Date: Mon Oct 17 13:29:19 PDT 2022

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

Frame size: 10 pixels

Coordinates: 133 um (x), 74.8 um (y), 46.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	385 nm	398 nm	223 nm
max	591 nm	611 nm	223 nm
Z	1.58 um	1.58 um	885 nm
Asymmetry	0.653		
Theta	60.2°		

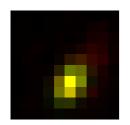
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.932$$



Parameters:

A = 701.643 (brightness)

B = 125.763 (background)

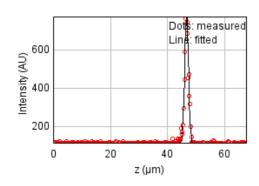
a = 0.776 px

b = 0.224 px

c = 0.513 px

xc = 5.051 pxyc = 6.176 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 50198.0133

Standard deviation: 12.78716

R^2: 0.97893 Parameters: a = 110.92418

b = 780.48396

c = 46.73386

Date: Mon Oct 17 13:29:19 PDT 2022

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

Frame size: 10 pixels

Coordinates: 61.5 um (x), 55.3 um (y), 47.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	477 nm	493 nm	223 nm
max	654 nm	676 nm	223 nm
Z	1.64 um	1.65 um	885 nm
Asymmetry	0.729		
Theta	70.4°		

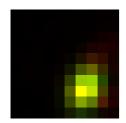
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.926$$



Parameters:

A = 1137.246 (brightness)

B = 131.193 (background)

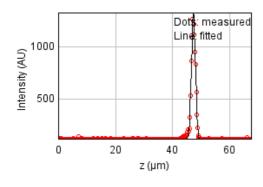
a = 0.559 px

b = 0.088 px

c = 0.345 px

xc = 6.429 pxyc = 6.738 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 70781.8508

Standard deviation: 15.18419

R^2: 0.99130 Parameters: a = 114.44681 b = 1335.13313 c = 47.37480

Date: Mon Oct 17 13:29:20 PDT 2022

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

Frame size: 10 pixels

Coordinates: 77.4 um (x), 31.9 um (y), 47.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	445 nm	460 nm	223 nm
max	556 nm	575 nm	223 nm
Z	1.38 um	1.38 um	885 nm
Asymmetry	0.8		
Theta	69.6°		

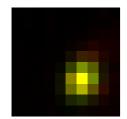
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.953$$



Parameters:

 $A = 1065.964 \quad (brightness)$ 

B = 128.270 (background)

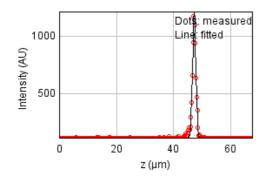
a = 0.647 px

b = 0.079 px

c = 0.463 px

xc = 6.011 pxyc = 6.108 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 42388.1948

Standard deviation: 11.75042

R^2: 0.99242 Parameters: a = 113.61326

b = 1216.49395

c = 47.29793

Date: Mon Oct 17 13:29:20 PDT 2022

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

Frame size: 10 pixels

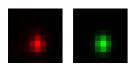
Coordinates: -108 um (x), 19.3 um (y), 46.6 um (z)

Corresponding bead: Not found

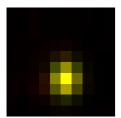
FWHM	Non corrected	Corrected	Theoretical
min	419 nm	433 nm	223 nm
max	509 nm	526 nm	223 nm
Z	1.28 um	1.28 um	885 nm
Asymmetry	0.822		
Theta	88.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1313.462 (brightness)

B = 127.196 (background)

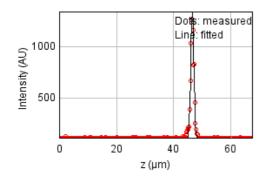
a = 0.765 px

b = 0.006 px

c = 0.518 px

xc = 4.921 pxyc = 6.062 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 102643.295

Standard deviation: 18.28505

R^2: 0.98407 Parameters:

a = 113.73741

b = 1334.82415

c = 46.63352

Date: Mon Oct 17 13:29:20 PDT 2022

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

Frame size: 10 pixels

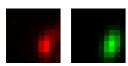
Coordinates: 114 um (x), 19.1 um (y), 46.8 um (z)

Corresponding bead: Not found

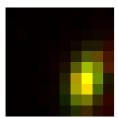
FWHM	Non corrected	Corrected	Theoretical
min	482 nm	498 nm	223 nm
max	813 nm	840 nm	223 nm
Z	1.17 um	1.18 um	885 nm
Asymmetry	0.593		
Theta	73.2°		

# XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.942$ 



Parameters:

A = 826.837 (brightness)

B = 121.326 (background)

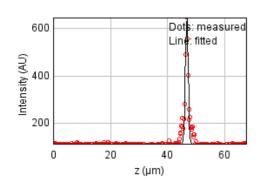
a = 0.546 px

b = 0.104 px

c = 0.234 px

xc = 6.923 pxyc = 6.214 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 87034.4109

Standard deviation: 16.83745

R^2: 0.92728 Parameters:

a = 113.85507

b = 646.31442

c = 46.80207

Date: Mon Oct 17 13:29:20 PDT 2022

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

Frame size: 10 pixels

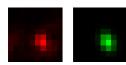
Coordinates: 75.6 um (x), 8.61 um (y), 47.1 um (z)

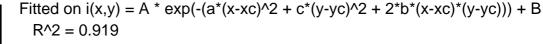
Corresponding bead: Not found

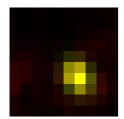
FWHM	Non corrected	Corrected	Theoretical
min	399 nm	413 nm	223 nm
max	534 nm	552 nm	223 nm
Z	1.62 um	1.63 um	885 nm
Asymmetry	0.747		
Theta	-65.8°		

