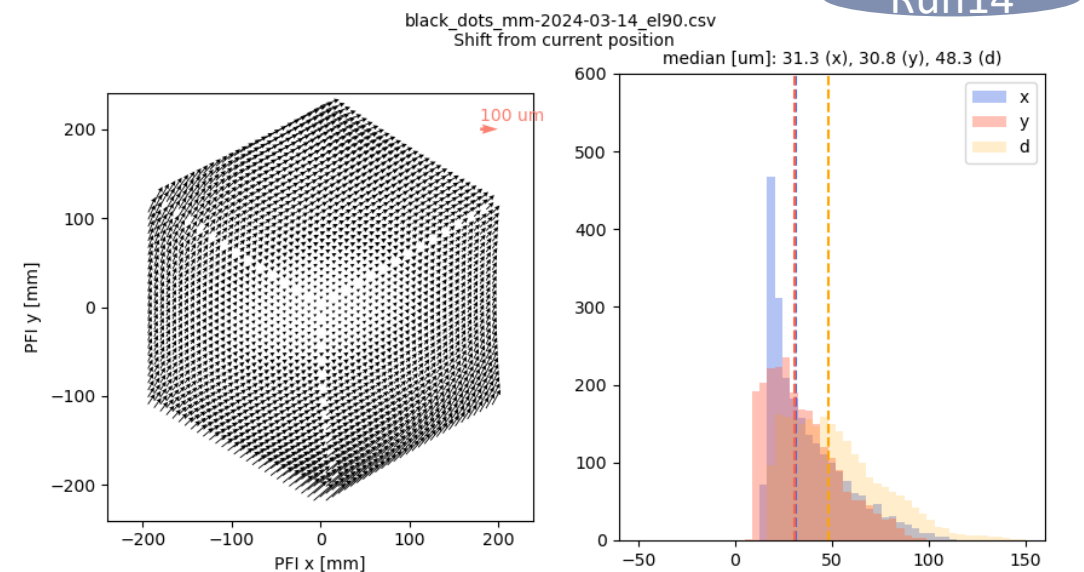
# Comparison to the current position (ver. 2022-09-23)



