Date: Mon Oct 17 13:30:11 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

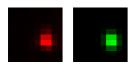
Coordinates: -158 um (x), 47.6 um (y), 63.1 um (z)

Corresponding bead: Not found

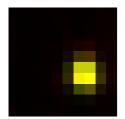
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	410 nm	223 nm
max	456 nm	471 nm	223 nm
Z	1.26 um	1.26 um	885 nm
Asymmetry	0.871		
Theta	-82.0°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.984$ 



Parameters:

A = 1130.477 (brightness)

B = 121.562 (background)

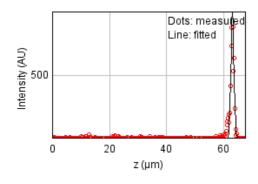
a = 0.848 px

b = -0.028 px

c = 0.650 px

xc = 6.525 pxyc = 5.637 px

### Z profile & fitting parameters:



Fitted on y = a + (b-a)\*exp(-(x-c)^2/(2\*d^2)

Sum of residuals squared: 114990.609

Standard deviation: 19.35361

R^2: 0.95670 Parameters: a = 113.00293 b = 892.22542

3 - 002.2204

c = 63.13607

Date: Mon Oct 17 13:30:11 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

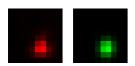
Coordinates: -105 um (x), 38.3 um (y), 63.3 um (z)

Corresponding bead: Not found

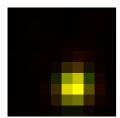
FWHM	Non corrected	Corrected	Theoretical
min	445 nm	460 nm	223 nm
max	501 nm	518 nm	223 nm
Z	1.31 um	1.31 um	885 nm
Asymmetry	0.887		
Theta	79.8°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.977$$



Parameters:

A = 994.820 (brightness)

B = 117.715 (background)

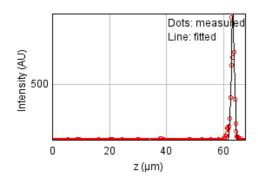
a = 0.673 px

b = 0.025 px

c = 0.538 px

xc = 5.648 pxyc = 6.782 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 173725.813

Standard deviation: 23.78828

R^2: 0.95050 Parameters: a = 114.31350 b = 990.29184 c = 63.28462

Date: Mon Oct 17 13:30:11 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

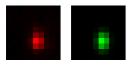
Coordinates: -104 um (x), 35.8 um (y), 63.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	357 nm	369 nm	223 nm
max	516 nm	534 nm	223 nm
Z	1.24 um	1.24 um	885 nm
Asymmetry	0.692		
Theta	88.4°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.981$ 



Parameters:

A = 1130.367 (brightness)

B = 125.793 (background)

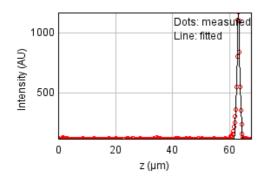
a = 1.050 px

b = 0.016 px

c = 0.504 px

xc = 5.293 pxyc = 6.095 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 52414.1904

Standard deviation: 13.06638

R^2: 0.98873 Parameters: a = 114.32730 b = 1171.25466

c = 63.13702

Date: Mon Oct 17 13:30:11 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

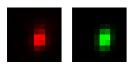
Coordinates: -101 um (x), 34.0 um (y), 63.1 um (z)

Corresponding bead: Not found

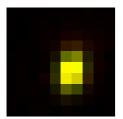
FWHM	Non corrected	Corrected	Theoretical
min	381 nm	394 nm	223 nm
max	561 nm	580 nm	223 nm
Z	1.29 um	1.29 um	885 nm
Asymmetry	0.68		
Theta	80.1°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.985$ 



Parameters:

A = 1258.684 (brightness)

B = 122.792 (background)

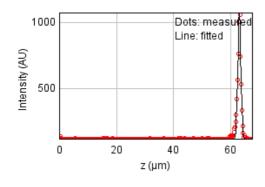
a = 0.908 px

b = 0.084 px

c = 0.441 px

xc = 5.482 pxyc = 5.345 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 51341.5063

Standard deviation: 12.93198

R^2: 0.98721 Parameters: a = 113.34297

b = 1075.07629

c = 63.11604

Date: Mon Oct 17 13:30:11 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

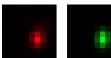
Coordinates: -74.1 um (x), 30.0 um (y), 63.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	374 nm	386 nm	223 nm
max	513 nm	531 nm	223 nm
Z	1.19 um	1.2 um	885 nm
Asymmetry	0.728		
Theta	82.3°		

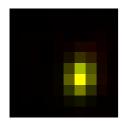
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.981$$



Parameters:

A = 1566.807 (brightness)

B = 129.035 (background)

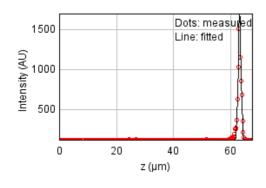
a = 0.953 px

b = 0.060 px

c = 0.518 px

xc = 6.038 pxyc = 5.801 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 131326.492

Standard deviation: 20.68269

R^2: 0.98727 Parameters: a = 115.40118b = 1714.93019c = 63.20572

Date: Mon Oct 17 13:30:11 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

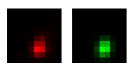
Coordinates: -49.8 um (x), 27.1 um (y), 63.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	402 nm	415 nm	223 nm
max	516 nm	534 nm	223 nm
Z	1.32 um	1.32 um	885 nm
Asymmetry	0.778		
Theta	75.7°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.983$$



A = 1308.986 (brightness)

B = 123.657 (background)

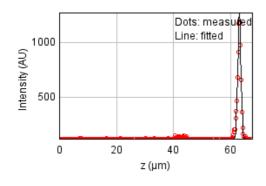
a = 0.811 px

b = 0.079 px

c = 0.523 px

xc = 5.423 pxyc = 6.834 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 77749.6038

Standard deviation: 15.91402

R^2: 0.98678 Parameters:

a = 117.47210

b = 1269.06026

c = 63.12044

Date: Mon Oct 17 13:30:12 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

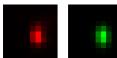
Coordinates: -82.8 um (x), 26.3 um (y), 63.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	371 nm	384 nm	223 nm
max	547 nm	566 nm	223 nm
Z	1.17 um	1.17 um	885 nm
Asymmetry	0.678		
Theta	-88.4°		

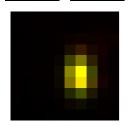
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.981$$



Parameters:

A = 1442.644 (brightness)

B = 129.450 (background)

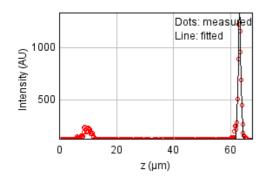
a = 0.974 px

b = -0.015 px

c = 0.448 px

xc = 5.840 pxyc = 5.351 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 216831.853

Standard deviation: 26.57617

R^2: 0.96382 Parameters: a = 120.85523b = 1340.13649c = 63.17557

Date: Mon Oct 17 13:30:12 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

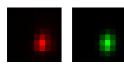
Coordinates: -117 um (x), 24.8 um (y), 63.3 um (z)

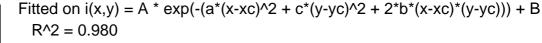
Corresponding bead: Not found

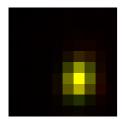
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	410 nm	223 nm
max	544 nm	563 nm	223 nm
Z	1.13 um	1.14 um	885 nm
Asymmetry	0.729		
Theta	82.2°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)







Parameters:

A = 1411.781 (brightness)

B = 122.078 (background)

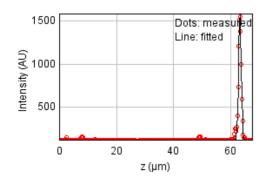
a = 0.845 px

b = 0.054 px

c = 0.460 px

xc = 5.974 pxyc = 6.079 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 83322.1592

Standard deviation: 16.47446

R^2: 0.98994 Parameters: a = 117.15529

b = 1590.04503

c = 63.30974

## Bead 3109 (Rejected)

Date: Mon Oct 17 13:30:12 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -47.1 um (x), 26.2 um (y), 29.0 um (z)

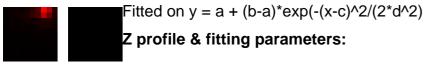
Corresponding bead: Not found

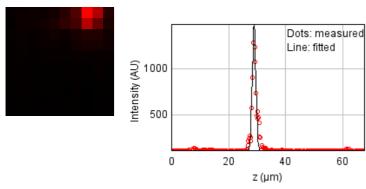
Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	1.47 um	1.48 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

(red: the original data, green: the fit, yellow: the two merged)





Fitted on  $y = a + (b-a)^* \exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 504996.940

Standard deviation: 40.55787

R^2: 0.94636 Parameters: a = 122.50015 b = 1475.06738

c = 29.00334

Date: Mon Oct 17 13:30:12 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

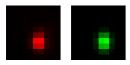
Coordinates: -47.8 um (x), 22.6 um (y), 63.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	390 nm	403 nm	223 nm
max	510 nm	527 nm	223 nm
Z	1.09 um	1.09 um	885 nm
Asymmetry	0.764		
Theta	88.2°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.987$ 



Parameters:

A = 1386.769 (brightness)

B = 125.924 (background)

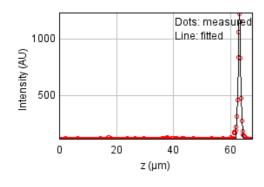
a = 0.884 px

b = 0.012 px

c = 0.517 px

xc = 5.551 pxyc = 6.208 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 41249.5910

Standard deviation: 11.59153

R^2: 0.99088 Parameters: a = 115.28913

b = 1227.71064

c = 63.14392

Date: Mon Oct 17 13:30:12 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -63.2 um (x), -31.5 um (y), 63.8 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	435 nm	450 nm	223 nm
max	921 nm	952 nm	223 nm
Z	1.52 um	1.53 um	885 nm
Asymmetry	0.473		
Theta	67.9°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.954$$



xc = 5.749 pxyc = 6.293 px

#### Parameters:

A = 1831.209 (brightness)