### XY profile & fitting parameters :

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







Parameters:

A = 826.068 (brightness) B = 159.128 (background)

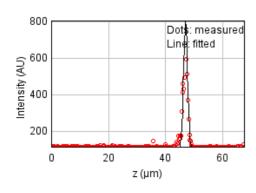
a = 0.779 px

b = -0.139 px

c = 0.532 px

xc = 5.777 pxyc = 5.859 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 183841.833

Standard deviation: 24.47107

R^2: 0.93294 Parameters: a = 113.76936 b = 805.83915 c = 47.07023

Date: Mon Oct 17 13:29:20 PDT 2022

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

Frame size: 10 pixels

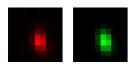
Coordinates: -24.1 um (x), -19.5 um (y), 46.7 um (z)

Corresponding bead: Not found

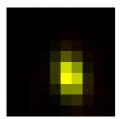
FWHM	Non corrected	Corrected	Theoretical
min	389 nm	402 nm	223 nm
max	612 nm	633 nm	223 nm
Z	1.07 um	1.07 um	885 nm
Asymmetry	0.636		
Theta	-78.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.993$ 



Parameters:

A = 1833.416 (brightness)

B = 127.932 (background)

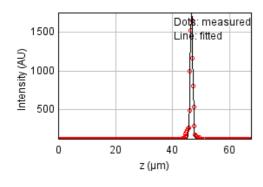
a = 0.863 px

b = -0.107 px

c = 0.381 px

xc = 5.363 pxyc = 5.796 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 107862.125

Standard deviation: 18.74413

R^2: 0.98901 Parameters: a = 115.92279 b = 1766.16534 c = 46.70011

Date: Mon Oct 17 13:29:20 PDT 2022

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

Frame size: 10 pixels

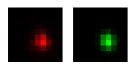
Coordinates: -108 um (x), -40.2 um (y), 46.9 um (z)

Corresponding bead: Not found

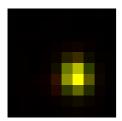
FWHM	Non corrected	Corrected	Theoretical
min	407 nm	421 nm	223 nm
max	477 nm	493 nm	223 nm
Z	1.27 um	1.28 um	885 nm
Asymmetry	0.855		
Theta	-77.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 2094.051 (brightness)

B = 133.372 (background)

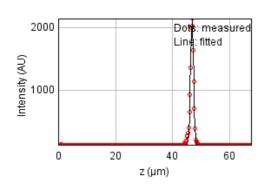
a = 0.798 px

b = -0.046 px

c = 0.600 px

xc = 5.830 pxyc = 5.734 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 114399.178

Standard deviation: 19.30378

R^2: 0.99349 Parameters: a = 115.20263 b = 2147.62429 c = 46.89653

Date: Mon Oct 17 13:29:20 PDT 2022

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

Frame size: 10 pixels

Coordinates: 73.6 um (x), -45.7 um (y), 46.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	424 nm	439 nm	223 nm
max	459 nm	475 nm	223 nm
Z	1.65 um	1.65 um	885 nm
Asymmetry	0.924		
Theta	-26.3°		

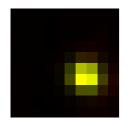
## XY profile & fitting parameters :

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





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



Parameters:

A = 1402.016 (brightness)

B = 125.991 (background)

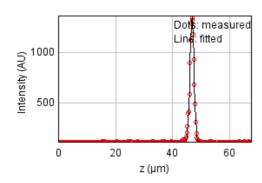
a = 0.658 px

b = -0.043 px

c = 0.724 px

xc = 6.442 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: 38831.6273

Standard deviation: 11.24666

R^2: 0.99547 Parameters: a = 113.20189b = 1367.20529c = 46.88000

Date: Mon Oct 17 13:29:20 PDT 2022

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

Frame size: 10 pixels

Coordinates: 88.5 um (x), -90.0 um (y), 46.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	394 nm	408 nm	223 nm
max	532 nm	550 nm	223 nm
Z	1.34 um	1.35 um	885 nm
Asymmetry	0.741		
Theta	-66.0°		

### 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:

 $A = 1619.990 \quad (brightness)$ 

B = 128.965 (background)

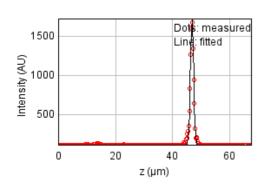
a = 0.799 px

b = -0.144 px

c = 0.538 px

xc = 6.304 pxyc = 5.926 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 80165.5925

Standard deviation: 16.15938

R^2: 0.99303 Parameters: a = 116.46090 b = 1717.91937

c = 46.88623d = 0.56986

Date: Mon Oct 17 13:29:21 PDT 2022

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

Frame size: 10 pixels

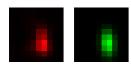
Coordinates: -82.6 um (x), 86.2 um (y), 47.0 um (z)

Corresponding bead: Not found

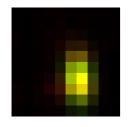
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	419 nm	223 nm
max	740 nm	765 nm	223 nm
Z	1.37 um	1.38 um	885 nm
Asymmetry	0.547		
Theta	-86.4°		

## XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.958$ 



Parameters:

A = 998.379 (brightness)

B = 125.953 (background)