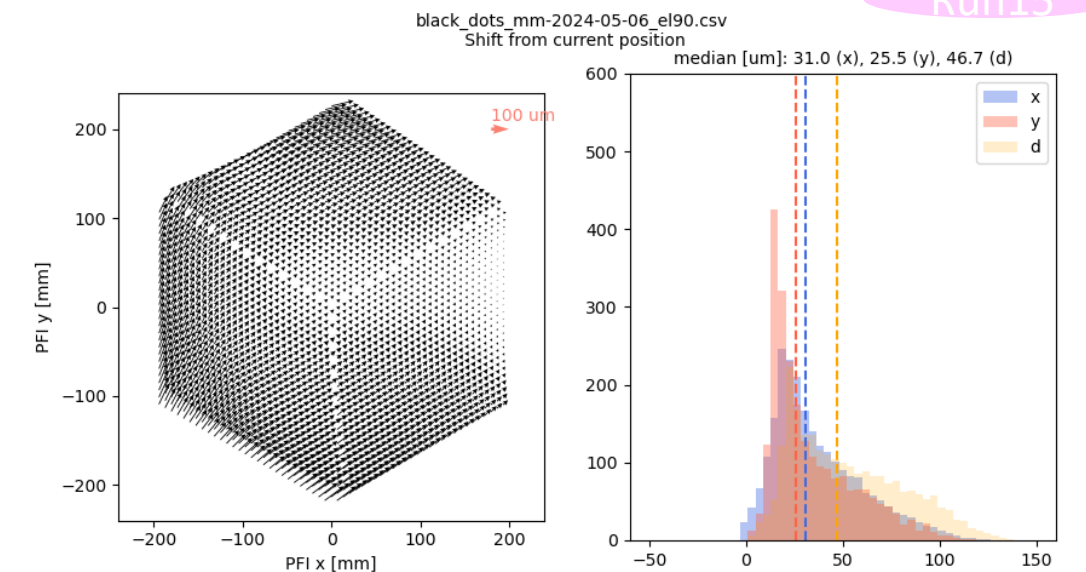
Run14



Run15

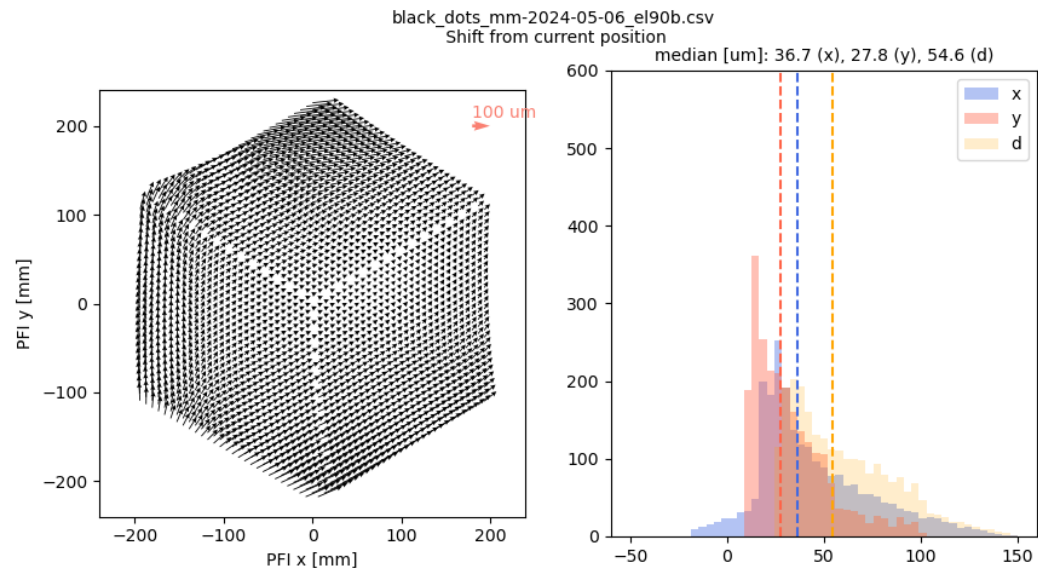


Run15

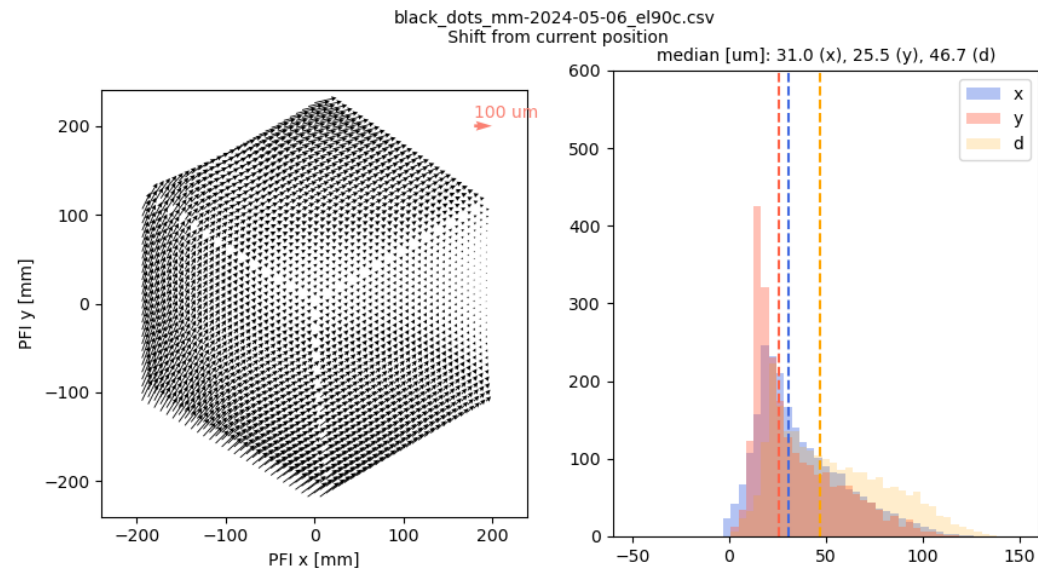


