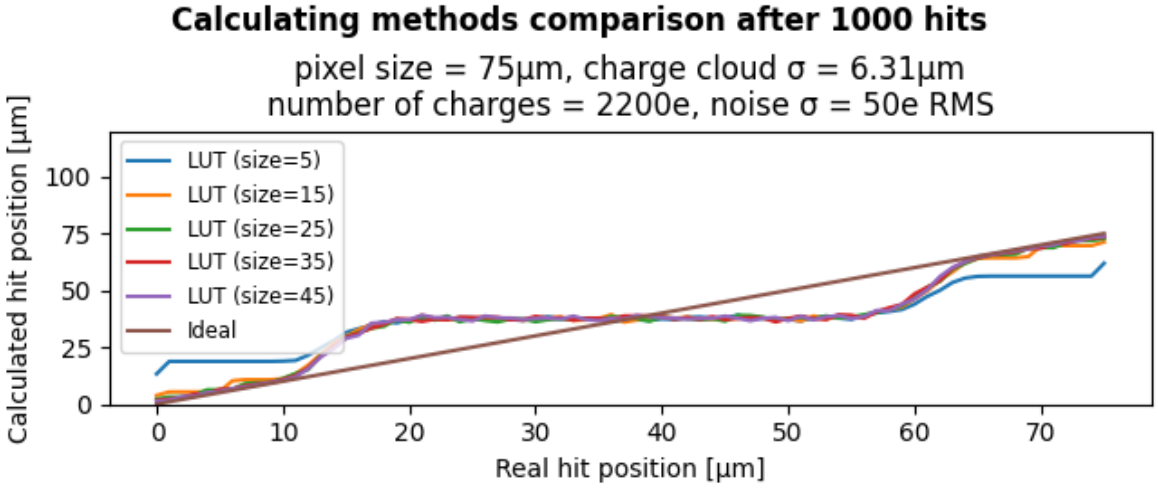
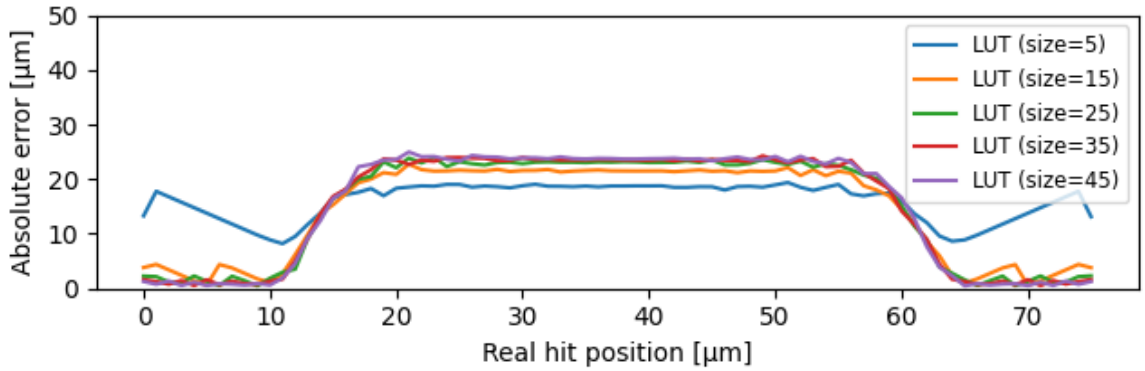
Porównanie wielkości LUT i sigmy chmury

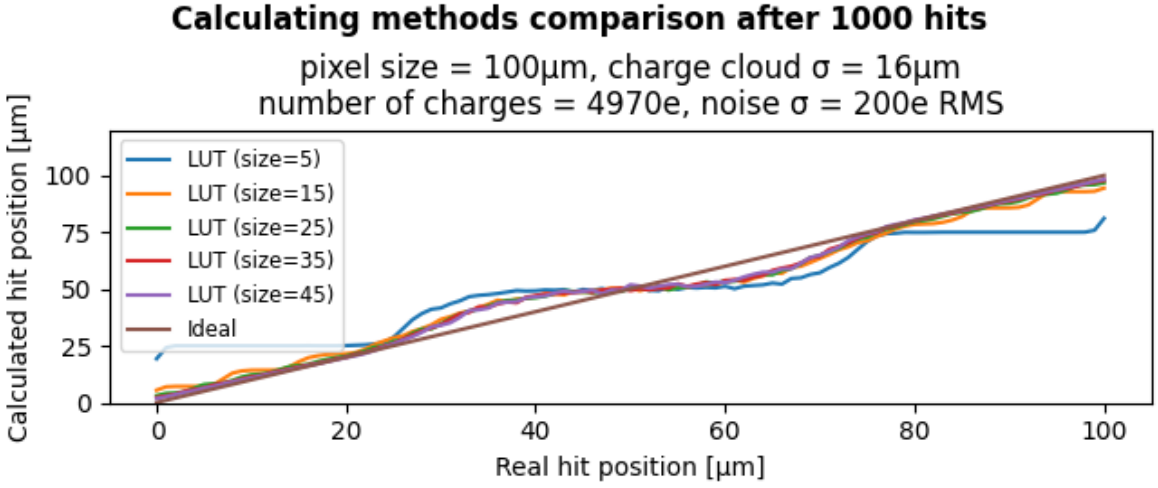
Dla metod wykorzystujących typ danych „floating point”