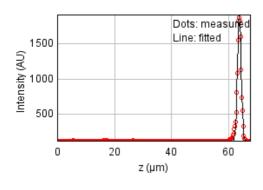
B = 132.402 (background)

a = 0.631 px

b = 0.192 px

c = 0.236 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 97138.3381

Standard deviation: 17.78796

R^2: 0.99402 Parameters:

a = 116.33348

b = 1909.42571

c = 63.79691

Date: Mon Oct 17 13:30:12 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

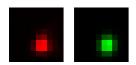
Coordinates: -35.3 um (x), -35.7 um (y), 63.8 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	450 nm	465 nm	223 nm
max	504 nm	521 nm	223 nm
Z	1.23 um	1.23 um	885 nm
Asymmetry	0.893		
Theta	79.9°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.979$$



Parameters:

A = 1997.391 (brightness)

B = 131.084 (background)

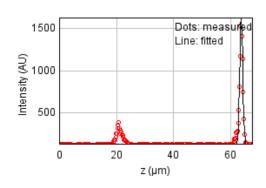
a = 0.658 px

b = 0.023 px

c = 0.532 px

xc = 5.589 pxyc = 6.427 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 492870.293

Standard deviation: 40.06795

R^2: 0.94965 Parameters:

a = 125.23135

b = 1632.15525

c = 63.76827

Date: Mon Oct 17 13:30:13 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

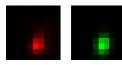
Coordinates: -14.0 um (x), -46.6 um (y), 63.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	390 nm	403 nm	223 nm
max	553 nm	572 nm	223 nm
Z	1.37 um	1.37 um	885 nm
Asymmetry	0.704		
Theta	76.7°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.966$ 



Parameters:

 $A = 1770.781 \quad (brightness)$ 

B = 133.883 (background)

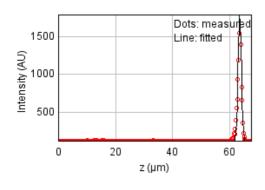
a = 0.861 px

b = 0.100 px

c = 0.462 px

xc = 5.353 pxyc = 6.746 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 229684.868

Standard deviation: 27.35250

R^2: 0.98217 Parameters: a = 117.04085

b = 1786.75970

c = 63.58813

Date: Mon Oct 17 13:30:13 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

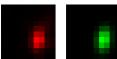
Coordinates: -2.33 um (x), -52.6 um (y), 63.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	406 nm	420 nm	223 nm
max	664 nm	687 nm	223 nm
Z	1.33 um	1.34 um	885 nm
Asymmetry	0.611		
Theta	82.4°		

### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.981$$



Parameters:

A = 1531.816 (brightness)

B = 132.408 (background)

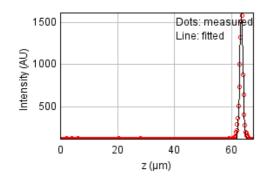
a = 0.805 px

b = 0.067 px

c = 0.313 px

xc = 6.394 pxyc = 5.963 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 175802.436

Standard deviation: 23.93003

R^2: 0.98323 Parameters: a = 114.98870b = 1641.75033

c = 63.46570

Date: Mon Oct 17 13:30:13 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

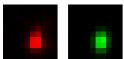
Coordinates: -30.7 um (x), -65.0 um (y), 63.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	420 nm	435 nm	223 nm
max	583 nm	602 nm	223 nm
Z	1.15 um	1.15 um	885 nm
Asymmetry	0.722		
Theta	85.1°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.979$$



Parameters:

A = 1901.454 (brightness)

B = 136.082 (background)

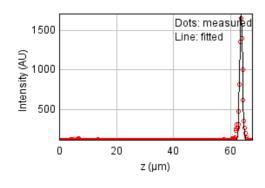
a = 0.756 px

b = 0.031 px

c = 0.398 px

xc = 5.567 pxyc = 6.343 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 150610.713

Standard deviation: 22.14924

R^2: 0.98500 Parameters: a = 117.27305

b = 1726.66704

c = 63.71643

Date: Mon Oct 17 13:30:13 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

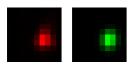
Coordinates: -36.5 um (x), -70.1 um (y), 64.0 um (z)

Corresponding bead: Not found

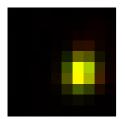
FWHM	Non corrected	Corrected	Theoretical
min	436 nm	451 nm	223 nm
max	523 nm	540 nm	223 nm
Z	1.49 um	1.5 um	885 nm
Asymmetry	0.835		
Theta	77.2°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.974$$



A = 2711.407 (brightness)

B = 136.817 (background)

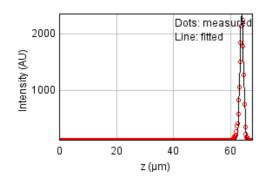
a = 0.694 px

b = 0.046 px

c = 0.502 px

xc = 6.302 pxyc = 5.447 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 303299.111

Standard deviation: 31.43159

R^2: 0.98799 Parameters: a = 114.73613 b = 2364.24444 c = 63.95372

Date: Mon Oct 17 13:30:13 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -21.5 um (x), -73.1 um (y), 63.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	372 nm	385 nm	223 nm
max	637 nm	658 nm	223 nm
Z	1.24 um	1.25 um	885 nm
Asymmetry	0.585		
Theta	88.5°		

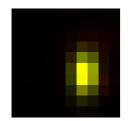
### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.981$$



Parameters:

A = 1793.408 (brightness)

B = 135.759 (background)

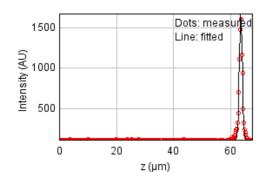
a = 0.967 px

b = 0.017 px

c = 0.332 px

xc = 6.250 pxyc = 5.455 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 107706.012

Standard deviation: 18.73056

R^2: 0.98936 Parameters:

a = 115.88933

b = 1673.51446

c = 63.61801

Date: Mon Oct 17 13:30:14 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

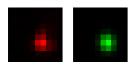
Coordinates: -4.46 um (x), -75.0 um (y), 63.8 um (z)

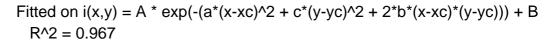
Corresponding bead: Not found

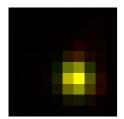
FWHM	Non corrected	Corrected	Theoretical
min	436 nm	451 nm	223 nm
max	496 nm	512 nm	223 nm
Z	1.22 um	1.22 um	885 nm
Asymmetry	0.881		
Theta	-80.6°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)







Parameters:

A = 1661.368 (brightness)

B = 132.746 (background)

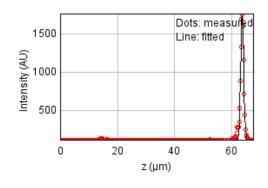
a = 0.700 px

b = -0.025 px

c = 0.550 px

xc = 5.739 pxyc = 5.996 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 99872.0319

Standard deviation: 18.03652

R^2: 0.99104 Parameters: a = 116.67071 b = 1767.24753

c = 63.75263

Date: Mon Oct 17 13:30:14 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

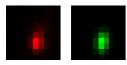
Coordinates: 7.09 um (x), -80.4 um (y), 63.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	357 nm	369 nm	223 nm
max	586 nm	605 nm	223 nm
Z	1.3 um	1.3 um	885 nm
Asymmetry	0.609		
Theta	82.0°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.970$ 



Parameters:

A = 2075.498 (brightness)

B = 140.352 (background)

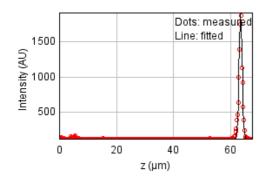
a = 1.042 px

b = 0.091 px

c = 0.404 px

xc = 5.224 pxyc = 6.232 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 205681.655

Standard deviation: 25.88383

R^2: 0.98547 Parameters: a = 118.37515 b = 1916.73373 c = 63.54827

Date: Mon Oct 17 13:30:14 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: 5.87 um (x), -89.3 um (y), 63.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	398 nm	412 nm	223 nm
max	616 nm	636 nm	223 nm
Z	1.15 um	1.15 um	885 nm
Asymmetry	0.647		
Theta	80.7°		

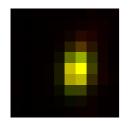
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.977$$



Parameters:

A = 1650.351 (brightness)

B = 132.204 (background)

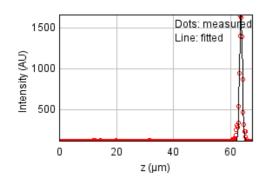
a = 0.833 px

b = 0.078 px

c = 0.367 px

xc = 5.668 pxyc = 5.115 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 114833.663

Standard deviation: 19.34040

R^2: 0.98800 Parameters: a = 115.59683

b = 1687.39859

c = 63.67277

# Bead 3121 (Rejected)

Date: Mon Oct 17 13:30:14 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: 19.8 um (x), -92.0 um (y), 64.0 um (z)

Corresponding bead: Not found

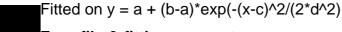
Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	263 nm	264 nm	885 nm
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

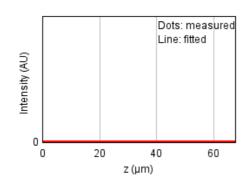
(red: the original data, green: the fit, yellow: the two merged)





# Z profile & fitting parameters:





Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 0.00000E0

Standard deviation: 0.00000E0

R^2: 0.00000 Parameters: a = 0.00000E0 b = 0.00000E0 c = -0.11115

# Bead 3122 (Rejected)

Date: Mon Oct 17 13:30:14 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: 17.1 um (x), -95.1 um (y), 8.9 um (z)

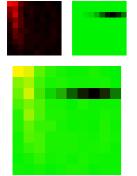
Corresponding bead: Not found

Reason of rejection: The fitted bead is likely to be a different bead from the center bead.