Run16

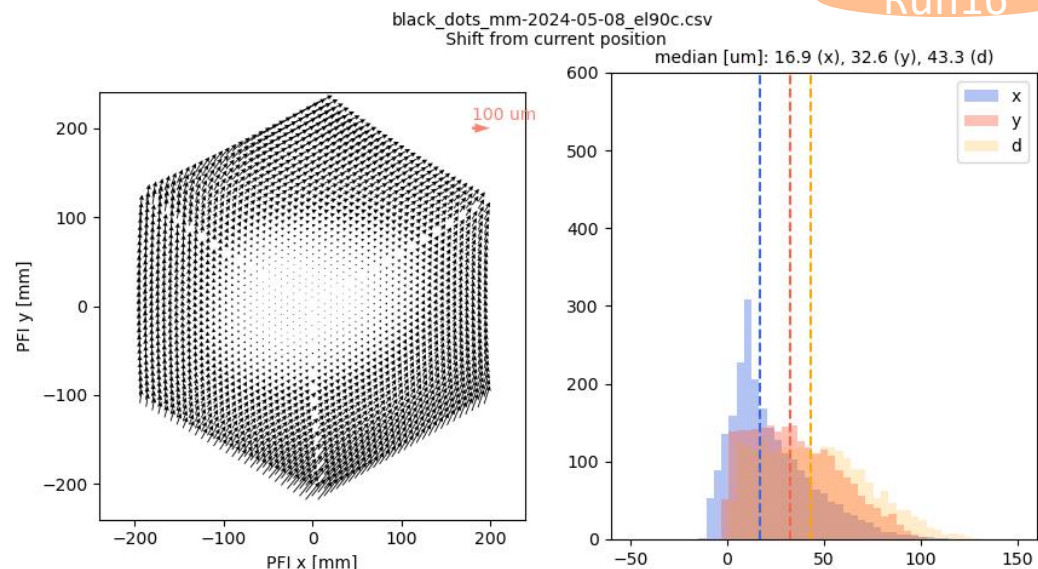
# Comparison to the current position (ver. 2022-09-23), cont'd