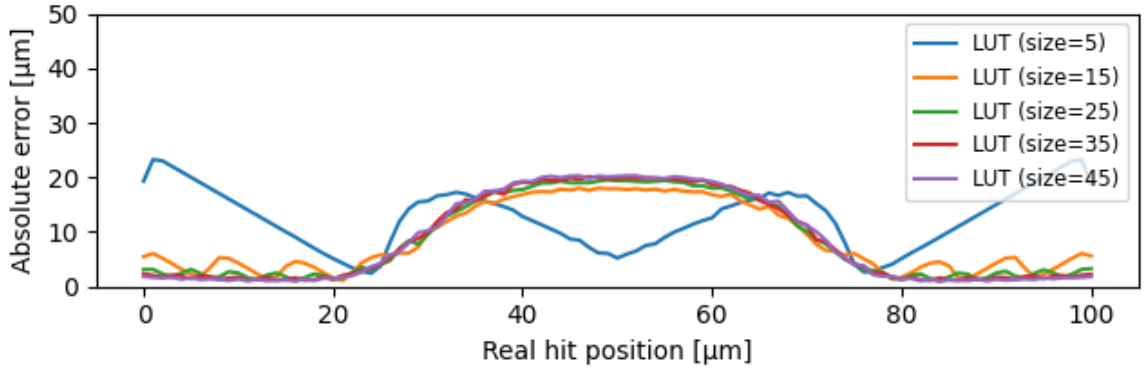
Porównanie wielkości LUT – cz.1

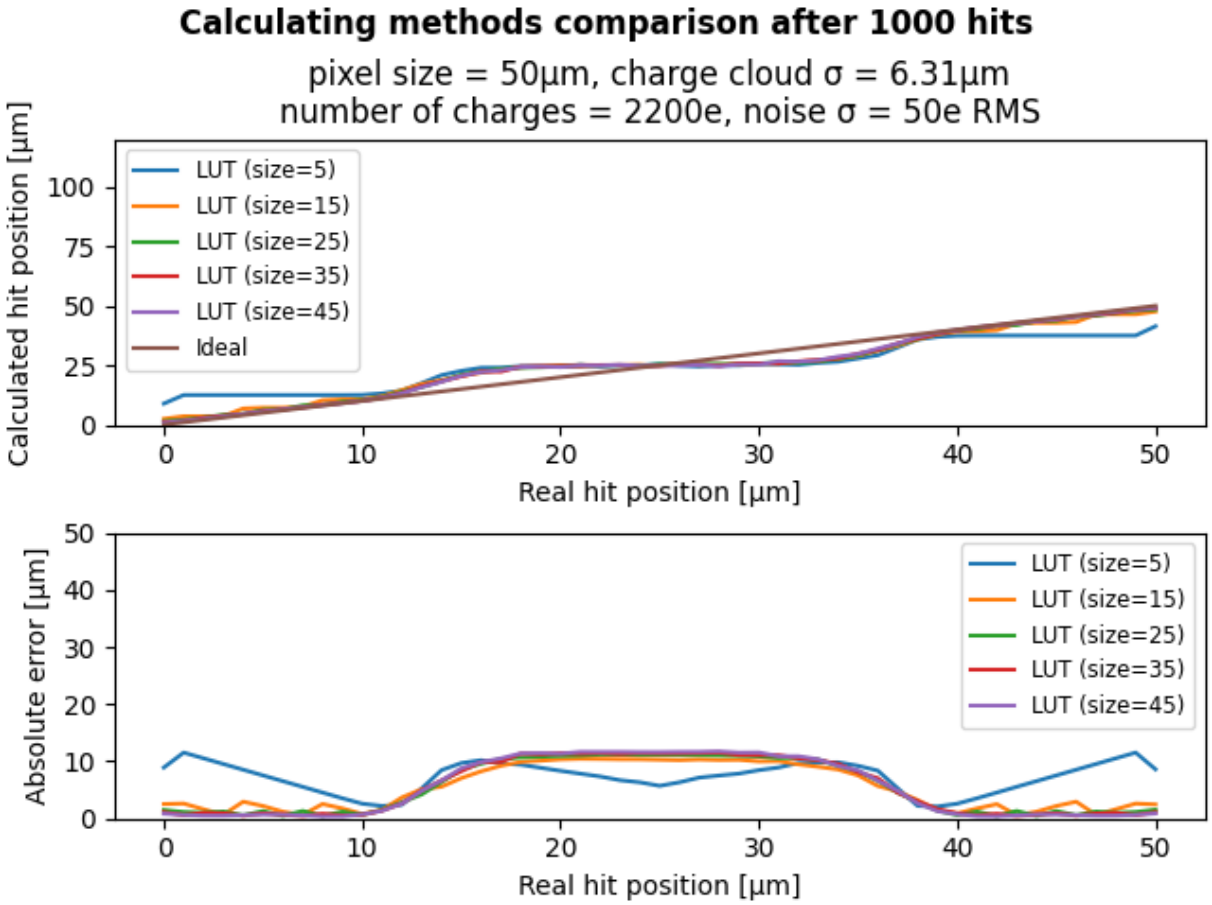
Dla detektorów z publikacji (Paper detectors).