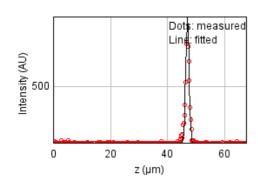
a = 0.815 px

b = -0.036 px

c = 0.247 px

xc = 5.682 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: 79988.3148

Standard deviation: 16.14151

R^2: 0.97707 Parameters: a = 114.34066 b = 979.46342

c = 47.03065d = 0.58315

Date: Mon Oct 17 13:29:21 PDT 2022

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

Frame size: 10 pixels

Coordinates: 109 um (x), 66.8 um (y), 47.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	438 nm	452 nm	223 nm
max	543 nm	562 nm	223 nm
Z	1.48 um	1.49 um	885 nm
Asymmetry	0.806		
Theta	58.6°		

## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.938$$



Parameters:

A = 953.838 (brightness)

B = 128.049 (background)

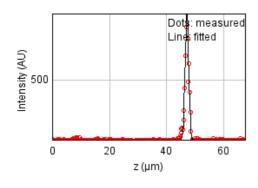
a = 0.634 px

b = 0.109 px

c = 0.521 px

xc = 6.230 pxyc = 6.418 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 94182.3483

Standard deviation: 17.51522

R^2: 0.97249 Parameters: a = 111.89869 b = 935.99214

c = 47.19606

Date: Mon Oct 17 13:29:21 PDT 2022

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

Frame size: 10 pixels

Coordinates: -31.9 um (x), 55.9 um (y), 47.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	377 nm	390 nm	223 nm
max	611 nm	632 nm	223 nm
Z	1.21 um	1.21 um	885 nm
Asymmetry	0.617		
Theta	-88.8°		

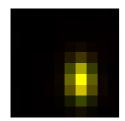
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.992$$



Parameters: A = 1981 42

A = 1981.429 (brightness)

B = 126.385 (background)

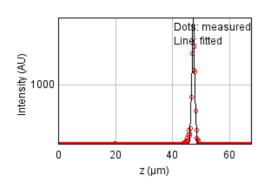
a = 0.942 px

b = -0.013 px

c = 0.359 px

xc = 5.974 pxyc = 6.101 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 375650.857

Standard deviation: 34.98026

R^2: 0.97405 Parameters: a = 116.31114 b = 1989.10924

0 - 1000.1002

c = 47.29737

Date: Mon Oct 17 13:29:21 PDT 2022

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

Frame size: 10 pixels

Coordinates: -19.2 um (x), 49.6 um (y), 47.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	378 nm	391 nm	223 nm
max	624 nm	645 nm	223 nm
Z	1.15 um	1.16 um	885 nm
Asymmetry	0.606		
Theta	87.7°		

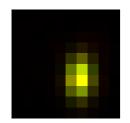
### XY profile & fitting parameters :

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





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



Parameters:

A = 1697.828 (brightness)

B = 127.351 (background)

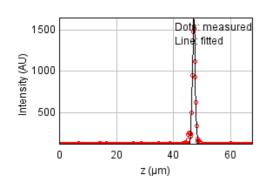
a = 0.936 px

b = 0.024 px

c = 0.346 px

xc = 5.824 pxyc = 5.745 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 347638.173

Standard deviation: 33.65073

R^2: 0.96388 Parameters: a = 114.97783 b = 1667.72866 c = 47.15957

Date: Mon Oct 17 13:29:21 PDT 2022

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

Frame size: 10 pixels

Coordinates: 76.4 um (x), 25.3 um (y), 47.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	472 nm	488 nm	223 nm
max	555 nm	573 nm	223 nm
Z	1.35 um	1.36 um	885 nm
Asymmetry	0.852		
Theta	64.0°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 1106.707 (brightness)

B = 133.883 (background)

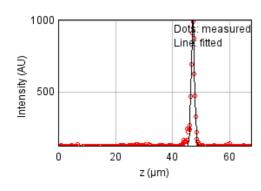
a = 0.570 px

b = 0.065 px

c = 0.468 px

xc = 5.409 pxyc = 6.105 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 65547.9302

Standard deviation: 14.61202

R^2: 0.98236 Parameters: a = 116.32540 b = 1018.83731 c = 47.17481

Date: Mon Oct 17 13:29:21 PDT 2022

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

Frame size: 10 pixels

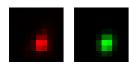
Coordinates: -152 um (x), -72.4 um (y), 47.5 um (z)

Corresponding bead: Not found

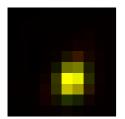
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	414 nm	223 nm
max	505 nm	522 nm	223 nm
Z	1.31 um	1.32 um	885 nm
Asymmetry	0.793		
Theta	73.6°		

## XY profile & fitting parameters :

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



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



Parameters:

 $A = 1786.229 \quad (brightness)$ 

B = 129.063 (background)

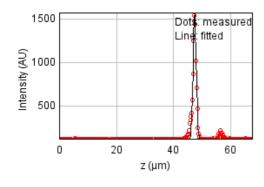
a = 0.812 px

b = 0.084 px

c = 0.552 px

xc = 5.441 pxyc = 6.174 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 184305.449

Standard deviation: 24.50191

R^2: 0.98055 Parameters: a = 117.30729 b = 1576.94760 c = 47.45197

Date: Mon Oct 17 13:29:21 PDT 2022

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

Frame size: 10 pixels

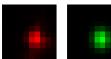
Coordinates: 17.3 um (x), -78.3 um (y), 47.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	491 nm	508 nm	223 nm
max	574 nm	594 nm	223 nm
Z	1.14 um	1.15 um	885 nm
Asymmetry	0.855		
Theta	-85.8°		

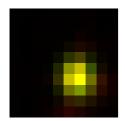
## XY profile & fitting parameters :