FWHM	Non corrected	Corrected	Theoretical
min	66.1 nm	68.3 nm	223 nm
max	1.43 um	1.48 um	223 nm
Z	1.98 um	1.99 um	885 nm
Asymmetry	0.046		
Theta	3.0°		

### XY profile & fitting parameters :

(red: the original data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.013$$

#### Parameters:

A = -19.858 (brightness)

B = 126.744 (background)

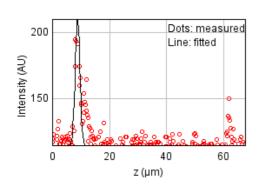
a = 0.151 px

b = 1.612 px

c = 30.630 px

xc = 5.805 pxyc = 2.097 px

# Z profile & fitting parameters:



Fitted on y = a + (b-a)\*exp(-(x-c)^2/(2\*d^2)

Sum of residuals squared: 25218.1303

Standard deviation: 9.06332

R^2: 0.70530 Parameters:

a = 114.29845

b = 210.81055

c = 8.89815

Date: Mon Oct 17 13:30:14 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

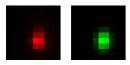
Coordinates: 72.3 um (x), -95.9 um (y), 63.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	415 nm	429 nm	223 nm
max	555 nm	574 nm	223 nm
Z	1.4 um	1.41 um	885 nm
Asymmetry	0.748		
Theta	84.6°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.980$ 



Parameters:

A = 1190.285 (brightness)

B = 125.672 (background)

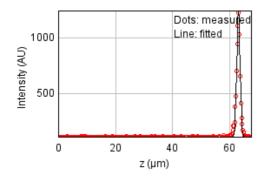
a = 0.777 px

b = 0.032 px

c = 0.439 px

xc = 5.436 pxyc = 5.940 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 67300.9742

Standard deviation: 14.80613

R^2: 0.98877 Parameters: a = 114.08309 b = 1243.26924 c = 63.14035

Date: Mon Oct 17 13:30:15 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -160 um (x), 28.1 um (y), 63.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	360 nm	372 nm	223 nm
max	589 nm	609 nm	223 nm
Z	1.12 um	1.13 um	885 nm
Asymmetry	0.61		
Theta	86.1°		

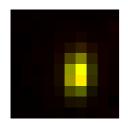
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.982$$



Parameters:

A = 825.922 (brightness)

B = 121.274 (background)

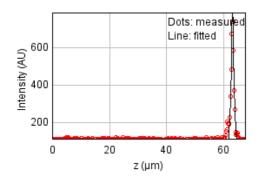
a = 1.033 px

b = 0.045 px

c = 0.389 px

xc = 5.743 pxyc = 5.418 px

# Z profile & fitting parameters:



Fitted on y = a + (b-a)\*exp(-(x-c)^2/(2\*d^2)

Sum of residuals squared: 43473.5057

Standard deviation: 11.89990

R^2: 0.97505 Parameters:

a = 112.24475

b = 785.66633

c = 63.18013

Date: Mon Oct 17 13:30:15 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -73.7 um (x), -7.25 um (y), 63.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	381 nm	394 nm	223 nm
max	535 nm	553 nm	223 nm
Z	1.34 um	1.35 um	885 nm
Asymmetry	0.712		
Theta	-88.0°		

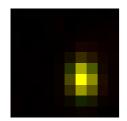
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.982$$



Parameters:

A = 1504.657 (brightness)

B = 127.327 (background)

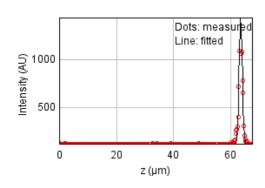
a = 0.926 px

b = -0.016 px

c = 0.470 px

xc = 6.175 pxyc = 5.954 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 203982.204

Standard deviation: 25.77668

R^2: 0.97474 Parameters: a = 114.53837 b = 1444.70417 c = 63.57730

Date: Mon Oct 17 13:30:15 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

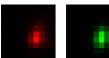
Coordinates: -11.0 um (x), -46.3 um (y), 63.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	390 nm	404 nm	223 nm
max	571 nm	591 nm	223 nm
Z	1.24 um	1.24 um	885 nm
Asymmetry	0.683		
Theta	78.2°		

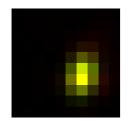
### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.970$$



Parameters:

A = 1541.345 (brightness)

B = 130.886 (background)

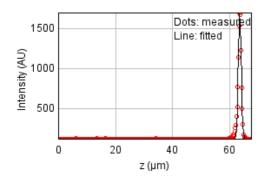
a = 0.861 px

b = 0.094 px

c = 0.431 px

xc = 6.024 pxyc = 5.630 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 103474.532

Standard deviation: 18.35894

R^2: 0.99009 Parameters:

a = 115.49487

b = 1699.90986

c = 63.58737

Date: Mon Oct 17 13:30:15 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -14.1 um (x), -70.6 um (y), 63.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	374 nm	387 nm	223 nm
max	652 nm	674 nm	223 nm
Z	1.12 um	1.13 um	885 nm
Asymmetry	0.573		
Theta	81.8°		

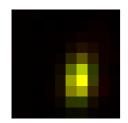
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.981$$



Parameters:

A = 1391.201(brightness)

B = 128.435 (background)

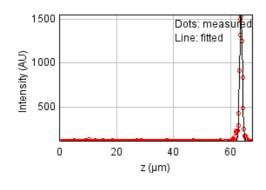
a = 0.946 px

b = 0.091 px

c = 0.328 px

xc = 5.759 pxyc = 5.920 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 78860.7984

Standard deviation: 16.02734

R^2: 0.99024 Parameters: a = 115.07764b = 1576.28782

c = 63.67908

Date: Mon Oct 17 13:30:15 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

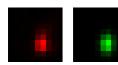
Coordinates: -29.5 um (x), -74.4 um (y), 63.8 um (z)

Corresponding bead: Not found

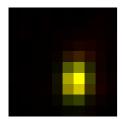
FWHM	Non corrected	Corrected	Theoretical
min	387 nm	400 nm	223 nm
max	560 nm	578 nm	223 nm
Z	1.17 um	1.17 um	885 nm
Asymmetry	0.692		
Theta	86.1°		

### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.977$ 



Parameters:

A = 2063.762 (brightness)

B = 138.013 (background)

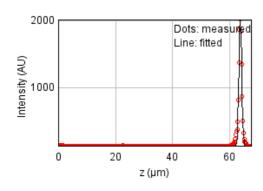
a = 0.893 px

b = 0.032 px

c = 0.431 px

xc = 5.739 pxyc = 6.205 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 124627.187

Standard deviation: 20.14824

R^2: 0.99122 Parameters: a = 116.62090 b = 2017.71405 c = 63.79772

Date: Mon Oct 17 13:30:15 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -138 um (x), -78.5 um (y), 64.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	464 nm	480 nm	223 nm
max	610 nm	631 nm	223 nm
Z	1.2 um	1.21 um	885 nm
Asymmetry	0.761		
Theta	4.9°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.979$$



Parameters:

A = 2729.799 (brightness)

B = 137.102 (background)

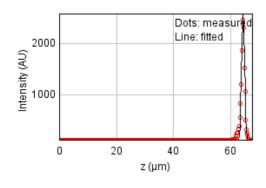
a = 0.362 px

b = 0.022 px

c = 0.621 px

xc = 6.367 pxyc = 6.012 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 292874.881

Standard deviation: 30.88673

R^2: 0.98814 Parameters: a = 116.36421 b = 2583.89612 c = 64.40615

# Bead 3130 (Rejected)

Date: Mon Oct 17 13:30:15 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -34.1 um (x), -79.4 um (y), 63.9 um (z)

Corresponding bead: Not found

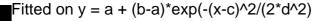
Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	1.27 um	1.28 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

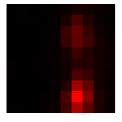
### XY profile & fitting parameters :

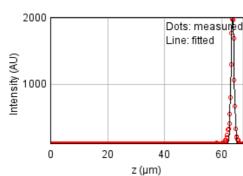
(red: the original data, green: the fit, yellow: the two merged)





## Z profile & fitting parameters:





Fitted on  $y = a + (b-a)^* \exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 164476.915

Standard deviation: 23.14639

R^2: 0.98939
Parameters:

a = 116.42126 b = 2021.59130

c = 63.86009

Date: Mon Oct 17 13:30:15 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

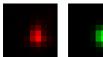
Coordinates: -38.8 um (x), -80.7 um (y), 64.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	409 nm	423 nm	223 nm
max	518 nm	535 nm	223 nm
Z	1.27 um	1.27 um	885 nm
Asymmetry	0.791		
Theta	-85.7°		

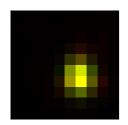
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.976$$



Parameters:

A = 2196.496 (brightness)

B = 138.421 (background)

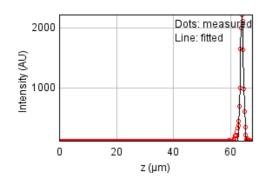
a = 0.799 px

b = -0.023 px

c = 0.502 px

xc = 5.827 pxyc = 5.603 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 178536.421

Standard deviation: 24.11539

R^2: 0.99057 Parameters:

a = 116.94391

b = 2224.98615

c = 64.01224

Date: Mon Oct 17 13:30:15 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: 11.6 um (x), -83.5 um (y), 63.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	378 nm	391 nm	223 nm
max	602 nm	622 nm	223 nm
Z	1.32 um	1.32 um	885 nm
Asymmetry	0.628		
Theta	79.7°		

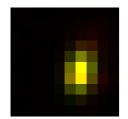
### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.971$ 



Parameters:

A = 1689.018 (brightness)

B = 132.956 (background)

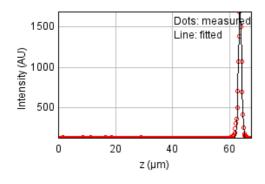
a = 0.921 px

b = 0.100 px

c = 0.388 px

xc = 5.941 pxyc = 5.403 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 79255.7221

Standard deviation: 16.06742

R^2: 0.99302 Parameters:

a = 115.76224

b = 1719.70107

c = 63.68975

Date: Mon Oct 17 13:30:16 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

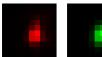
Coordinates: -19.7 um (x), -86.3 um (y), 63.8 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	393 nm	406 nm	223 nm
max	585 nm	605 nm	223 nm
Z	1.12 um	1.13 um	885 nm
Asymmetry	0.672		
Theta	78.7°		

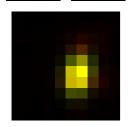
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.973$$



Parameters:

A = 1821.020 (brightness)

B = 134.224 (background)

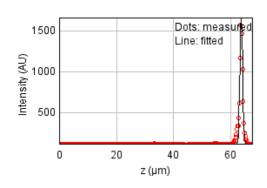
a = 0.852 px

b = 0.092 px

c = 0.411 px

xc = 5.644 pxyc = 5.292 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 157762.724

Standard deviation: 22.66903

R^2: 0.98277 Parameters: a = 116.97255b = 1666.31403c = 63.77358

Date: Mon Oct 17 13:30:16 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

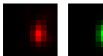
Coordinates: 34.4 um (x), -90.0 um (y), 63.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	381 nm	394 nm	223 nm
max	603 nm	624 nm	223 nm
Z	1.25 um	1.26 um	885 nm
Asymmetry	0.632		
Theta	86.9°		