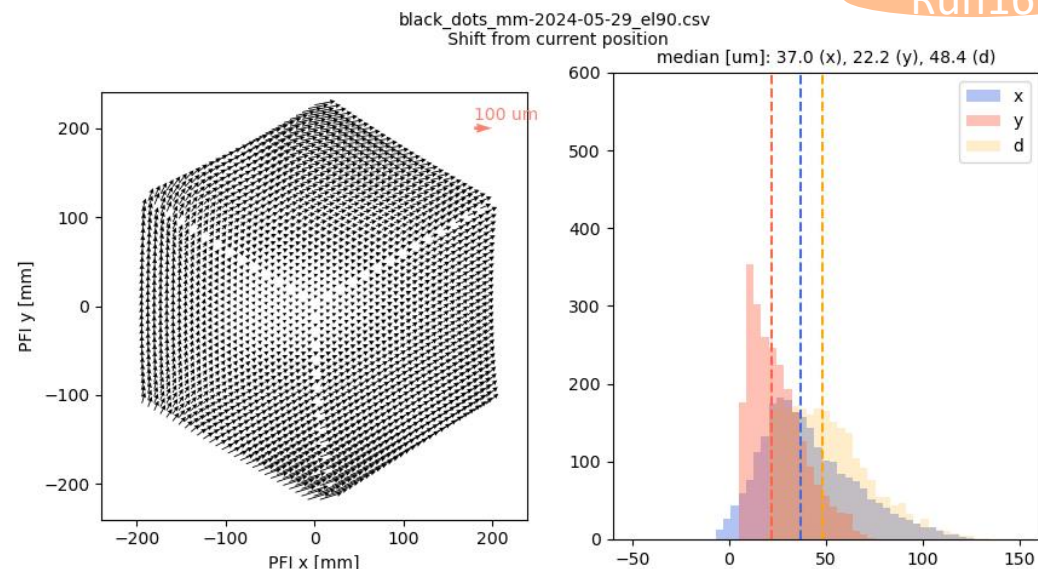
Run16



Run16



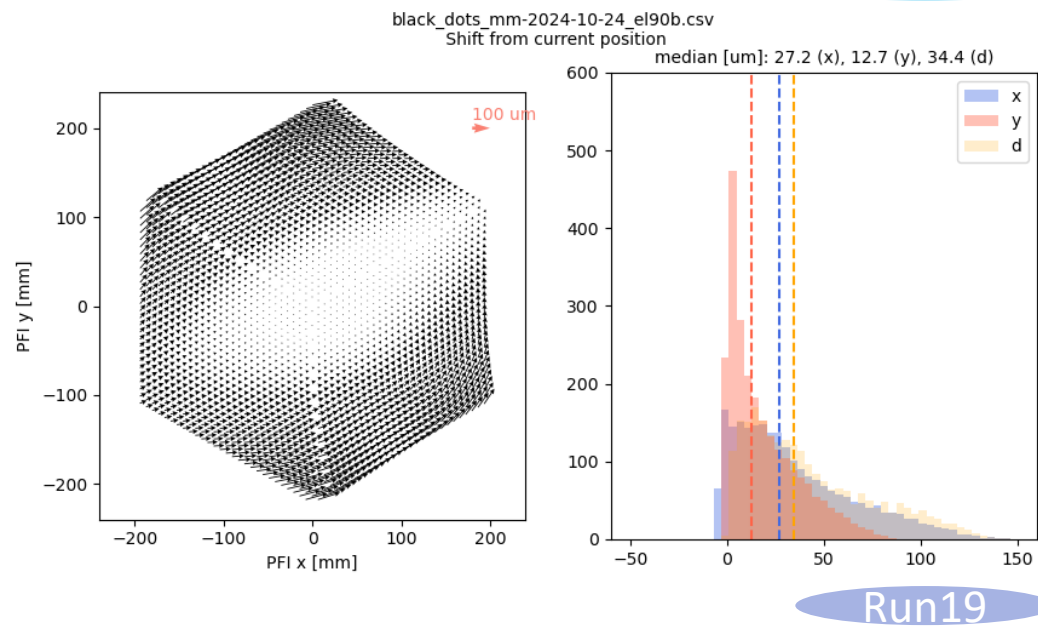