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





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



Parameters:

A = 1671.721 (brightness)

B = 136.044 (background)

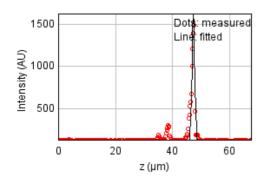
a = 0.556 px

b = -0.011 px

c = 0.407 px

xc = 5.752 pxyc = 5.850 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 1009328.78

Standard deviation: 57.33861

R^2: 0.89561 Parameters: a = 123.56845b = 1631.90678c = 47.34129

Date: Mon Oct 17 13:29:22 PDT 2022

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

Frame size: 10 pixels

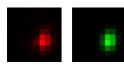
Coordinates: -86.0 um (x), -91.9 um (y), 46.7 um (z)

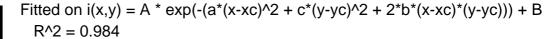
Corresponding bead: Not found

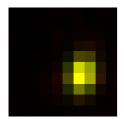
FWHM	Non corrected	Corrected	Theoretical
min	396 nm	409 nm	223 nm
max	540 nm	558 nm	223 nm
Z	1.31 um	1.32 um	885 nm
Asymmetry	0.733		
Theta	80.1°		

## XY profile & fitting parameters :

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







Parameters:

A = 1547.900 (brightness)

B = 129.247 (background)

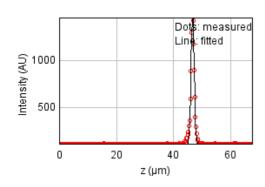
a = 0.845 px

b = 0.067 px

c = 0.472 px

xc = 6.282 pxyc = 5.651 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 78583.4651

Standard deviation: 15.99913

R^2: 0.99039 Parameters:

a = 115.71364

b = 1478.84819

c = 46.73909

Date: Mon Oct 17 13:29:22 PDT 2022

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

Frame size: 10 pixels

Coordinates: -7.06 um (x), 86.6 um (y), 47.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	407 nm	421 nm	223 nm
max	708 nm	732 nm	223 nm
Z	1.14 um	1.15 um	885 nm
Asymmetry	0.575		
Theta	83.4°		

### 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 = 1350.894 (brightness)

B = 128.000 (background)

a = 0.802 px

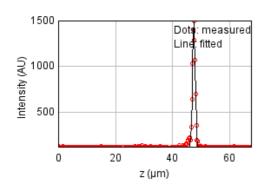
Parameters:

b = 0.062 px

c = 0.275 px

xc = 5.930 pxyc = 6.159 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 66462.9944

Standard deviation: 14.71366

R^2: 0.99102 Parameters: a = 114.81326b = 1501.50727c = 47.52193

Date: Mon Oct 17 13:29:22 PDT 2022

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

Frame size: 10 pixels

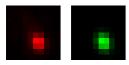
Coordinates: -159 um (x), 86.2 um (y), 47.6 um (z)

Corresponding bead: Not found

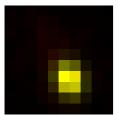
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	418 nm	223 nm
max	512 nm	530 nm	223 nm
Z	1.39 um	1.4 um	885 nm
Asymmetry	0.79		
Theta	-70.2°		

## XY profile & fitting parameters :

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



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



Parameters:

 $A = 1316.674 \quad (brightness)$ 

B = 137.567 (background)

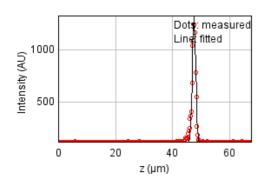
a = 0.784 px

b = -0.098 px

c = 0.547 px

xc = 5.452 pxyc = 6.258 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 138990.654

Standard deviation: 21.27765

R^2: 0.98003 Parameters: a = 113.17009 b = 1327.75264 c = 47.56749

Date: Mon Oct 17 13:29:22 PDT 2022

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

Frame size: 10 pixels

Coordinates: -2.28 um (x), 39.4 um (y), 47.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	436 nm	451 nm	223 nm
max	537 nm	555 nm	223 nm
Z	1.09 um	1.09 um	885 nm
Asymmetry	0.813		
Theta	82.7°		

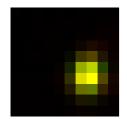
## XY profile & fitting parameters :

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





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



Parameters:

A = 2024.617 (brightness)

B = 127.303 (background)

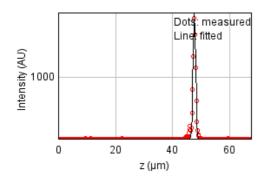
a = 0.701 px

b = 0.030 px

c = 0.470 px

xc = 6.619 pxyc = 5.732 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 117923.648

Standard deviation: 19.59888

R^2: 0.99036 Parameters: a = 116.40046 b = 1941.93153 c = 47.69501

Date: Mon Oct 17 13:29:22 PDT 2022

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

Frame size: 10 pixels

Coordinates: -120 um (x), 24.8 um (y), 46.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	420 nm	434 nm	223 nm
max	667 nm	689 nm	223 nm
Z	1.36 um	1.37 um	885 nm
Asymmetry	0.63		
Theta	-84.8°		

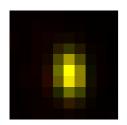
## XY profile & fitting parameters :

(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 = 836.738 (brightness)

B = 120.635 (background)

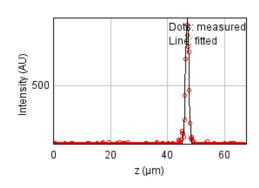
a = 0.756 px

b = -0.042 px

c = 0.306 px

xc = 5.079 pxyc = 5.310 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 88560.7265