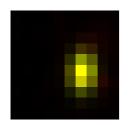
### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.981$$



Parameters:

A = 1561.011 (brightness)

B = 133.401 (background)

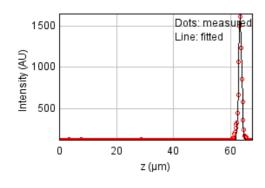
a = 0.921 px

b = 0.030 px

c = 0.370 px

xc = 6.164 pxyc = 5.152 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 99164.8083

Standard deviation: 17.97255

R^2: 0.99007 Parameters:

a = 115.45579

b = 1655.40876

c = 63.41026

Date: Mon Oct 17 13:30:16 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -9.25 um (x), -92.5 um (y), 63.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	465 nm	481 nm	223 nm
max	641 nm	662 nm	223 nm
Z	1.54 um	1.55 um	885 nm
Asymmetry	0.726		
Theta	81.9°		

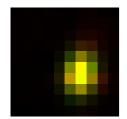
### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.960$$



Parameters:

A = 1358.754 (brightness)

B = 131.694 (background)

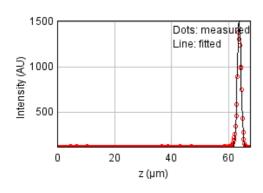
a = 0.614 px

b = 0.041 px

c = 0.333 px

xc = 5.960 pxyc = 5.561 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 389156.450

Standard deviation: 35.60352

R^2: 0.96278 Parameters:

a = 113.82686

b = 1519.03493

c = 63.74301

Date: Mon Oct 17 13:30:16 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -46.4 um (x), -32.3 um (y), 63.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	374 nm	386 nm	223 nm
max	593 nm	613 nm	223 nm
Z	1.27 um	1.27 um	885 nm
Asymmetry	0.63		
Theta	-85.7°		

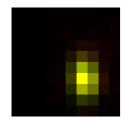
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.977$$



Parameters:

 $A = 1304.002 \quad (brightness)$ 

B = 128.070 (background)

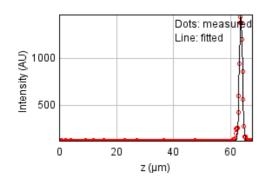
a = 0.958 px

b = -0.043 px

c = 0.385 px

xc = 6.231 pxyc = 6.004 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 66485.6952

Standard deviation: 14.71617

R^2: 0.99151 Parameters: a = 114.71255 b = 1472.04787 c = 63.64396

Date: Mon Oct 17 13:30:16 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

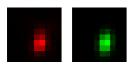
Coordinates: -46.9 um (x), -61.2 um (y), 63.9 um (z)

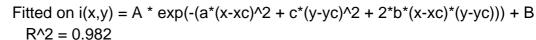
Corresponding bead: Not found

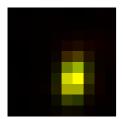
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	399 nm	223 nm
max	607 nm	628 nm	223 nm
Z	1.12 um	1.13 um	885 nm
Asymmetry	0.637		
Theta	81.0°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)







Parameters:

A = 1644.545 (brightness)

B = 129.068 (background)

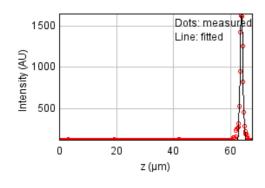
a = 0.885 px

b = 0.083 px

c = 0.377 px

xc = 5.596 pxyc = 6.047 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 99948.8736

Standard deviation: 18.04346

R^2: 0.98896 Parameters:

a = 116.21377

b = 1663.38579

c = 63.87503

Date: Mon Oct 17 13:30:16 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

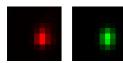
Coordinates: -30.8 um (x), -62.1 um (y), 63.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	394 nm	407 nm	223 nm
max	541 nm	559 nm	223 nm
Z	1.28 um	1.29 um	885 nm
Asymmetry	0.728		
Theta	86.8°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.977$$



Parameters:

A = 1485.519 (brightness)

B = 130.293 (background)

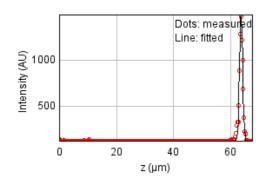
a = 0.864 px

b = 0.023 px

c = 0.460 px

xc = 5.995 pxyc = 5.355 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 90166.1509

Standard deviation: 17.13770

R^2: 0.98929 Parameters: a = 114.96731 b = 1513.78418 c = 63.70826

Date: Mon Oct 17 13:30:17 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

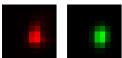
Coordinates: -23.8 um (x), -65.0 um (y), 63.8 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	417 nm	432 nm	223 nm
max	571 nm	591 nm	223 nm
Z	1.3 um	1.3 um	885 nm
Asymmetry	0.731		
Theta	85.4°		

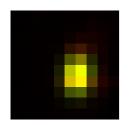
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.968$$



Parameters:

A = 1351.988 (brightness)

B = 128.884 (background)

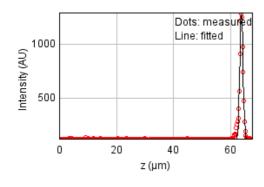
a = 0.768 px

b = 0.028 px

c = 0.413 px

xc = 5.676 pxyc = 5.443 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 72306.6175

Standard deviation: 15.34687

R^2: 0.98818 Parameters: a = 115.35762b = 1298.64246c = 63.83178

Date: Mon Oct 17 13:30:17 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -39.8 um (x), -66.4 um (y), 63.8 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	376 nm	388 nm	223 nm
max	590 nm	610 nm	223 nm
Z	1.47 um	1.47 um	885 nm
Asymmetry	0.637		
Theta	-89.2°		

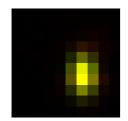
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.984$$



Parameters:

A = 1625.419 (brightness)

B = 130.107 (background)

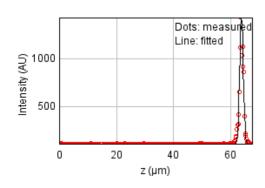
a = 0.950 px

b = -0.008 px

c = 0.385 px

xc = 6.095 pxyc = 5.604 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 335271.318

Standard deviation: 33.04677

R^2: 0.96135 Parameters: a = 114.08835

b = 1424.29445

c = 63.84901

# Bead 3141 (Rejected)

Date: Mon Oct 17 13:30:17 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -8.58 um (x), -69.1 um (y), 40.4 um (z)

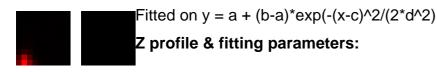
Corresponding bead: Not found

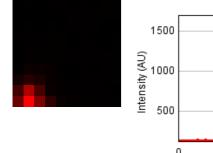
Reason of rejection: R or C parameter off limits.

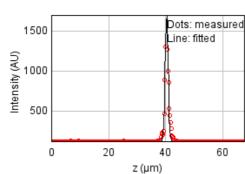
FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	1.25 um	1.26 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

(red: the original data, green: the fit, yellow: the two merged)







Fitted on  $y = a + (b-a)^* \exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 304220.440

Standard deviation: 31.47930

R^2: 0.97173 Parameters: a = 117.51199 b = 1700.63707 c = 40.43276

Date: Mon Oct 17 13:30:17 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -29.3 um (x), -71.4 um (y), 63.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	372 nm	384 nm	223 nm
max	571 nm	590 nm	223 nm
Z	1.3 um	1.31 um	885 nm
Asymmetry	0.651		
Theta	85.6°		

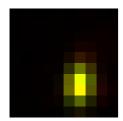
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.973$$



Parameters:

 $A = 1516.556 \quad (brightness)$ 

B = 131.140 (background)

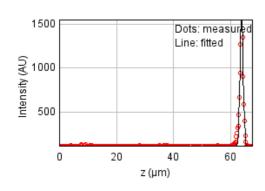
a = 0.967 px

b = 0.043 px

c = 0.415 px

xc = 5.964 pxyc = 6.459 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 117330.131

Standard deviation: 19.54950

R^2: 0.98728 Parameters: a = 116.92647 b = 1566.70040 c = 63.89357

Date: Mon Oct 17 13:30:17 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

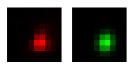
Coordinates: -28.0 um (x), -79.9 um (y), 63.9 um (z)

Corresponding bead: Not found

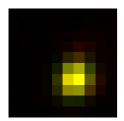
FWHM	Non corrected	Corrected	Theoretical
min	461 nm	476 nm	223 nm
max	537 nm	555 nm	223 nm
Z	1.16 um	1.17 um	885 nm
Asymmetry	0.858		
Theta	72.8°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.976$$



Parameters:

A = 1584.964 (brightness)

B = 126.949 (background)

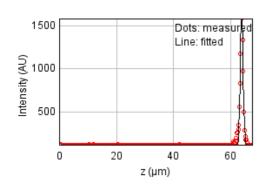
a = 0.618 px

b = 0.047 px

c = 0.480 px

xc = 5.651 pxyc = 5.955 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 117890.343

Standard deviation: 19.59611

R^2: 0.98644 Parameters:

a = 115.05873

b = 1602.17015

c = 63.92812

Date: Mon Oct 17 13:30:17 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

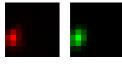
Coordinates: -110 um (x), -43.1 um (y), 59.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	396 nm	409 nm	223 nm
max	531 nm	549 nm	223 nm
Z	1.23 um	1.23 um	885 nm
Asymmetry	0.745		
Theta	68.3°		

### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.986$ 



Parameters:

A = 1331.625 (brightness)

B = 119.809 (background)

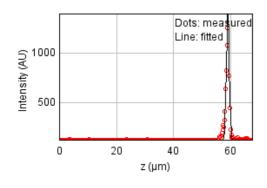
a = 0.804 px

b = 0.131 px

c = 0.527 px

xc = 0.915 pxyc = 6.066 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 245834.262

Standard deviation: 28.29776

R^2: 0.96606 Parameters: a = 115.57071 b = 1425.14114 c = 59.07415

Date: Mon Oct 17 13:30:17 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

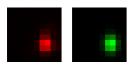
Coordinates: -147 um (x), -46.9 um (y), 64.1 um (z)

Corresponding bead: Not found

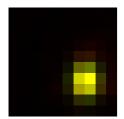
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	415 nm	223 nm
max	506 nm	523 nm	223 nm
Z	1.19 um	1.19 um	885 nm
Asymmetry	0.792		
Theta	90.0°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.980$ 