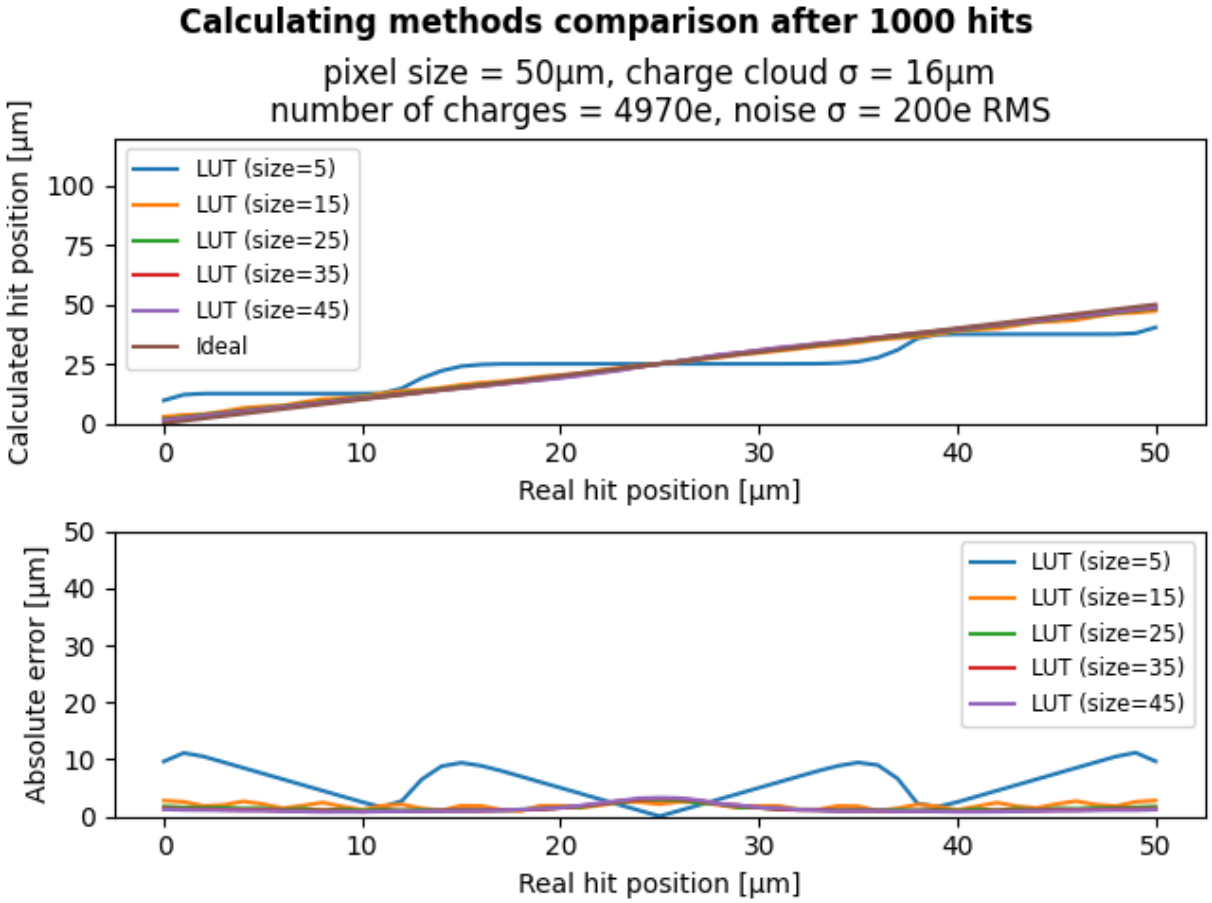












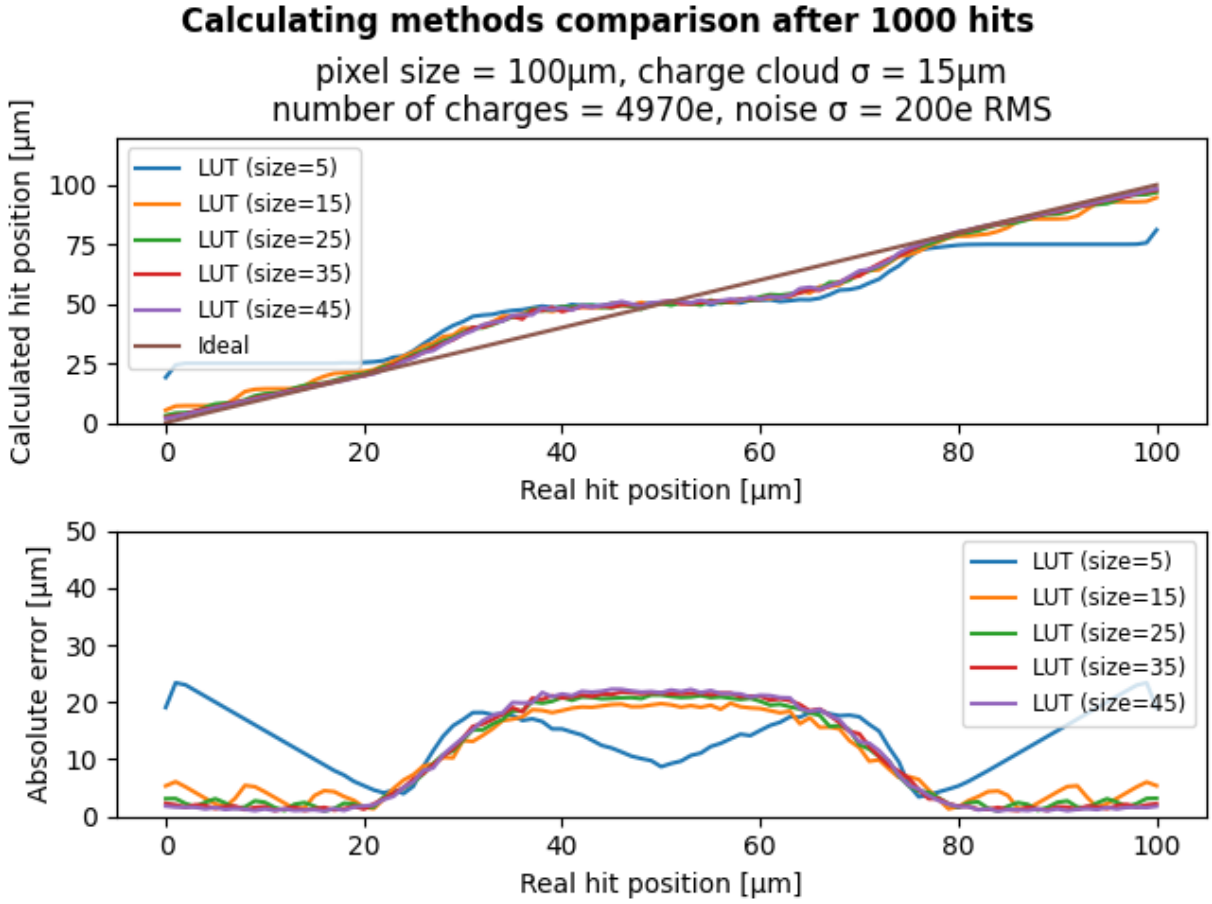
Wniosek

Nie widać większej poprawy dla wielkości tablicy większej niż 50.

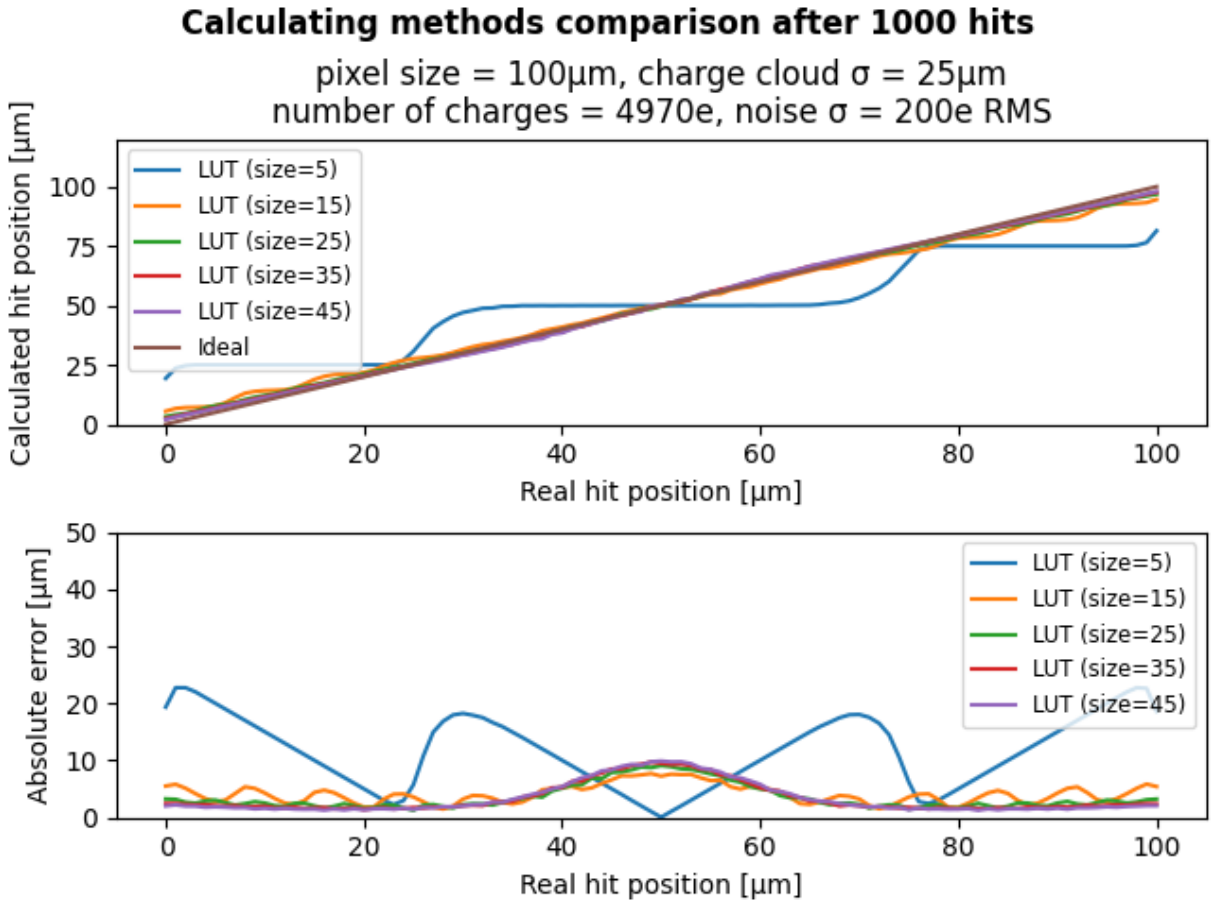
Porównanie wielkości LUT – cz.2

Dla tego samego detektora, ale z różnym stosunkiem sigmy chmury ładunku do wielkości pixela.