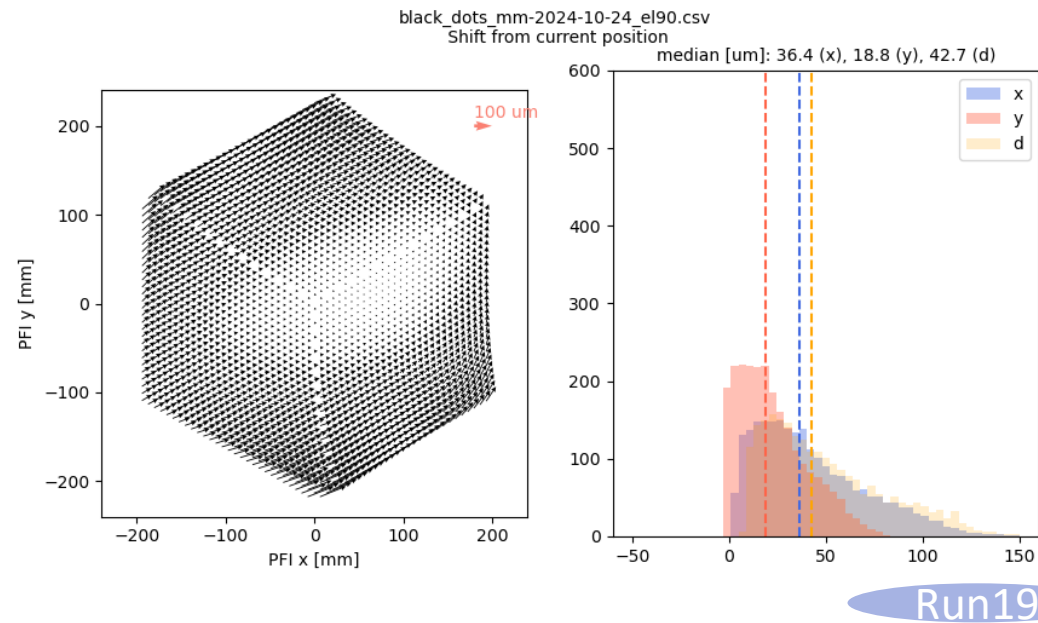
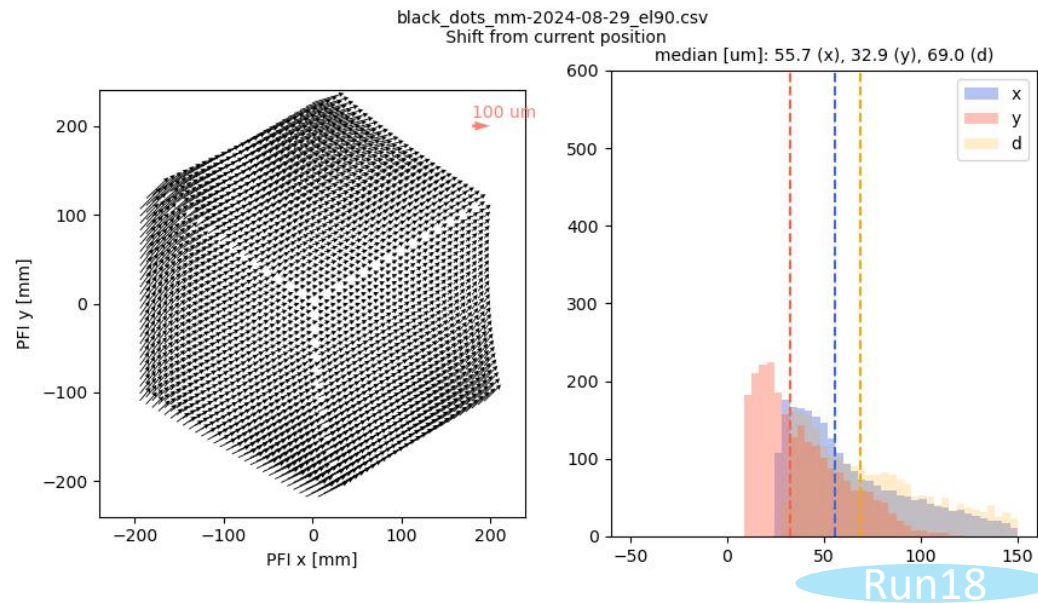
Run16