Parameters:

A = 1495.257 (brightness)

B = 124.839 (background)

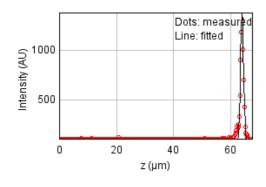
a = 0.834 px

b = 0.000 px

c = 0.523 px

xc = 6.609 pxyc = 6.226 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 78658.0460

Standard deviation: 16.00672

R^2: 0.98764 Parameters:

a = 113.52035

b = 1374.84072

c = 64.06222

Date: Mon Oct 17 13:30:17 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

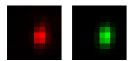
Coordinates: -51.8 um (x), -54.6 um (y), 63.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	399 nm	412 nm	223 nm
max	584 nm	604 nm	223 nm
Z	1.48 um	1.49 um	885 nm
Asymmetry	0.682		
Theta	83.8°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.985$ 



Parameters:

A = 1271.826 (brightness)

B = 126.648 (background)

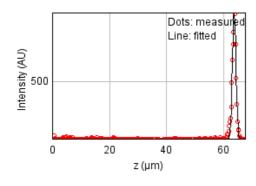
a = 0.838 px

b = 0.048 px

c = 0.398 px

xc = 5.655 pxyc = 5.198 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 61490.0221

Standard deviation: 14.15250

R^2: 0.98302 Parameters: a = 113.89536 b = 966.46972 c = 63.74842

Date: Mon Oct 17 13:30:18 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -135 um (x), -55.4 um (y), 64.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	393 nm	407 nm	223 nm
max	604 nm	624 nm	223 nm
Z	1.52 um	1.53 um	885 nm
Asymmetry	0.652		
Theta	84.6°		

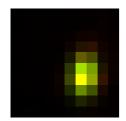
### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.959$$



Parameters:

A = 1607.087 (brightness)

B = 134.415 (background)

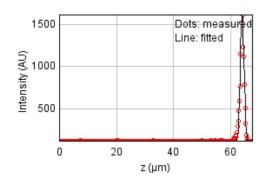
a = 0.863 px

b = 0.047 px

c = 0.373 px

xc = 6.273 pxyc = 5.644 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 305493.858

Standard deviation: 31.54511

R^2: 0.97415 Parameters: a = 113.97495 b = 1625.41879

c = 64.09699

Date: Mon Oct 17 13:30:18 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

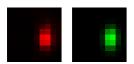
Coordinates: -47.2 um (x), -63.8 um (y), 63.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	392 nm	405 nm	223 nm
max	631 nm	652 nm	223 nm
Z	1.13 um	1.13 um	885 nm
Asymmetry	0.621		
Theta	87.7°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.985$$



Parameters:

A = 1325.572 (brightness)

B = 122.739 (background)

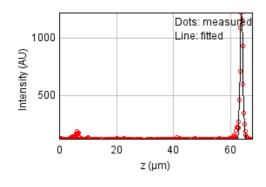
a = 0.873 px

b = 0.022 px

c = 0.338 px

xc = 6.583 pxyc = 5.210 px

# Z profile & fitting parameters:



Fitted on y = a + (b-a)\*exp(-(x-c)^2/(2\*d^2)

Sum of residuals squared: 79812.1196

Standard deviation: 16.12372

R^2: 0.98316 Parameters:

a = 118.04277

b = 1231.61802

c = 63.85874

Date: Mon Oct 17 13:30:18 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

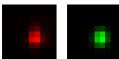
Coordinates: -54.6 um (x), -66.4 um (y), 64.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	415 nm	429 nm	223 nm
max	486 nm	503 nm	223 nm
Z	1.18 um	1.18 um	885 nm
Asymmetry	0.854		
Theta	85.8°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.980$$



Parameters:

A = 1519.205 (brightness)

B = 124.803 (background)

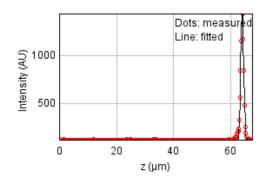
a = 0.777 px

b = 0.015 px

c = 0.569 px

xc = 5.667 pxyc = 5.654 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 41172.7950

Standard deviation: 11.58073

R^2: 0.99428 Parameters: a = 113.84188b = 1462.86180

c = 64.11773

Date: Mon Oct 17 13:30:18 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

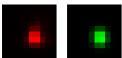
Coordinates: -41.9 um (x), -71.4 um (y), 64.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	426 nm	441 nm	223 nm
max	491 nm	507 nm	223 nm
Z	1.32 um	1.33 um	885 nm
Asymmetry	0.869		
Theta	-86.6°		

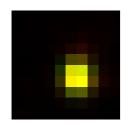
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$  $R^2 = 0.980$ 



Parameters:

A = 1929.496 (brightness)

B = 132.551 (background)

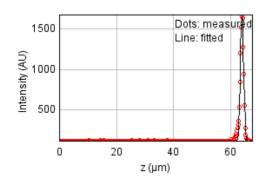
a = 0.737 px

b = -0.011 px

c = 0.558 px

xc = 5.544 pxyc = 5.583 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 90866.1901

Standard deviation: 17.20410

R^2: 0.99153 Parameters: a = 115.16115

b = 1671.76904

c = 64.03516

Date: Mon Oct 17 13:30:18 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

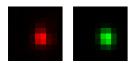
Coordinates: -90.9 um (x), -75.3 um (y), 64.2 um (z)

Corresponding bead: Not found

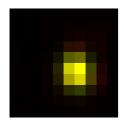
FWHM	Non corrected	Corrected	Theoretical
min	421 nm	435 nm	223 nm
max	502 nm	519 nm	223 nm
Z	1.17 um	1.17 um	885 nm
Asymmetry	0.838		
Theta	-81.5°		

### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.979$$



Parameters:

A = 1666.120 (brightness)

B = 133.866 (background)

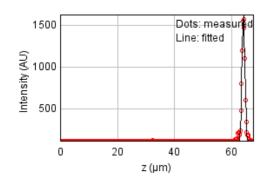
a = 0.753 px

b = -0.033 px

c = 0.537 px

xc = 5.653 pxyc = 5.301 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 62980.0113

Standard deviation: 14.32294

R^2: 0.99298 Parameters: a = 114.75916 b = 1628.90998 c = 64.19822

Date: Mon Oct 17 13:30:19 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

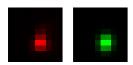
Coordinates: -74.3 um (x), -77.2 um (y), 64.1 um (z)

Corresponding bead: Not found

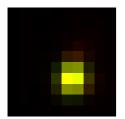
FWHM	Non corrected	Corrected	Theoretical
min	410 nm	423 nm	223 nm
max	474 nm	490 nm	223 nm
Z	1.47 um	1.48 um	885 nm
Asymmetry	0.865		
Theta	81.9°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.975$ 



Parameters:

 $A = 1734.181 \quad (brightness)$ 

B = 129.516 (background)

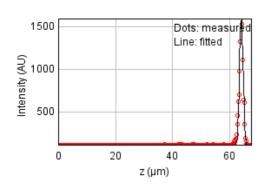
a = 0.796 px

b = 0.028 px

c = 0.602 px

xc = 5.497 pxyc = 5.987 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 163838.554

Standard deviation: 23.10143

R^2: 0.98511 Parameters: a = 113.93739 b = 1605.83895

c = 64.14408

Date: Mon Oct 17 13:30:19 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

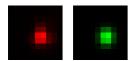
Coordinates: -89.4 um (x), -77.9 um (y), 64.2 um (z)

Corresponding bead: Not found

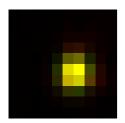
FWHM	Non corrected	Corrected	Theoretical
min	442 nm	456 nm	223 nm
max	497 nm	513 nm	223 nm
Z	1.17 um	1.17 um	885 nm
Asymmetry	0.889		
Theta	86.4°		

### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.974$$



A = 1646.902 (brightness)

B = 129.747 (background)

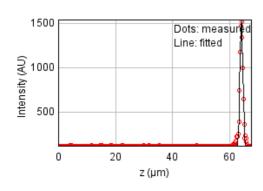
a = 0.688 px

b = 0.009 px

c = 0.545 px

xc = 5.610 pxyc = 5.303 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 72571.6329

Standard deviation: 15.37497

R^2: 0.99091 Parameters:

a = 115.13420

b = 1539.43932

c = 64.19860

Date: Mon Oct 17 13:30:19 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

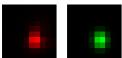
Coordinates: -80.4 um (x), -78.6 um (y), 64.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	420 nm	434 nm	223 nm
max	502 nm	519 nm	223 nm
Z	1.11 um	1.11 um	885 nm
Asymmetry	0.837		
Theta	89.1°		

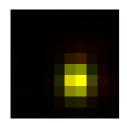
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.977$$



Parameters:

A = 1947.480 (brightness)

B = 138.840 (background)

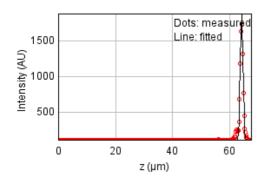
a = 0.761 px

b = 0.004 px

c = 0.533 px

xc = 5.613 pxyc = 6.051 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 106603.471

Standard deviation: 18.63445

R^2: 0.99081 Parameters: a = 115.20377

b = 1879.07689

c = 64.26701

Date: Mon Oct 17 13:30:19 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

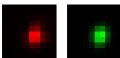
Coordinates: -107 um (x), -79.3 um (y), 64.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	444 nm	459 nm	223 nm
max	553 nm	572 nm	223 nm
Z	1.1 um	1.1 um	885 nm
Asymmetry	0.802		
Theta	79.1°		

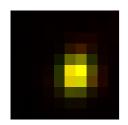
### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.979$$



Parameters:

A = 1623.164 (brightness)

B = 128.692 (background)

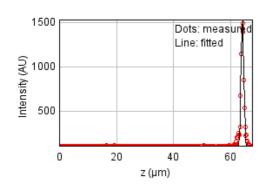
a = 0.673 px

b = 0.045 px

c = 0.447 px

xc = 5.581 pxyc = 5.314 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 113718.594

Standard deviation: 19.24627

R^2: 0.98477 Parameters: a = 115.31290b = 1532.96917

c = 64.19299

Date: Mon Oct 17 13:30:19 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

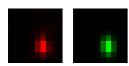
Coordinates: -42.5 um (x), -87.9 um (y), 64.1 um (z)

Corresponding bead: Not found

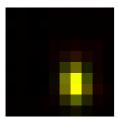
FWHM	Non corrected	Corrected	Theoretical
min	366 nm	378 nm	223 nm
max	543 nm	562 nm	223 nm
Z	1.23 um	1.24 um	885 nm
Asymmetry	0.674		
Theta	-86.0°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.984$$



Parameters:

A = 1455.067 (brightness)

B = 127.530 (background)

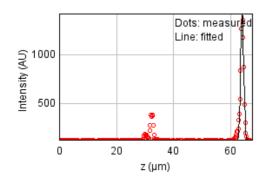
a = 0.999 px

b = -0.039 px

c = 0.457 px

xc = 5.901 pxyc = 6.481 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 441407.815

Standard deviation: 37.91847

R^2: 0.94147 Parameters: a = 123.80043 b = 1439.43786 c = 64.10520

# Bead 3157 (Rejected)

Date: Mon Oct 17 13:30:19 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -139 um (x), -88.0 um (y), 64.3 um (z)

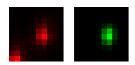
Corresponding bead: Not found

Reason of rejection: The fitted bead is likely to be a different bead from the center bead.