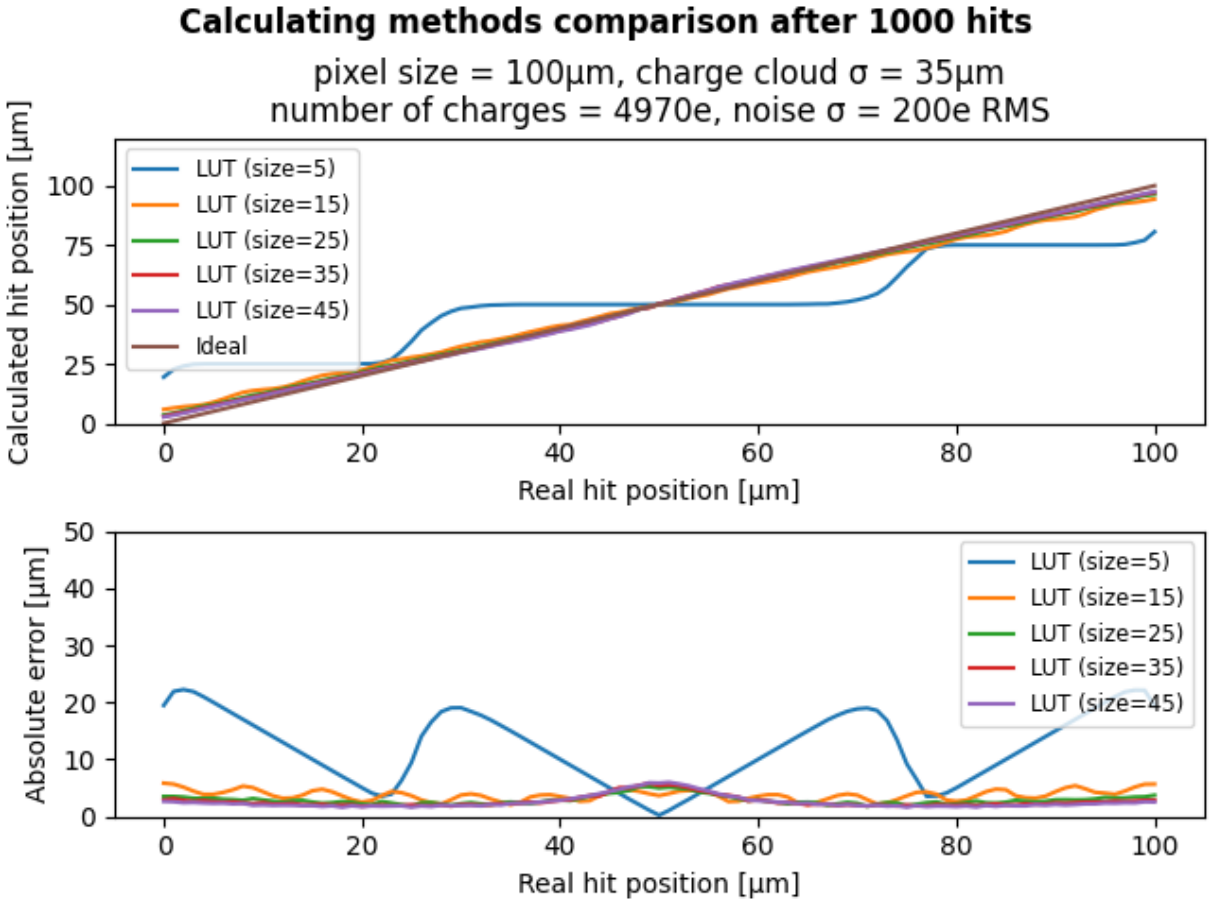
- 15%



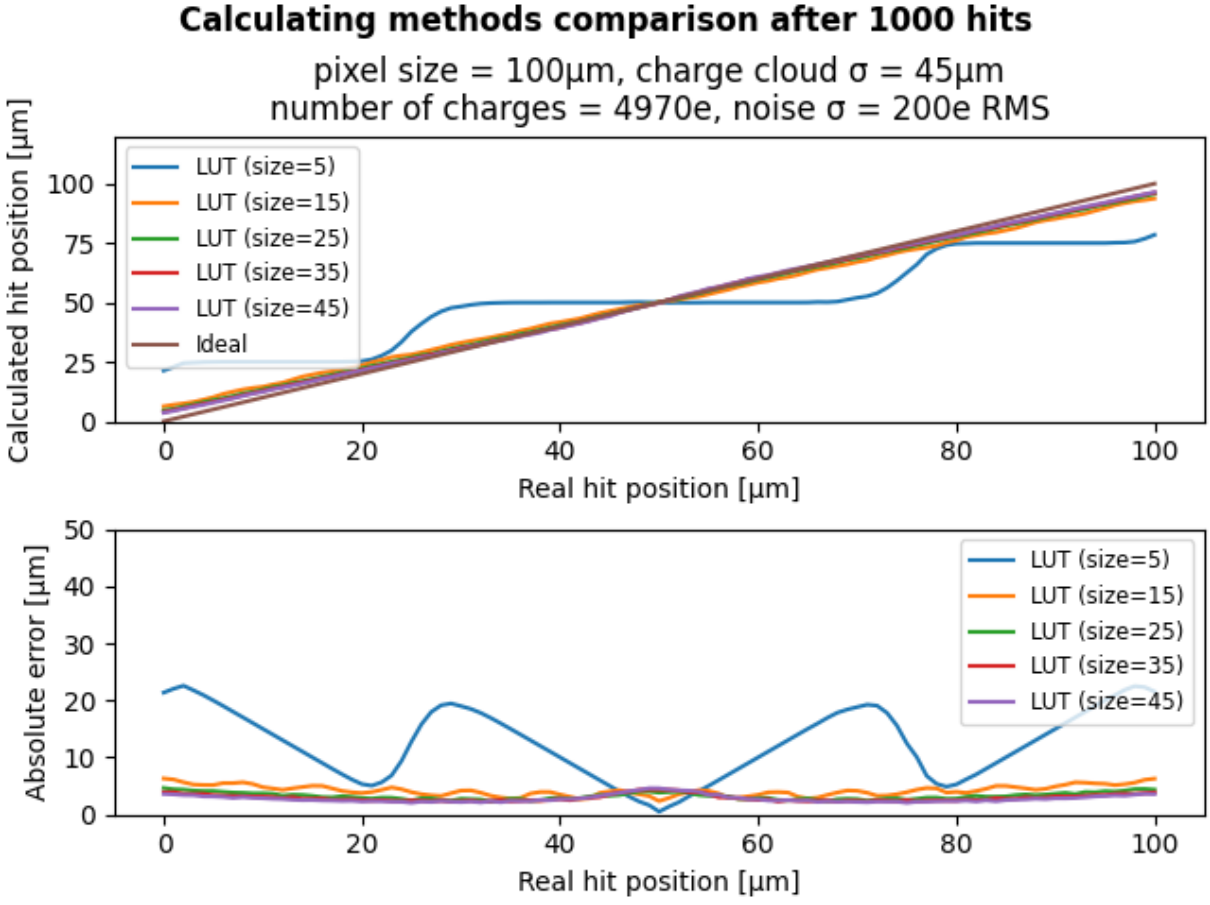
- 25%



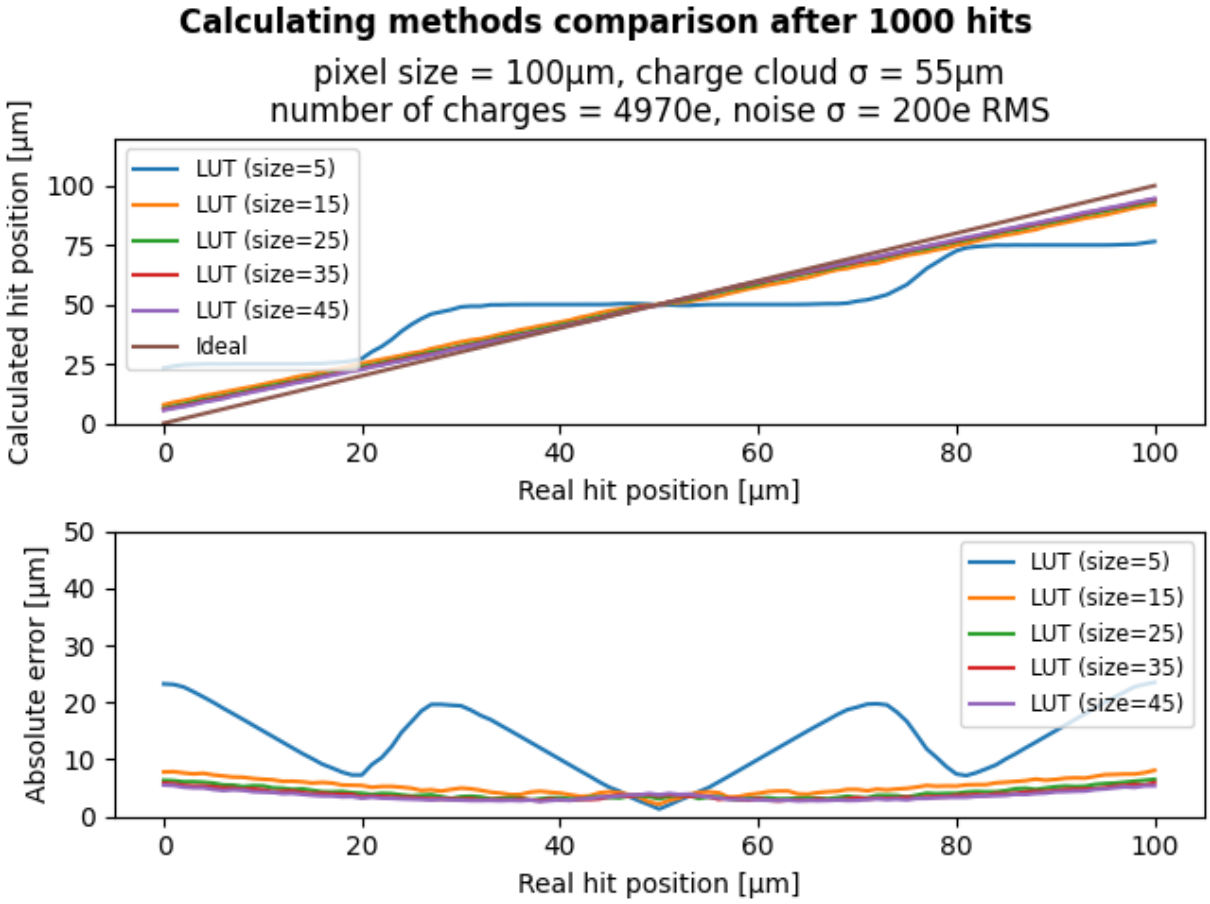
- 35%


Calculating methods comparison after 1000 hits
pixel size = 100µm, charge cloud σ = 35µm
number of charges = 4970e, noise σ = 200e RMS
Calculated hit position [µm]
Real hit position [µm]
LUT (size=5)
LUT (size=15)
LUT (size=25)
LUT (size=35)
LUT (size=45)
Ideal
Absolute error [µm]
Real hit position [µm]

- 45%


Calculating methods comparison after 1000 hits