Standard deviation: 16.98445

R^2: 0.97351 Parameters: a = 113.37836b = 961.97244

c = 46.93850

# Bead 2123 (Rejected)

Date: Mon Oct 17 13:29:22 PDT 2022

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

Frame size: 10 pixels

Coordinates: 113 um (x), 19.1 um (y), 46.8 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	1.17 um	1.18 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

## XY profile & fitting parameters :

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

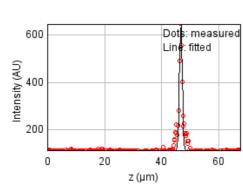




Fitted on y = a + 
$$(b-a)*exp(-(x-c)^2/(2*d^2)$$

# Z profile & fitting parameters:





Fitted on  $y = a + (b-a)^* \exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 87034.4109

Standard deviation: 16.83745

R^2: 0.92728 Parameters: a = 113.85507 b = 646.31442 c = 46.80207

Date: Mon Oct 17 13:29:23 PDT 2022

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

Frame size: 10 pixels

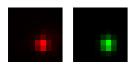
Coordinates: 128 um (x), -2.7 um (y), 47.0 um (z)

Corresponding bead: Not found

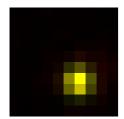
FWHM	Non corrected	Corrected	Theoretical
min	394 nm	408 nm	223 nm
max	430 nm	444 nm	223 nm
Z	1.22 um	1.22 um	885 nm
Asymmetry	0.917		
Theta	-88.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 704.930 (brightness)

B = 117.014 (background)

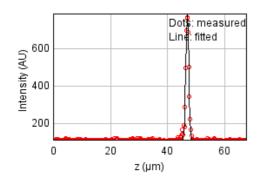
a = 0.863 px

b = -0.003 px

c = 0.726 px

xc = 5.868 pxyc = 6.290 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 20500.2465

Standard deviation: 8.17166

R^2: 0.98943 Parameters: a = 110.80950b = 799.51165

c = 46.98214

Date: Mon Oct 17 13:29:23 PDT 2022

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

Frame size: 10 pixels

Coordinates: 48.4 um (x), -5.03 um (y), 47.8 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	440 nm	454 nm	223 nm
max	521 nm	539 nm	223 nm
Z	1.36 um	1.36 um	885 nm
Asymmetry	0.844		
Theta	-79.0°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 1810.019 (brightness)

B = 134.469 (background)

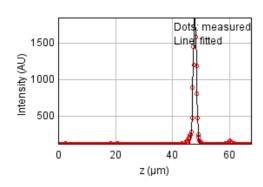
a = 0.687 px

b = -0.037 px

c = 0.502 px

xc = 5.907 pxyc = 6.855 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 318508.316

Standard deviation: 32.21004

R^2: 0.97770 Parameters: a = 118.80753b = 1879.29455

c = 47.84226

Date: Mon Oct 17 13:29:23 PDT 2022

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

Frame size: 10 pixels

Coordinates: -79.6 um (x), -8.46 um (y), 47.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	361 nm	373 nm	223 nm
max	555 nm	574 nm	223 nm
Z	1.06 um	1.07 um	885 nm
Asymmetry	0.65		
Theta	85.6°		

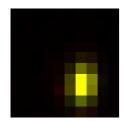
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.989$$



Parameters:

A = 1614.468 (brightness)

B = 130.793 (background)

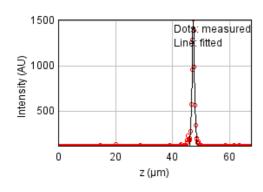
a = 1.026 px

b = 0.045 px

c = 0.439 px

xc = 6.157 pxyc = 6.460 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 58483.4643

Standard deviation: 13.80217

R^2: 0.99165 Parameters: a = 115.57336 b = 1515.14246

c = 47.31470

Date: Mon Oct 17 13:29:23 PDT 2022

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

Frame size: 10 pixels

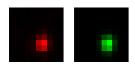
Coordinates: -143 um (x), -11.9 um (y), 46.8 um (z)

Corresponding bead: Not found

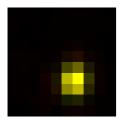
FWHM	Non corrected	Corrected	Theoretical
min	378 nm	391 nm	223 nm
max	460 nm	476 nm	223 nm
Z	1.25 um	1.26 um	885 nm
Asymmetry	0.821		
Theta	85.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.990$ 



Parameters:

A = 891.076 (brightness)

B = 116.462 (background)

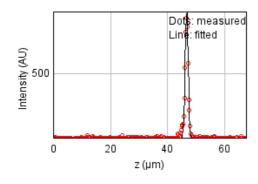
a = 0.938 px

b = 0.026 px

c = 0.636 px

xc = 5.668 pxyc = 6.235 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 32384.7393

Standard deviation: 10.27072

R^2: 0.98706 Parameters: a = 111.67372 b = 881.15991 c = 46.76208

Date: Mon Oct 17 13:29:23 PDT 2022

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

Frame size: 10 pixels

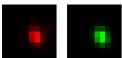
Coordinates: 148 um (x), -11.5 um (y), 47.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	392 nm	406 nm	223 nm
max	493 nm	509 nm	223 nm
Z	1.28 um	1.29 um	885 nm
Asymmetry	0.796		
Theta	-64.9°		

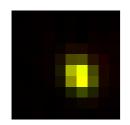
## XY profile & fitting parameters :

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





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



Parameters:

A = 1361.011 (brightness)

B = 125.633 (background)