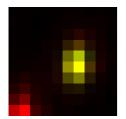
FWHM	Non corrected	Corrected	Theoretical
min	350 nm	362 nm	223 nm
max	516 nm	534 nm	223 nm
Z	1.61 um	1.62 um	885 nm
Asymmetry	0.678		
Theta	87.4°		

### XY profile & fitting parameters :

(red: the original data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.570$ 



Parameters:

A = 1377.754 (brightness) B = 200.942 (background)

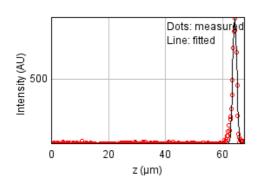
a = 1.093 px

b = 0.026 px

c = 0.505 px

xc = 5.767 pxyc = 4.787 px

### Z profile & fitting parameters:



Fitted on y = a + (b-a)\*exp(-(x-c)^2/(2\*d^2)

Sum of residuals squared: 94052.2901

Standard deviation: 17.50312

R^2: 0.97019 Parameters:

a = 112.23957

b = 871.04885

c = 64.30231

# Bead 3158 (Rejected)

Date: Mon Oct 17 13:30:19 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -140 um (x), -88.8 um (y), 64.2 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

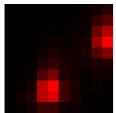
FWHM	Non corrected	Corrected	Theoretical
min	457 nm	472 nm	223 nm
max	2.38 um	2.46 um	223 nm
Z	1.21 um	1.22 um	885 nm
Asymmetry	0.192		
Theta	0.0°		

### XY profile & fitting parameters :

(red: the original data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.501$$



Parameters:

A = 431.998 (brightness)

B = 141.214 (background)

a = 0.291 px

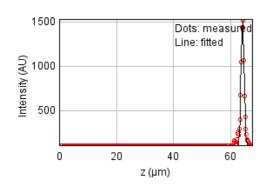
b = 0.333 px

c = 0.329 px

xc = 4.660 px

# yc = 6.816 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 104891.184

Standard deviation: 18.48418

R^2: 0.98711 Parameters:

a = 114.94720

b = 1526.46517

c = 64.24306

Date: Mon Oct 17 13:30:20 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

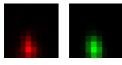
Coordinates: -71.0 um (x), -89.1 um (y), 46.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	419 nm	433 nm	223 nm
max	706 nm	730 nm	223 nm
Z	1.19 um	1.19 um	885 nm
Asymmetry	0.593		
Theta	-82.0°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.977$ 



Parameters:

A = 1905.844 (brightness)

B = 129.994 (background)

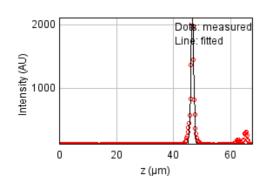
a = 0.755 px

b = -0.069 px

c = 0.279 px

xc = 4.111 pxyc = 7.874 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 448223.189

Standard deviation: 38.21008

R^2: 0.97227 Parameters: a = 123.76859 b = 2116.06567 c = 46.64148

Date: Mon Oct 17 13:30:20 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

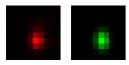
Coordinates: -50.5 um (x), -90.0 um (y), 64.1 um (z)

Corresponding bead: Not found

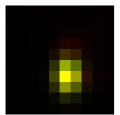
FWHM	Non corrected	Corrected	Theoretical
min	390 nm	403 nm	223 nm
max	537 nm	555 nm	223 nm
Z	1.4 um	1.41 um	885 nm
Asymmetry	0.726		
Theta	-90.0°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.975$ 



Parameters:

A = 1619.522 (brightness)

B = 134.888 (background)

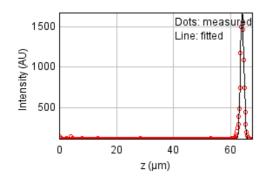
a = 0.883 px

b = -0.000 px

c = 0.466 px

xc = 5.235 pxyc = 5.917 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 83681.9674

Standard deviation: 16.50999

R^2: 0.99275 Parameters: a = 115.06939 b = 1683.92223

0 - 1000.022

c = 64.10144

# Bead 3161 (Rejected)

Date: Mon Oct 17 13:30:20 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -108 um (x), -90.5 um (y), 64.2 um (z)

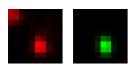
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	370 nm	382 nm	223 nm
max	497 nm	514 nm	223 nm
Z	1.52 um	1.53 um	885 nm
Asymmetry	0.744		
Theta	-83.9°		

### XY profile & fitting parameters :

(red: the original data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.654$$



Parameters:

A = 1437.977 (brightness) B = 190.562 (background)

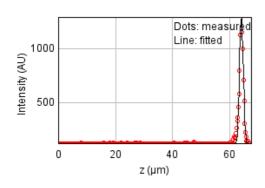
a = 0.977 px

b = -0.047 px

c = 0.548 px

xc = 5.420 pxyc = 6.334 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 88878.8544

Standard deviation: 17.01492

R^2: 0.98757 Parameters:

a = 114.33590

b = 1299.03969

c = 64.16830

Date: Mon Oct 17 13:30:20 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

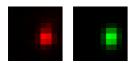
Coordinates: -105 um (x), -92.7 um (y), 64.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	419 nm	433 nm	223 nm
max	544 nm	563 nm	223 nm
Z	1.55 um	1.56 um	885 nm
Asymmetry	0.77		
Theta	84.2°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.974$ 



Parameters:

A = 1440.041 (brightness)

B = 128.485 (background)

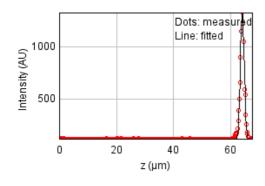
a = 0.761 px

b = 0.031 px

c = 0.456 px

xc = 6.453 pxyc = 5.199 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 70924.1163

Standard deviation: 15.19945

R^2: 0.99091 Parameters: a = 113.40754 b = 1342.28885

c = 64.14834

Date: Mon Oct 17 13:30:20 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

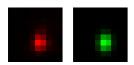
Coordinates: -114 um (x), -94.6 um (y), 64.3 um (z)

Corresponding bead: Not found

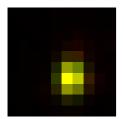
FWHM	Non corrected	Corrected	Theoretical
min	396 nm	409 nm	223 nm
max	510 nm	527 nm	223 nm
Z	1.38 um	1.38 um	885 nm
Asymmetry	0.775		
Theta	86.8°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$  $R^2 = 0.976$ 



Parameters:

A = 1918.920 (brightness)

B = 139.797 (background)

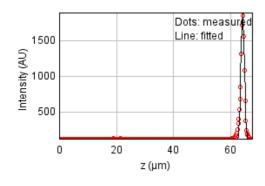
a = 0.856 px

b = 0.019 px

c = 0.517 px

xc = 5.366 pxyc = 5.963 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 182485.674

Standard deviation: 24.38065

R^2: 0.98763 Parameters: a = 114.75696b = 1901.54313

c = 64.27107

Date: Mon Oct 17 13:30:20 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -75.0 um (x), -72.3 um (y), 64.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	404 nm	417 nm	223 nm
max	487 nm	504 nm	223 nm
Z	1.36 um	1.36 um	885 nm
Asymmetry	0.828		
Theta	-89.2°		

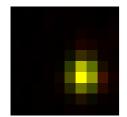
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.967$$



Parameters:

A = 1242.223 (brightness)

B = 126.915 (background)

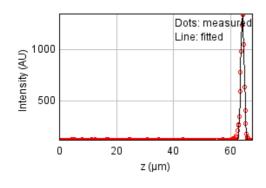
a = 0.824 px

b = -0.004 px

c = 0.566 px

xc = 6.199 pxyc = 5.790 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 80086.5159

Standard deviation: 16.15141

R^2: 0.98859 Parameters:

a = 113.88544

b = 1356.28008

c = 64.21152

Date: Mon Oct 17 13:30:20 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

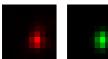
Coordinates: -124 um (x), -73.9 um (y), 64.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	384 nm	396 nm	223 nm
max	513 nm	530 nm	223 nm
Z	1.23 um	1.24 um	885 nm
Asymmetry	0.748		
Theta	83.1°		

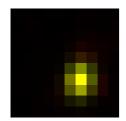
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.976$$



Parameters:

A = 1188.866 (brightness)

B = 124.791 (background)

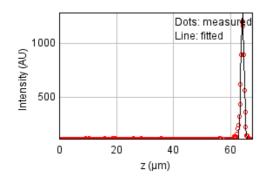
a = 0.907 px

b = 0.048 px

c = 0.516 px

xc = 5.927 pxyc = 6.072 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 66199.2122

Standard deviation: 14.68443

R^2: 0.98832 Parameters: a = 113.22476

b = 1282.82162

c = 64.21499

Date: Mon Oct 17 13:30:21 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

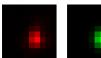
Coordinates: -148 um (x), -79.4 um (y), 64.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	410 nm	424 nm	223 nm
max	533 nm	550 nm	223 nm
Z	1.21 um	1.21 um	885 nm
Asymmetry	0.771		
Theta	88.3°		

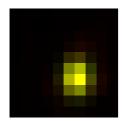
### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.986$$