pixel size = 100µm, charge cloud σ = 45µm
number of charges = 4970e, noise σ = 200e RMS
Calculated hit position [µm]
Real hit position [µm]
LUT (size=5)
LUT (size=15)
LUT (size=25)
LUT (size=35)
LUT (size=45)
Ideal
Absolute error [µm]
Real hit position [µm]

- 55%

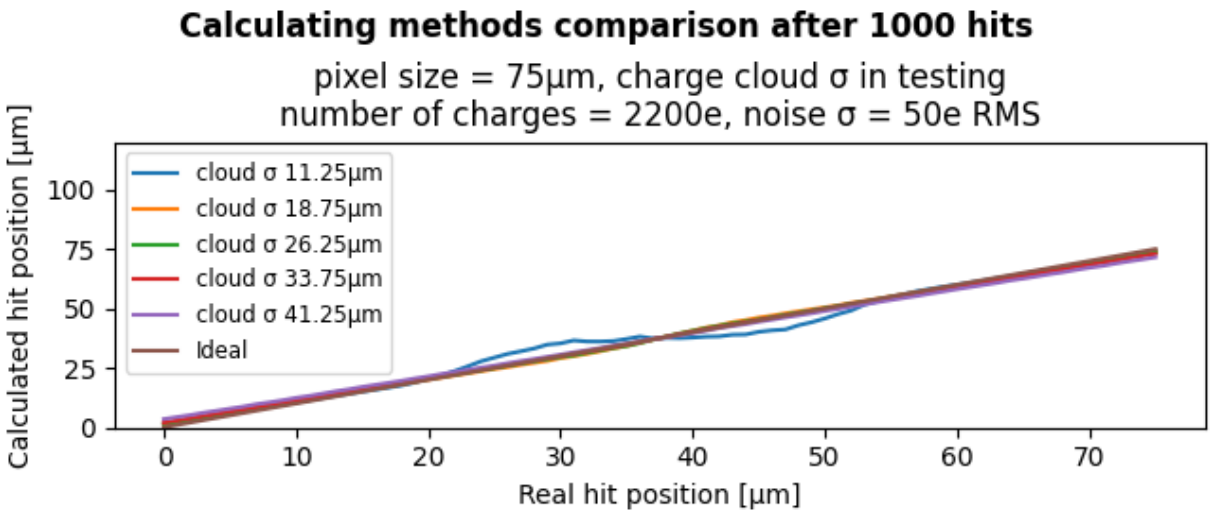


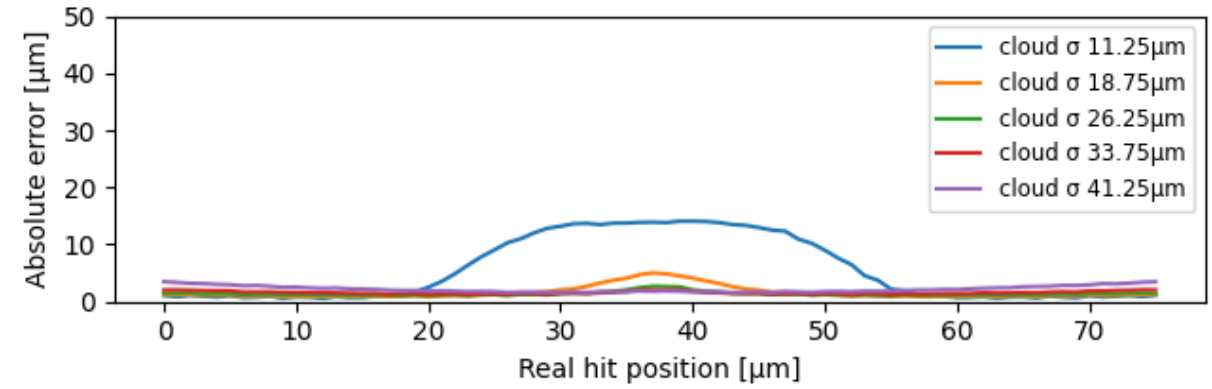
Wniosek

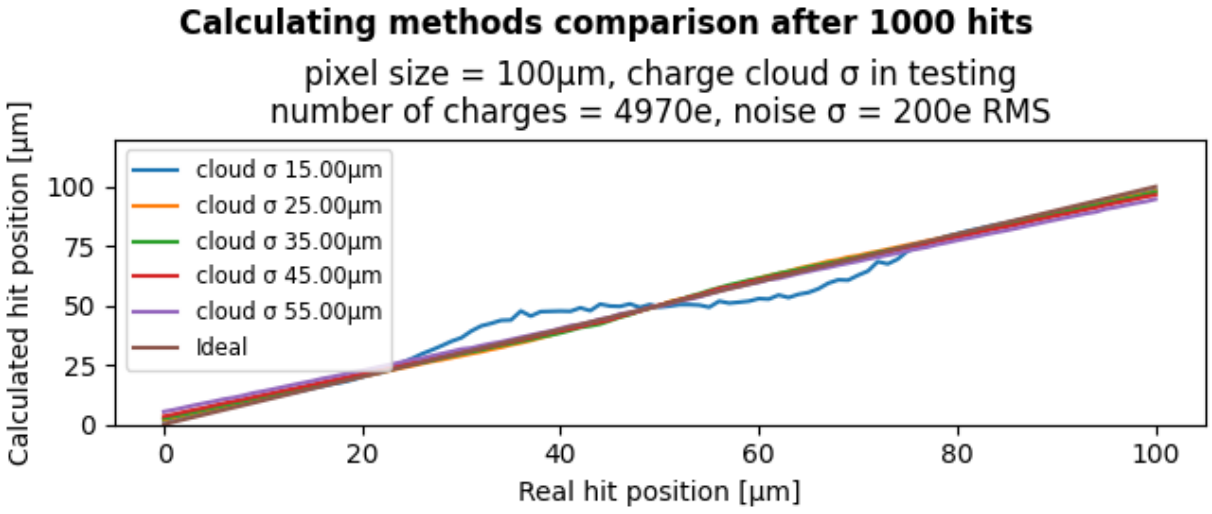
Nawet dla niekorzystnego stosunku sigmy chmury ładunku do wielkości pixela (15%, 25%), obserwujemy zadowalające wyniki już dla wielkości LUT = 50.