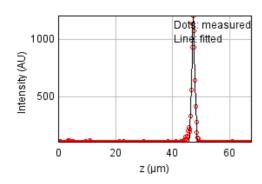
a = 0.814 px

b = -0.123 px

c = 0.610 px

xc = 5.769 pxyc = 5.441 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 62895.6774

Standard deviation: 14.31335

R^2: 0.98778 Parameters: a = 111.75740b = 1203.38549

c = 47.31696

Date: Mon Oct 17 13:29:23 PDT 2022

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

Frame size: 10 pixels

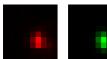
Coordinates: 57.9 um (x), -29.8 um (y), 47.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	384 nm	397 nm	223 nm
max	480 nm	496 nm	223 nm
Z	1.46 um	1.47 um	885 nm
Asymmetry	0.801		
Theta	-76.2°		

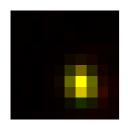
### XY profile & fitting parameters :

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





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



Parameters:

A = 1156.428 (brightness)

B = 127.827 (background)

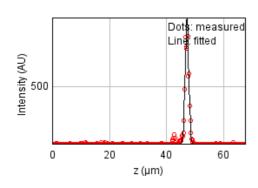
a = 0.892 px

b = -0.076 px

c = 0.602 px

xc = 6.029 pxyc = 6.269 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 185730.571

Standard deviation: 24.59645

R^2: 0.95043 Parameters: a = 114.28046b = 971.68808c = 47.21367

Date: Mon Oct 17 13:29:23 PDT 2022

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

Frame size: 10 pixels

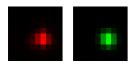
Coordinates: -63.8 um (x), -52.3 um (y), 47.5 um (z)

Corresponding bead: Not found

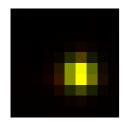
FWHM	Non corrected	Corrected	Theoretical
min	437 nm	452 nm	223 nm
max	453 nm	468 nm	223 nm
Z	1.34 um	1.35 um	885 nm
Asymmetry	0.965		
Theta	-57.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 2592.137 (brightness)

B = 136.472 (background)

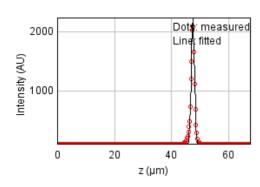
a = 0.688 px

b = -0.022 px

c = 0.667 px

xc = 5.895 pxyc = 5.520 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 196324.722

Standard deviation: 25.28822

R^2: 0.99019 Parameters: a = 116.01307 b = 2226.64588 c = 47.51891

Date: Mon Oct 17 13:29:23 PDT 2022

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

Frame size: 10 pixels

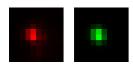
Coordinates: 101 um (x), -56.0 um (y), 49.1 um (z)

Corresponding bead: Not found

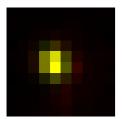
FWHM	Non corrected	Corrected	Theoretical
min	378 nm	390 nm	223 nm
max	439 nm	454 nm	223 nm
Z	1.29 um	1.3 um	885 nm
Asymmetry	0.859		
Theta	-69.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1329.732 (brightness)

B = 139.176 (background)

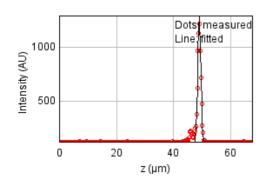
a = 0.911 px

b = -0.080 px

c = 0.724 px

xc = 3.881 pxyc = 4.591 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 88209.2300

Standard deviation: 16.95071

R^2: 0.98536 Parameters:

a = 115.89378

b = 1292.66387

c = 49.08633

Date: Mon Oct 17 13:29:24 PDT 2022

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

Frame size: 10 pixels

Coordinates: 31.5 um (x), -65.1 um (y), 47.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	400 nm	414 nm	223 nm
max	513 nm	531 nm	223 nm
Z	1.31 um	1.31 um	885 nm
Asymmetry	0.78		
Theta	-81.1°		

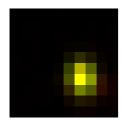
## XY profile & fitting parameters :

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





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



Parameters:

A = 1796.948 (brightness)

B = 129.855 (background)

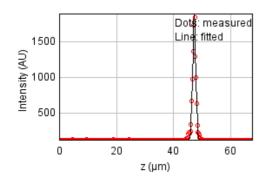
a = 0.829 px

b = -0.050 px

c = 0.517 px

xc = 6.186 pxyc = 5.865 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 79925.9435

Standard deviation: 16.13521

R^2: 0.99425 Parameters: a = 114.81946b = 1899.04982

c = 47.29925

Date: Mon Oct 17 13:29:24 PDT 2022

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

Frame size: 10 pixels

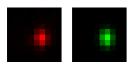
Coordinates: -121 um (x), -73.5 um (y), 47.3 um (z)

Corresponding bead: Not found

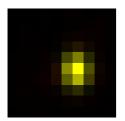
	1		_
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	404 nm	223 nm
max	501 nm	518 nm	223 nm
Z	1.26 um	1.26 um	885 nm
Asymmetry	0.78		
Theta	-89.2°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.992$$



Parameters:

A = 1515.799 (brightness)

B = 127.348 (background)

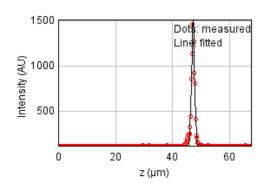
a = 0.878 px

b = -0.005 px

c = 0.534 px

xc = 5.847 pxyc = 5.154 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 113198.625