Parameters:

A = 1536.095 (brightness)

B = 128.794 (background)

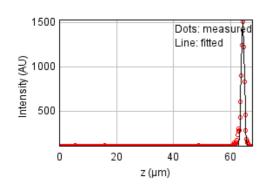
a = 0.797 px

b = 0.010 px

c = 0.474 px

xc = 5.723 pxyc = 5.835 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 130481.729

Standard deviation: 20.61606

R^2: 0.98440 Parameters: a = 113.16690b = 1545.28055

c = 64.31443

Date: Mon Oct 17 13:30:21 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

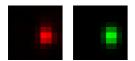
Coordinates: -115 um (x), -81.4 um (y), 64.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	420 nm	434 nm	223 nm
max	523 nm	540 nm	223 nm
Z	1.44 um	1.45 um	885 nm
Asymmetry	0.803		
Theta	89.8°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.981$ 



Parameters:

A = 1287.339 (brightness)

B = 124.998 (background)

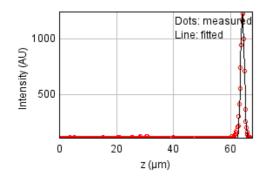
a = 0.761 px

b = 0.001 px

c = 0.491 px

xc = 6.458 pxyc = 5.143 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 72499.1071

Standard deviation: 15.36728

R^2: 0.98831 Parameters: a = 113.35118 b = 1245.33436 c = 64.20577

Date: Mon Oct 17 13:30:21 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

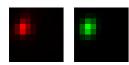
Coordinates: -151 um (x), -83.4 um (y), 56.7 um (z)

Corresponding bead: Not found

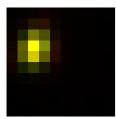
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	529 nm	547 nm	223 nm
Z	1.36 um	1.37 um	885 nm
Asymmetry	0.76		
Theta	73.8°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.978$ 



Parameters:

 $A = 1854.092 \quad (brightness)$ 

B = 131.296 (background)

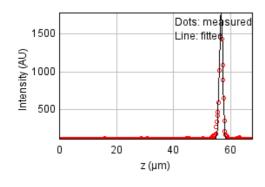
a = 0.803 px

b = 0.094 px

c = 0.507 px

xc = 2.096 pxyc = 3.244 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 237081.809

Standard deviation: 27.78945

R^2: 0.98157 Parameters: a = 114.99414 b = 1786.96977

c = 56.68495

Date: Mon Oct 17 13:30:21 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

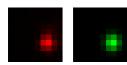
Coordinates: -79.9 um (x), -84.0 um (y), 64.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	441 nm	456 nm	223 nm
max	479 nm	495 nm	223 nm
Z	1.22 um	1.23 um	885 nm
Asymmetry	0.92		
Theta	85.7°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.979$ 



Parameters:

A = 1420.099 (brightness)

B = 128.054 (background)

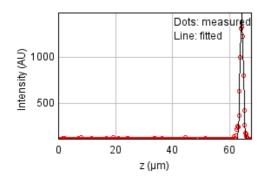
a = 0.690 px

b = 0.008 px

c = 0.585 px

xc = 6.729 pxyc = 5.956 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 73200.0540

Standard deviation: 15.44139

R^2: 0.99051 Parameters:

a = 114.94928

b = 1484.24352

c = 64.28506

Date: Mon Oct 17 13:30:21 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

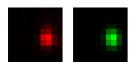
Coordinates: -97.5 um (x), -84.1 um (y), 64.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	414 nm	428 nm	223 nm
max	525 nm	543 nm	223 nm
Z	1.22 um	1.22 um	885 nm
Asymmetry	0.788		
Theta	-84.9°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.979$ 



Parameters:

A = 1448.349 (brightness)

B = 124.409 (background)

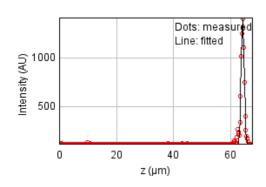
a = 0.780 px

b = -0.026 px

c = 0.488 px

xc = 6.691 pxyc = 5.229 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 82264.2837

Standard deviation: 16.36954

R^2: 0.98820 Parameters:

a = 114.22924

b = 1419.03244

c = 64.27530

Date: Mon Oct 17 13:30:21 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

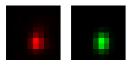
Coordinates: -76.7 um (x), -86.7 um (y), 64.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	389 nm	402 nm	223 nm
max	531 nm	549 nm	223 nm
Z	1.33 um	1.34 um	885 nm
Asymmetry	0.732		
Theta	87.5°		

### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.975$ 



Parameters:

 $A = 1505.431 \quad (brightness)$ 

B = 131.341 (background)

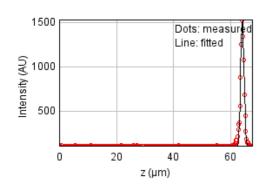
a = 0.888 px

b = 0.018 px

c = 0.477 px

xc = 5.179 pxyc = 6.302 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 84254.9300

Standard deviation: 16.56641

R^2: 0.99068 Parameters: a = 113.90239 b = 1535.81350 c = 64.16920

Date: Mon Oct 17 13:30:21 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

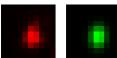
Coordinates: -109 um (x), -89.2 um (y), 64.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	478 nm	494 nm	223 nm
max	656 nm	678 nm	223 nm
Z	1.81 um	1.82 um	885 nm
Asymmetry	0.73		
Theta	86.4°		

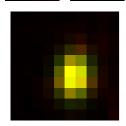
### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.972$$



Parameters:

A = 892.271(brightness)

B = 123.523 (background)

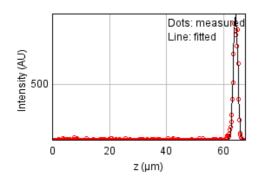
a = 0.585 px

b = 0.017 px

c = 0.313 px

xc = 5.359 pxyc = 5.416 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 124483.730

Standard deviation: 20.13664

R^2: 0.97334 Parameters: a = 112.71829b = 987.48065c = 64.23588

Date: Mon Oct 17 13:30:21 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

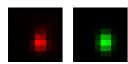
Coordinates: -84.4 um (x), -92.4 um (y), 64.3 um (z)

Corresponding bead: Not found

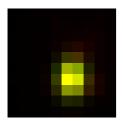
FWHM	Non corrected	Corrected	Theoretical
min	417 nm	431 nm	223 nm
max	551 nm	569 nm	223 nm
Z	1.59 um	1.6 um	885 nm
Asymmetry	0.757		
Theta	89.3°		

### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.974$$



A = 1433.060 (brightness)

B = 135.103 (background)

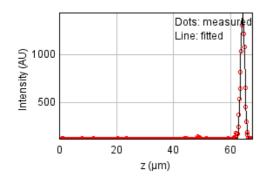
a = 0.772 px

b = 0.004 px

c = 0.443 px

xc = 5.434 pxyc = 5.892 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 83151.8969

Standard deviation: 16.45761

R^2: 0.99109 Parameters: a = 114.25846 b = 1441.77681

c = 64.28416d = 0.67558

Date: Mon Oct 17 13:30:22 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

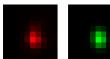
Coordinates: -73.6 um (x), -93.5 um (y), 64.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	399 nm	413 nm	223 nm
max	521 nm	539 nm	223 nm
Z	1.42 um	1.42 um	885 nm
Asymmetry	0.766		
Theta	-84.3°		

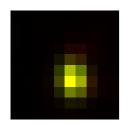
#### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.972$$



Parameters:

A = 1536.154 (brightness)

B = 134.372 (background)

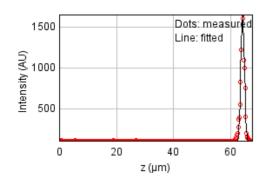
a = 0.837 px

b = -0.034 px

c = 0.497 px

xc = 5.260 pxyc = 5.812 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 155284.930

Standard deviation: 22.49031

R^2: 0.98611 Parameters: a = 114.52561b = 1645.67281c = 64.24979

Date: Mon Oct 17 13:30:22 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

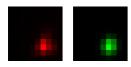
Coordinates: -137 um (x), -94.8 um (y), 64.4 um (z)

Corresponding bead: Not found

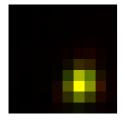
FWHM	Non corrected	Corrected	Theoretical
min	407 nm	421 nm	223 nm
max	487 nm	503 nm	223 nm
Z	1.35 um	1.35 um	885 nm
Asymmetry	0.837		
Theta	75.9°		

#### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.965$ 



Parameters:

A = 1591.934 (brightness)

B = 130.698 (background)

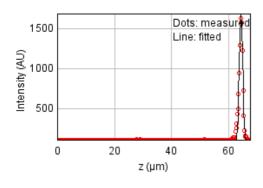
a = 0.794 px

b = 0.057 px

c = 0.581 px

xc = 6.174 pxyc = 6.781 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 164321.253

Standard deviation: 23.13544

R^2: 0.98547 Parameters: a = 114.33006 b = 1692.95021

c = 64.38944

Date: Mon Oct 17 13:30:22 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

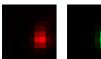
Coordinates: -83.2 um (x), -95.7 um (y), 64.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	415 nm	429 nm	223 nm
max	538 nm	556 nm	223 nm
Z	1.23 um	1.24 um	885 nm
Asymmetry	0.771		
Theta	87.6°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.976$$



Parameters:

A = 1790.653 (brightness)

B = 135.100 (background)

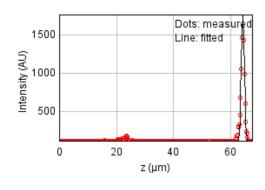
a = 0.778 px

b = 0.013 px

c = 0.464 px

xc = 6.649 pxyc = 5.883 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 139898.141

Standard deviation: 21.34700

R^2: 0.98792 Parameters:

a = 117.74319

b = 1787.28997

c = 64.32770

Date: Mon Oct 17 13:30:22 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

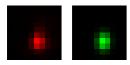
Coordinates: -65.1 um (x), -96.0 um (y), 64.2 um (z)

Corresponding bead: Not found

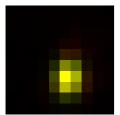
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	415 nm	223 nm
max	524 nm	541 nm	223 nm
Z	1.39 um	1.4 um	885 nm
Asymmetry	0.767		
Theta	86.6°		

#### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.978$ 



Parameters:

A = 2063.311 (brightness)

B = 136.354 (background)