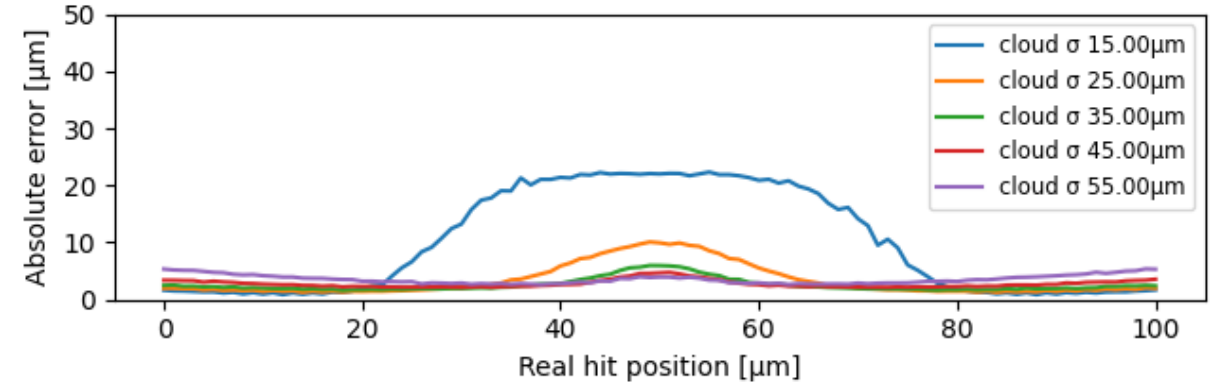
Porównanie zmian sigmy – cz. 1

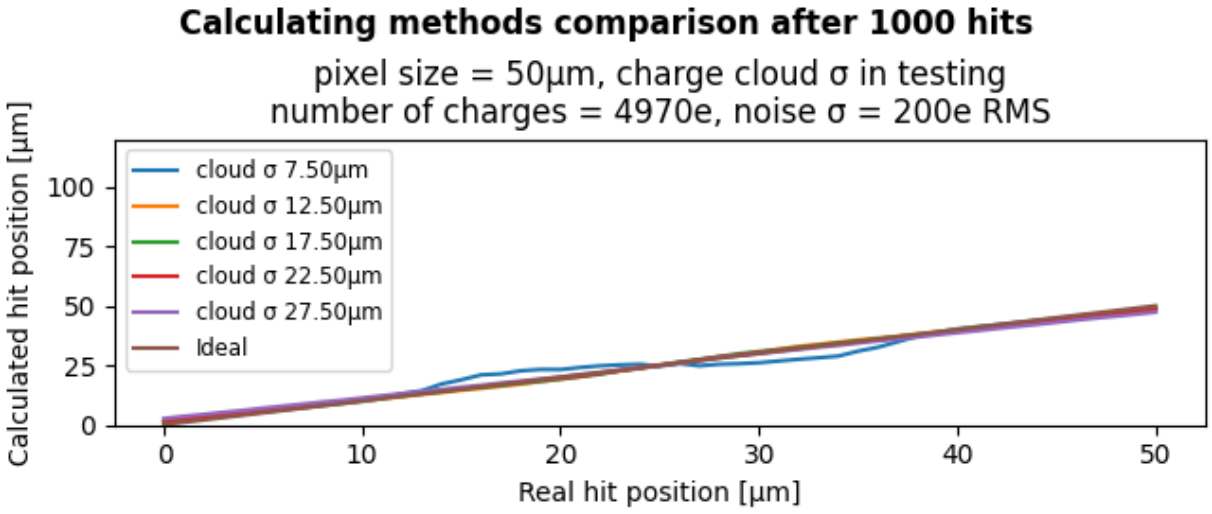
Dla wielkości LUT = 50 i detektorów z publikacji