Standard deviation: 19.20222

R^2: 0.98639 Parameters: a = 113.97128

b = 1515.04468

c = 47.25127

Date: Mon Oct 17 13:29:24 PDT 2022

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

Frame size: 10 pixels

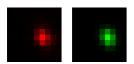
Coordinates: 93.5 um (x), -95.5 um (y), 47.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	403 nm	416 nm	223 nm
max	516 nm	533 nm	223 nm
Z	1.33 um	1.33 um	885 nm
Asymmetry	0.781		
Theta	-70.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1506.820 (brightness)

B = 128.528 (background)

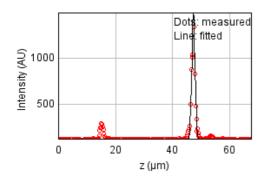
a = 0.790 px

b = -0.103 px

c = 0.542 px

xc = 6.130 pxyc = 5.074 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 393414.539

Standard deviation: 35.79777

R^2: 0.95569 Parameters: a = 120.64773 b = 1507.26349 c = 47.36291

# Bead 2135 (Rejected)

Date: Mon Oct 17 13:29:24 PDT 2022

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

Frame size: 10 pixels

Coordinates: -12.0 um (x), 73.8 um (y), 46.6 um (z)

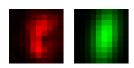
Corresponding bead: Not found

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

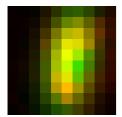
FWHM	Non corrected	Corrected	Theoretical
min	785 nm	811 nm	223 nm
max	1.63 um	1.68 um	223 nm
Z	1.23 um	1.24 um	885 nm
Asymmetry	0.482		
Theta	81.6°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.877$$



A = 354.846 (brightness)

B = 132.598 (background)

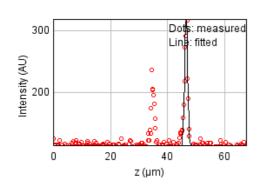
a = 0.214 px

b = 0.024 px

c = 0.054 px

xc = 5.245 pxyc = 4.409 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 66451.2724

Standard deviation: 14.71236

R^2: 0.72094

Parameters:

a = 115.43998

b = 319.96879

c = 46.56330

Date: Mon Oct 17 13:29:24 PDT 2022

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

Frame size: 10 pixels

Coordinates: -10.5 um (x), 40.8 um (y), 47.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	387 nm	400 nm	223 nm
max	646 nm	667 nm	223 nm
Z	1.19 um	1.2 um	885 nm
Asymmetry	0.6		
Theta	87.3°		

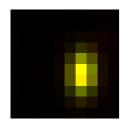
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.988$$



Parameters:

A = 1333.442 (brightness)

B = 126.526 (background)

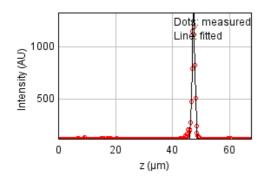
a = 0.893 px

b = 0.027 px

c = 0.323 px

xc = 6.116 pxyc = 5.372 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 62453.3412

Standard deviation: 14.26293

R^2: 0.98973 Parameters: a = 115.14930 b = 1345.61438

c = 47.40009

Date: Mon Oct 17 13:29:24 PDT 2022

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

Frame size: 10 pixels

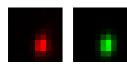
Coordinates: 11.2 um (x), 36.2 um (y), 47.6 um (z)

Corresponding bead: Not found

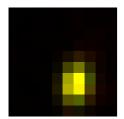
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	419 nm	223 nm
max	574 nm	593 nm	223 nm
Z	1.11 um	1.12 um	885 nm
Asymmetry	0.706		
Theta	81.7°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 1161.553 (brightness)

B = 122.573 (background)

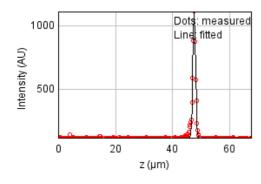
a = 0.810 px

b = 0.059 px

c = 0.416 px

xc = 5.738 pxyc = 6.464 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 60259.9607

Standard deviation: 14.01023

R^2: 0.98462 Parameters: a = 114.86187

b = 1134.20734

c = 47.62900

Date: Mon Oct 17 13:29:24 PDT 2022

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

Frame size: 10 pixels

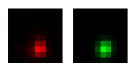
Coordinates: -86.2 um (x), 36.3 um (y), 47.9 um (z)

Corresponding bead: Not found

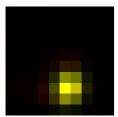
FWHM	Non corrected	Corrected	Theoretical
min	417 nm	431 nm	223 nm
max	478 nm	494 nm	223 nm
Z	1.12 um	1.12 um	885 nm
Asymmetry	0.872		
Theta	74.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1928.784 (brightness)

B = 129.926 (background)

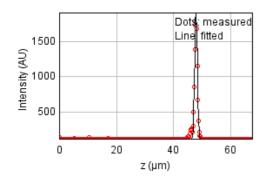
a = 0.759 px

b = 0.047 px

c = 0.600 px

xc = 5.313 pxyc = 6.967 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 100791.843

Standard deviation: 18.11939

R^2: 0.99165 Parameters: a = 115.64106 b = 1908.01843 c = 47.91517

# Bead 2139 (Rejected)

Date: Mon Oct 17 13:29:25 PDT 2022

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

Frame size: 10 pixels

Coordinates: -68.9 um (x), 34.5 um (y), 63.6 um (z)

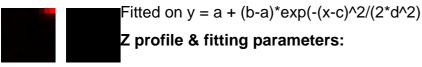
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

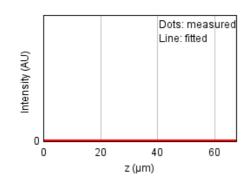
FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	263 nm	264 nm	885 nm
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