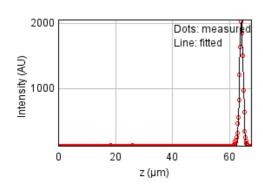
a = 0.831 px

b = 0.020 px

c = 0.491 px

xc = 5.274 pxyc = 6.152 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 98882.7922

Standard deviation: 17.94697

R^2: 0.99439 Parameters:

a = 114.75830

b = 2062.20756

c = 64.17591

Date: Mon Oct 17 13:30:22 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

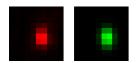
Coordinates: -96.2 um (x), -74.6 um (y), 64.0 um (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	572 nm	591 nm	223 nm
Z	1.67 um	1.67 um	885 nm
Asymmetry	0.703		
Theta	-88.2°		

#### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.976$$



Parameters:

A = 902.291 (brightness)

B = 123.312 (background)

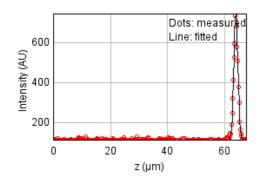
a = 0.829 px

b = -0.013 px

c = 0.410 px

xc = 5.561 pxyc = 5.249 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 22910.0445

Standard deviation: 8.63861

R^2: 0.98958 Parameters:

a = 113.48999

b = 743.30399

c = 63.98742

Date: Mon Oct 17 13:30:22 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

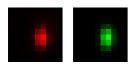
Coordinates: -109 um (x), -81.9 um (y), 64.1 um (z)

Corresponding bead: Not found

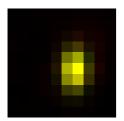
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	398 nm	223 nm
max	619 nm	640 nm	223 nm
Z	1.64 um	1.65 um	885 nm
Asymmetry	0.622		
Theta	88.3°		

#### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.986$ 



Parameters:

A = 982.027 (brightness)

B = 121.668 (background)

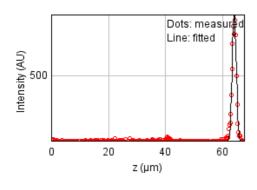
a = 0.906 px

b = 0.016 px

c = 0.351 px

xc = 5.695 pxyc = 5.095 px

#### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 51154.4739

Standard deviation: 12.90841

R^2: 0.98359 Parameters: a = 114.26318 b = 867.04123 c = 64.11823

Date: Mon Oct 17 13:30:23 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

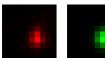
Coordinates: -110 um (x), -85.3 um (y), 64.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	546 nm	564 nm	223 nm
Z	1.25 um	1.25 um	885 nm
Asymmetry	0.737		
Theta	86.8°		

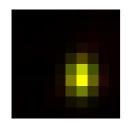
#### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.979$$



Parameters:

A = 1085.741 (brightness)

B = 124.584 (background)

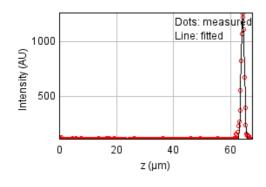
a = 0.829 px

b = 0.021 px

c = 0.452 px

xc = 5.939 pxyc = 5.733 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 66538.3329

Standard deviation: 14.72200

R^2: 0.98806 Parameters:

a = 114.18177

b = 1266.92456

c = 64.30336

Date: Mon Oct 17 13:30:23 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -142 um (x), -86.3 um (y), 64.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	384 nm	397 nm	223 nm
max	529 nm	547 nm	223 nm
Z	1.17 um	1.18 um	885 nm
Asymmetry	0.725		
Theta	-86.3°		

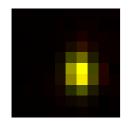
#### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.980$$



Parameters:

A = 1197.802 (brightness)

B = 125.252 (background)

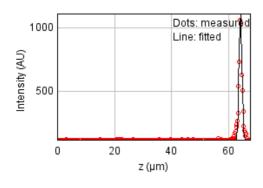
a = 0.910 px

b = -0.028 px

c = 0.481 px

xc = 5.804 pxyc = 5.401 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 85890.3631

Standard deviation: 16.72642

R^2: 0.97867 Parameters:

a = 111.76038

b = 1115.03842

c = 64.21450

Date: Mon Oct 17 13:30:23 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

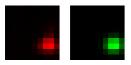
Coordinates: -61.7 um (x), -89.7 um (y), 52.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	440 nm	455 nm	223 nm
max	513 nm	530 nm	223 nm
Z	1.37 um	1.37 um	885 nm
Asymmetry	0.859		
Theta	4.4°		

#### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.985$ 



Parameters:

A = 1690.210 (brightness)

B = 122.503 (background)

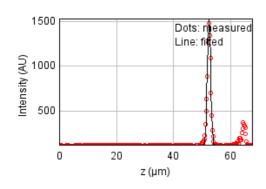
a = 0.511 px

b = 0.014 px

c = 0.691 px

xc = 7.557 pxyc = 6.731 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 387194.908

Standard deviation: 35.51368

R^2: 0.95923 Parameters: a = 122.94612 b = 1539.40885 c = 52.50415

Date: Mon Oct 17 13:30:23 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -119 um (x), -90.6 um (y), 64.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	368 nm	381 nm	223 nm
max	552 nm	571 nm	223 nm
Z	1.5 um	1.51 um	885 nm
Asymmetry	0.667		
Theta	-87.2°		

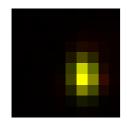
#### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.975$$



Parameters:

A = 1731.364 (brightness)

B = 132.439 (background)

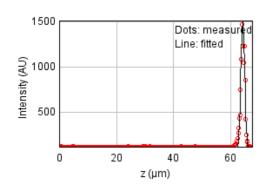
a = 0.989 px

b = -0.027 px

c = 0.442 px

xc = 6.172 pxyc = 5.726 px

## Z profile & fitting parameters:



Fitted on y = a + (b-a)\*exp(-(x-c)^2/(2\*d^2)

Sum of residuals squared: 352444.393

Standard deviation: 33.88255

R^2: 0.96549 Parameters:

a = 112.93605

b = 1520.63323

c = 64.30340

Date: Mon Oct 17 13:30:23 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

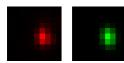
Coordinates: -131 um (x), -92.4 um (y), 64.3 um (z)

Corresponding bead: Not found

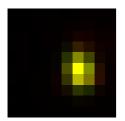
FWHM	Non corrected	Corrected	Theoretical
min	389 nm	402 nm	223 nm
max	540 nm	559 nm	223 nm
Z	1.33 um	1.33 um	885 nm
Asymmetry	0.721		
Theta	-82.0°		

#### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.975$ 



Parameters:

A = 1367.993 (brightness)

B = 125.669 (background)

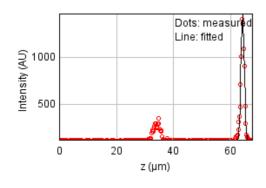
a = 0.877 px

b = -0.059 px

c = 0.468 px

xc = 6.179 pxyc = 5.172 px

# Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 454053.886

Standard deviation: 38.45781

R^2: 0.94520 Parameters:

a = 122.89547

b = 1456.11216

c = 64.25875

Date: Mon Oct 17 13:30:23 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

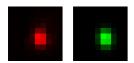
Coordinates: -145 um (x), -96.2 um (y), 64.2 um (z)

Corresponding bead: Not found

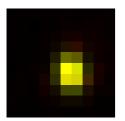
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	419 nm	223 nm
max	521 nm	538 nm	223 nm
Z	1.48 um	1.48 um	885 nm
Asymmetry	0.778		
Theta	-83.7°		

#### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.983$$



Parameters:

A = 1036.389 (brightness)

B = 124.565 (background)

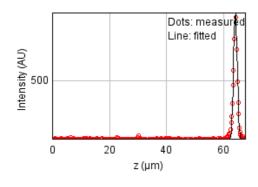
a = 0.813 px

b = -0.035 px

c = 0.499 px

xc = 5.445 pxyc = 5.383 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ 

Sum of residuals squared: 40595.9887

Standard deviation: 11.49933

R^2: 0.98846 Parameters: a = 111.22773 b = 955.24295

c = 64.17784

Date: Mon Oct 17 13:30:23 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

Coordinates: -159 um (x), -80.1 um (y), 64.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	367 nm	379 nm	223 nm
max	511 nm	529 nm	223 nm
Z	1.26 um	1.27 um	885 nm
Asymmetry	0.718		
Theta	77.8°		

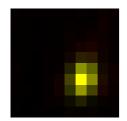
#### XY profile & fitting parameters :

(red : the orignal data, green : the fit, yellow : the two merged)





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.979$$



Parameters:

A = 949.167 (brightness)

B = 119.963 (background)

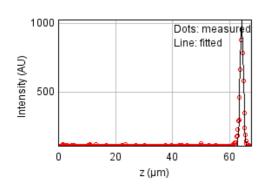
a = 0.975 px

b = 0.100 px

c = 0.535 px

xc = 6.189 pxyc = 5.974 px

### Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 51772.4247

Standard deviation: 12.98614

R^2: 0.98563 Parameters: a = 111.03359 b = 1031.59414 c = 64.29518

Date: Mon Oct 17 13:30:23 PDT 2022

Origin: data\_traditional.tif (Nikon 40x1.15 water)

Frame size: 10 pixels

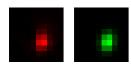
Coordinates: -146 um (x), -88.8 um (y), 64.3 um (z)

Corresponding bead: Not found

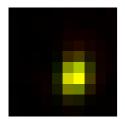
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	414 nm	223 nm
max	537 nm	556 nm	223 nm
Z	1.5 um	1.5 um	885 nm
Asymmetry	0.745		
Theta	79.0°		

### XY profile & fitting parameters :

(red: the orignal data, green: the fit, yellow: the two merged)



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.978$ 



Parameters:

A = 994.065 (brightness)

B = 121.085 (background)

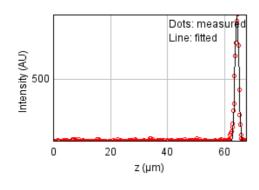
a = 0.823 px

b = 0.070 px

c = 0.478 px

xc = 5.622 pxyc = 5.818 px

## Z profile & fitting parameters:



Fitted on y = a +  $(b-a)^* \exp(-(x-c)^2/(2^*d^2)$ 

Sum of residuals squared: 61920.6338

Standard deviation: 14.20197

R^2: 0.98099 Parameters: a = 113.39060 b = 917.03687 c = 64.34881