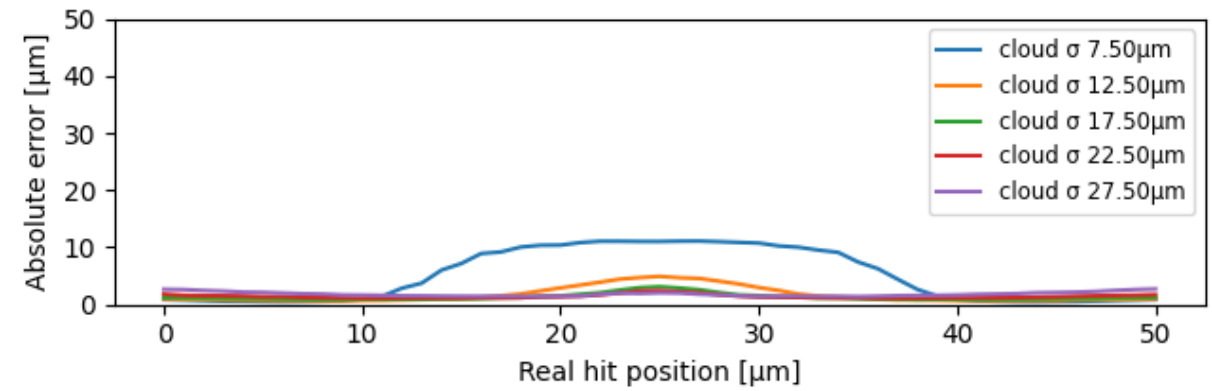


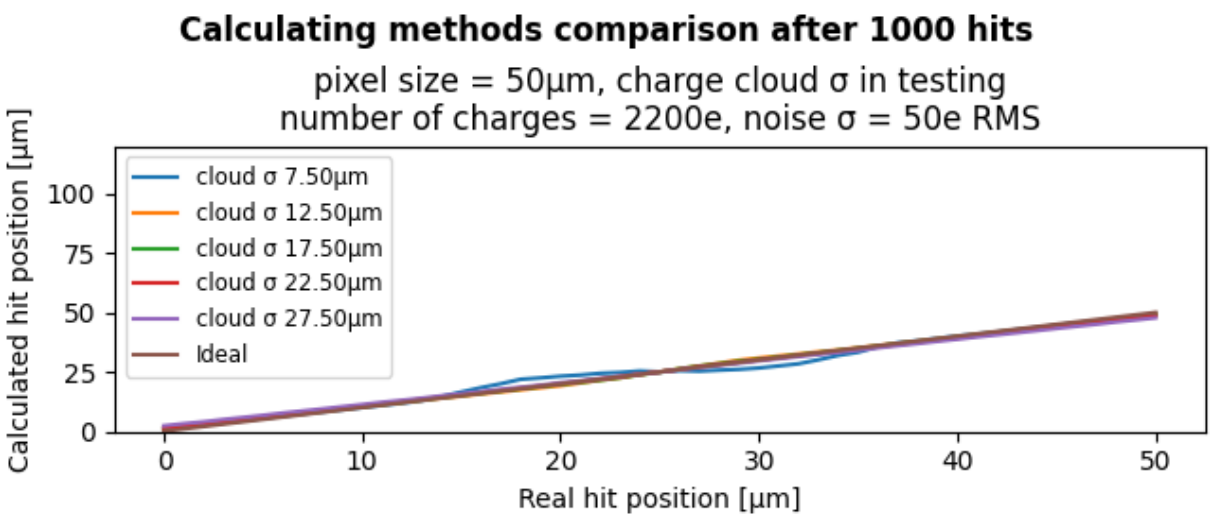


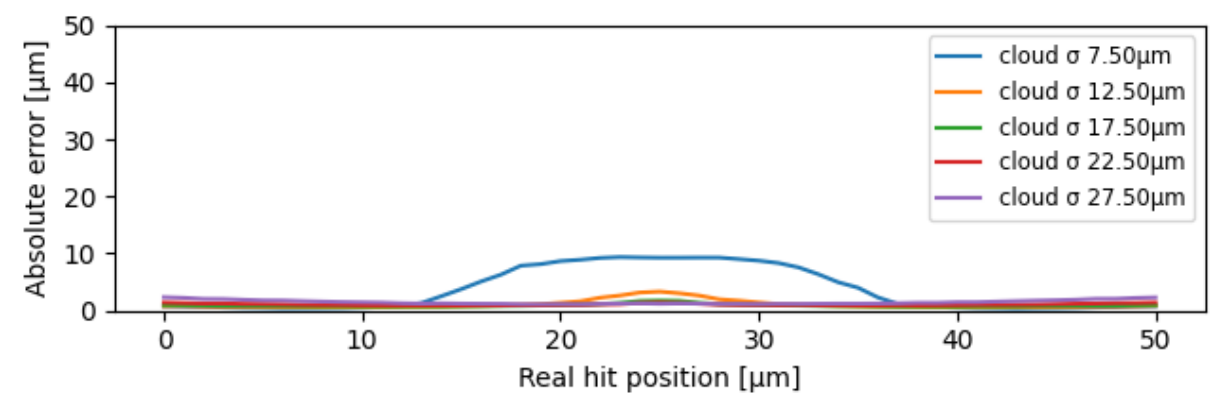










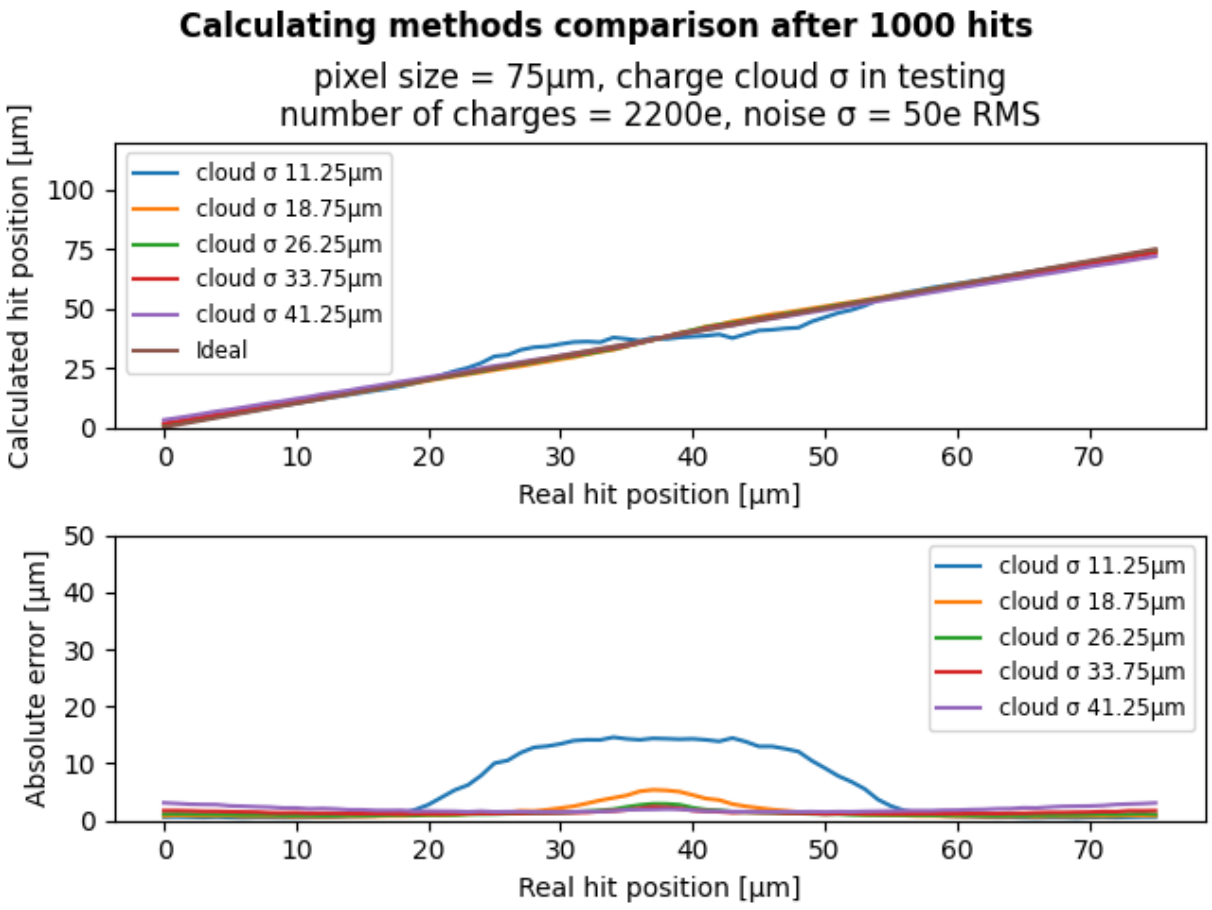


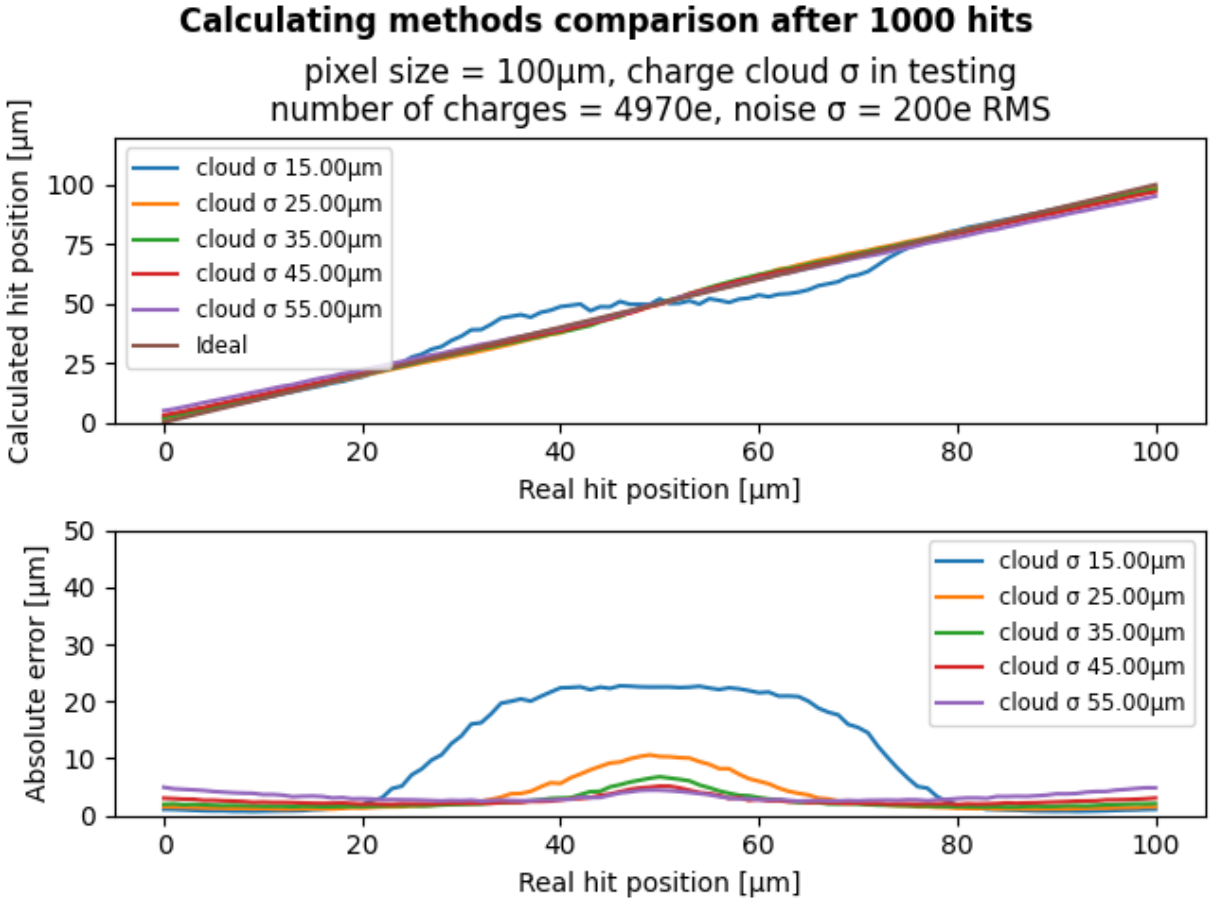
Wniosek

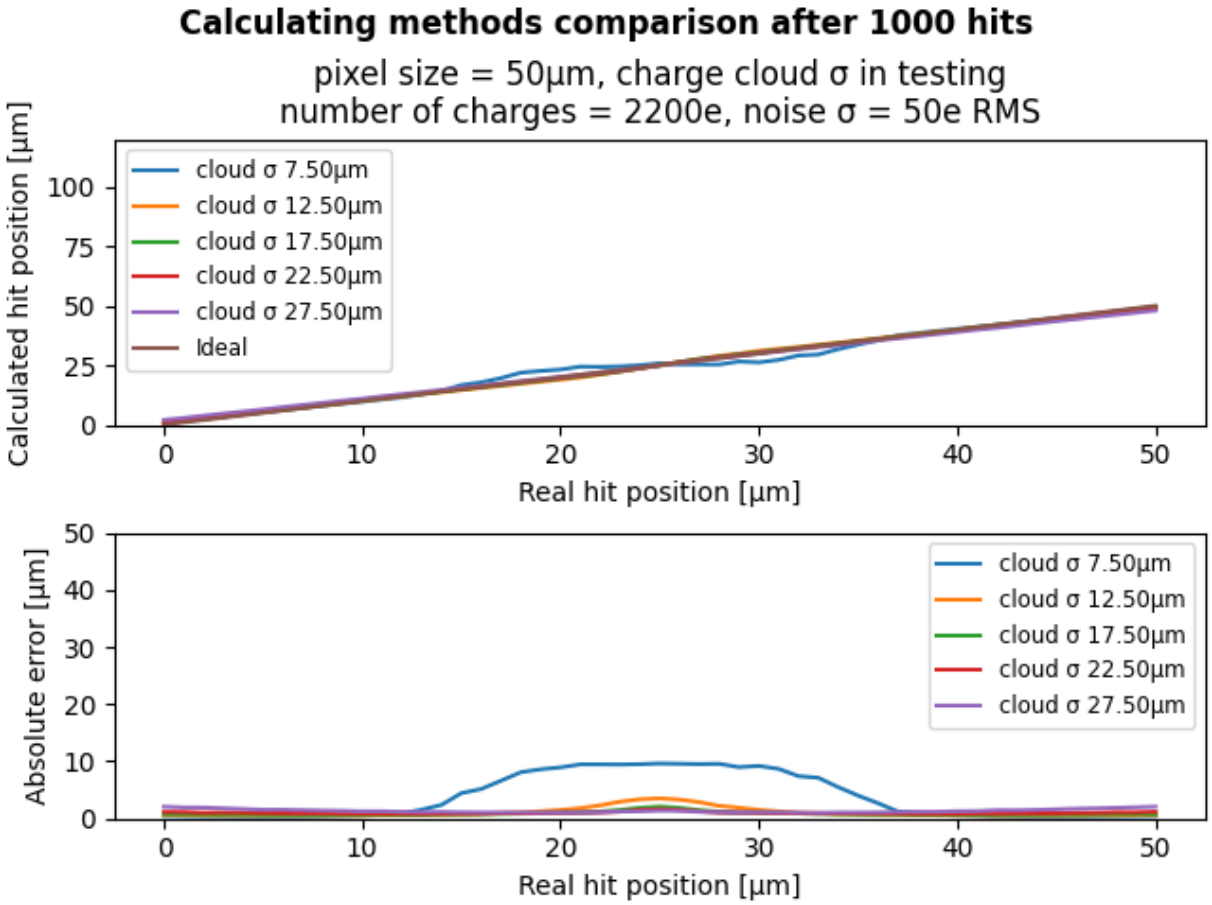