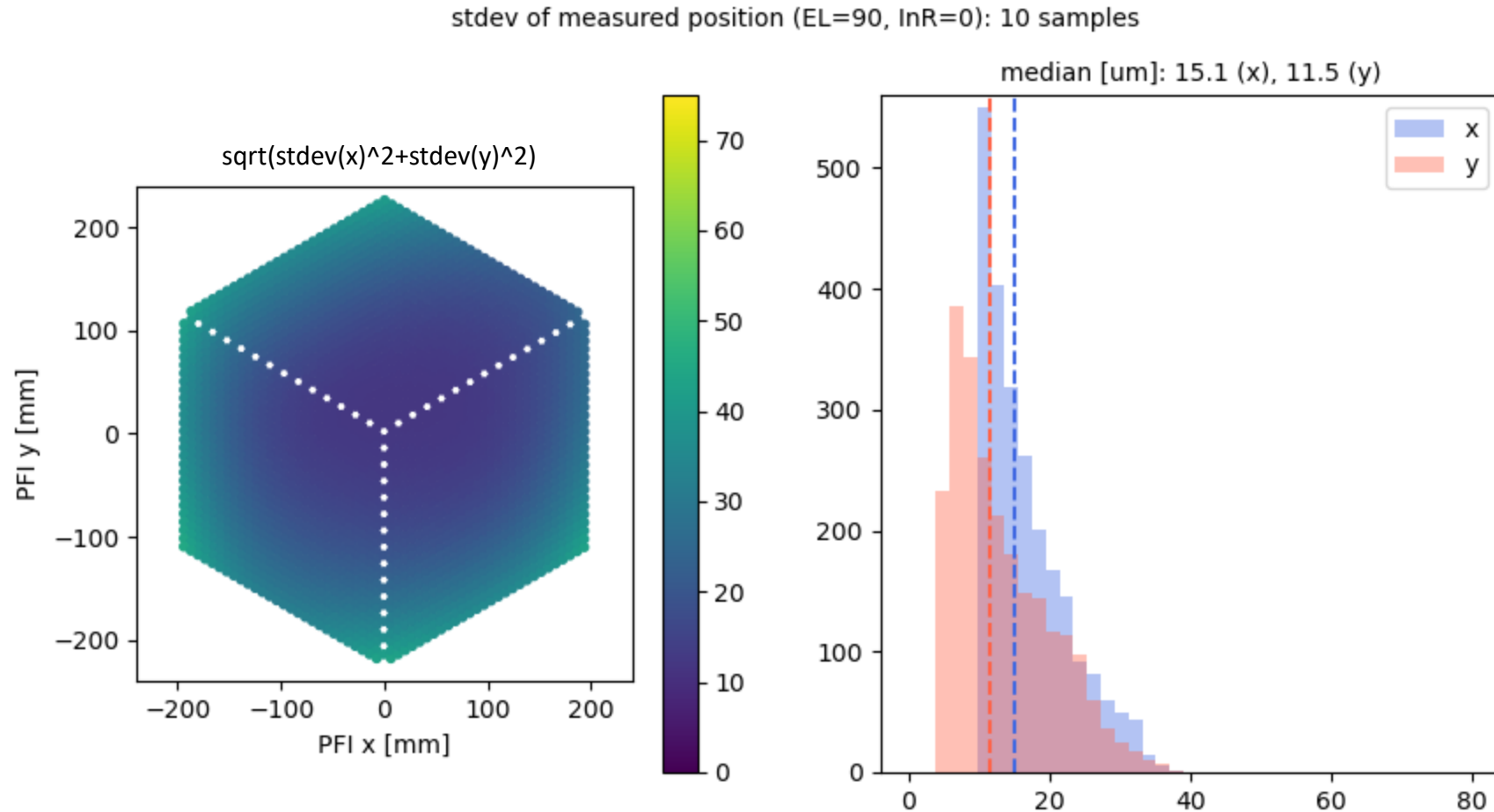
Run17



# Comparison to the current position (ver. 2022-09-23), cont'd



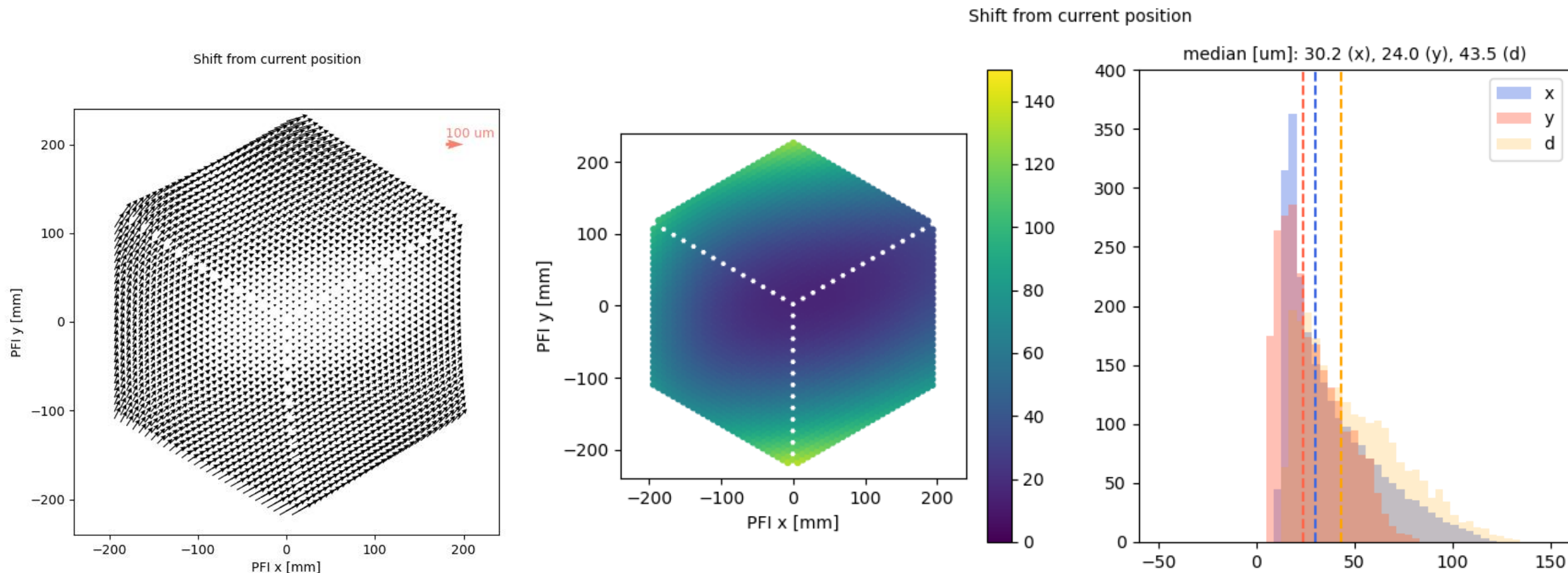
# Variation in measured position in the previous run



w/o data on 2024.03.11 (before centroid fix)

# Shift from the current position

The current position: ver. 2022-09-23  
(Measured in June 2022, and corrected rotation/shift/scale)



Comparison between the current position and mean of measured position (10 samples).  
Entirely, the dot position seems to be in direction of (+x, +y).  
The difference around the field edge is up to  $\sim 100 \mu\text{m}$ .

w/o data on 2024.03.11 (before centroid fix)