Zmiany sigmy chmury ładunku dla różnych detektorów są zadowalające dla wielkości LUT = 50

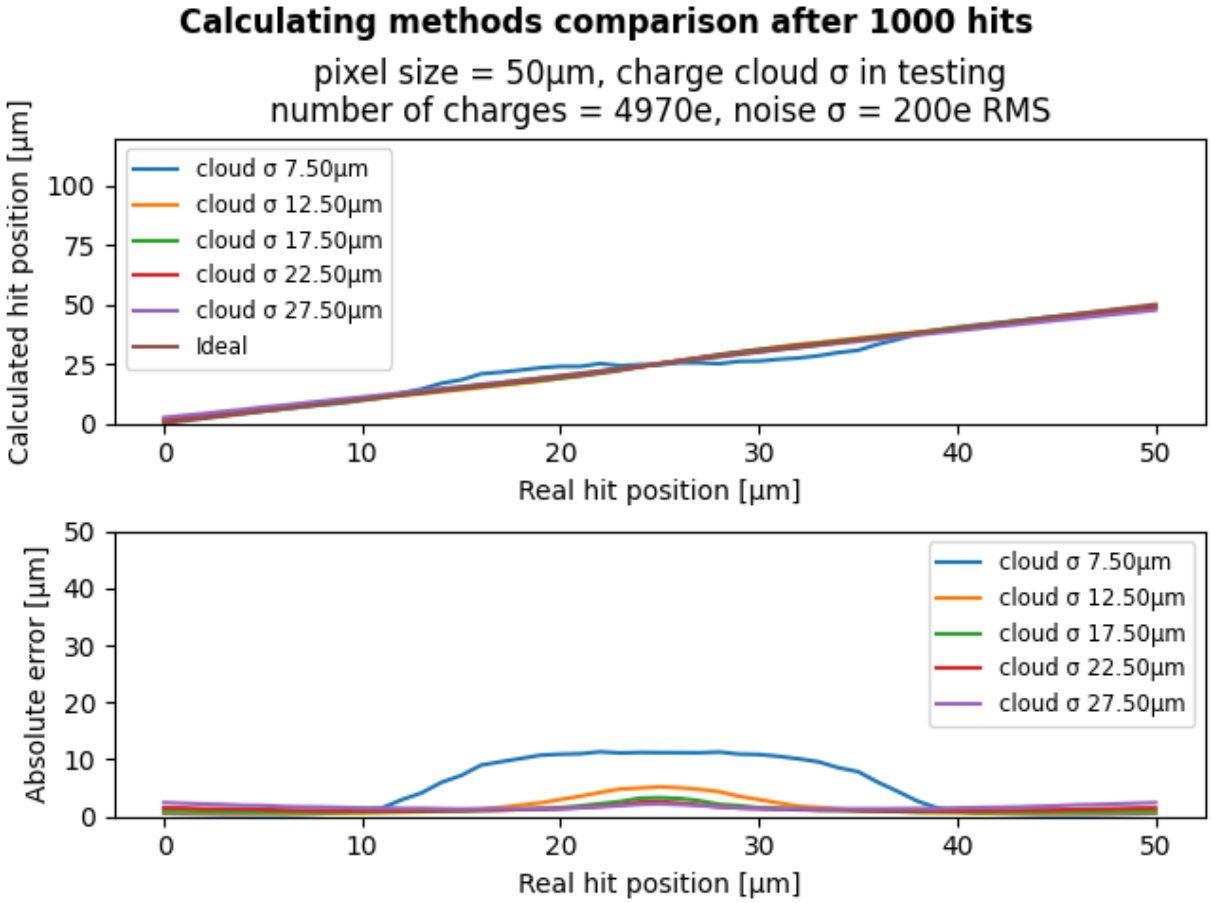
Porównanie zmian sigmy – cz. 2

Dla wielkości LUT = 100 i detektorów z publikacji









Wniosek

Nie widać żadnej poprawy dla wielkości LUT > 50