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







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 d = 0.11151

Date: Mon Oct 17 13:29:25 PDT 2022

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

Frame size: 10 pixels

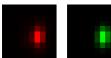
Coordinates: -79.6 um (x), -8.46 um (y), 47.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	360 nm	373 nm	223 nm
max	555 nm	573 nm	223 nm
Z	1.06 um	1.07 um	885 nm
Asymmetry	0.65		
Theta	85.6°		

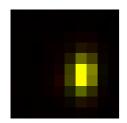
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.989$$



Parameters:

A = 1614.216 (brightness)

B = 132.088 (background)

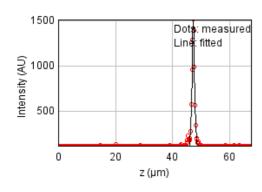
a = 1.029 px

b = 0.046 px

c = 0.440 px

xc = 6.158 pxyc = 5.460 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 58483.4643

Standard deviation: 13.80217

R^2: 0.99165 Parameters: a = 115.57336b = 1515.14246

c = 47.31470

Date: Mon Oct 17 13:29:25 PDT 2022

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

Frame size: 10 pixels

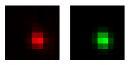
Coordinates: 113 um (x), -88.0 um (y), 47.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	415 nm	428 nm	223 nm
max	471 nm	487 nm	223 nm
Z	1.28 um	1.28 um	885 nm
Asymmetry	0.88		
Theta	-66.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1673.718 (brightness)

B = 130.272 (background)

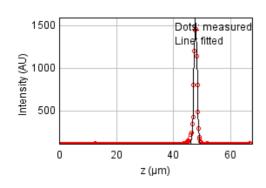
a = 0.753 px

b = -0.064 px

c = 0.633 px

xc = 5.582 pxyc = 5.875 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 60693.8327

Standard deviation: 14.06058

R^2: 0.99347 Parameters:

a = 113.42786

b = 1588.39187

c = 47.73527

Date: Mon Oct 17 13:29:25 PDT 2022

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

Frame size: 10 pixels

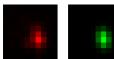
Coordinates: -112 um (x), 67.8 um (y), 47.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	378 nm	391 nm	223 nm
max	542 nm	561 nm	223 nm
Z	1.28 um	1.29 um	885 nm
Asymmetry	0.697		
Theta	-80.8°		

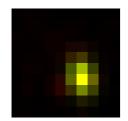
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.964$$



Parameters:

A = 827.285 (brightness)

B = 127.223 (background)

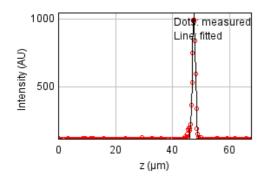
a = 0.927 px

b = -0.076 px

c = 0.469 px

xc = 5.987 pxyc = 5.815 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 38608.7222

Standard deviation: 11.21434

R^2: 0.98966 Parameters:

a = 113.25084

b = 1045.17448

c = 47.53429

Date: Mon Oct 17 13:29:25 PDT 2022

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

Frame size: 10 pixels

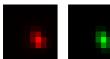
Coordinates: -140 um (x), 40.7 um (y), 47.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	349 nm	361 nm	223 nm
max	511 nm	529 nm	223 nm
Z	1.1 um	1.11 um	885 nm
Asymmetry	0.683		
Theta	-65.7°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 1385.546 (brightness)

B = 122.110 (background)

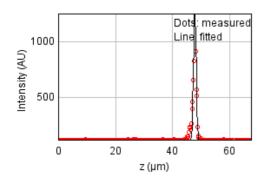
a = 1.001 px

b = -0.221 px

c = 0.613 px

xc = 5.983 pxyc = 6.081 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 228665.818

Standard deviation: 27.29175

R^2: 0.95647 Parameters: a = 113.69539b = 1282.08182c = 47.85311

Date: Mon Oct 17 13:29:25 PDT 2022

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

Frame size: 10 pixels

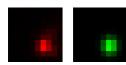
Coordinates: 88.1 um (x), 40.8 um (y), 48.4 um (z)

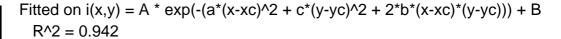
Corresponding bead: Not found

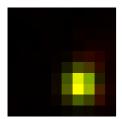
FWHM	Non corrected	Corrected	Theoretical
min	444 nm	459 nm	223 nm
max	498 nm	515 nm	223 nm
Z	1.53 um	1.53 um	885 nm
Asymmetry	0.891		
Theta	86.6°		

### XY profile & fitting parameters :

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







Parameters:

A = 1251.641 (brightness)

B = 133.961 (background)

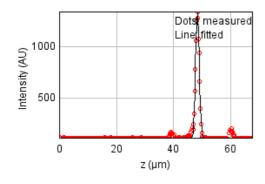
a = 0.680 px

b = 0.008 px

c = 0.541 px

xc = 6.240 pxyc = 6.573 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 100858.127

Standard deviation: 18.12534

R^2: 0.98662 Parameters:

a = 119.34964

b = 1333.08541

c = 48.43483

## Bead 2145 (Rejected)

Date: Mon Oct 17 13:29:25 PDT 2022

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

Frame size: 10 pixels

Coordinates: 76.8 um (x), 41.8 nm (y), 48.1 um (z)

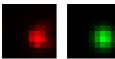
Corresponding bead: Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	588 nm	608 nm	223 nm
max	636 nm	657 nm	223 nm
Z	2.31 um	2.31 um	885 nm
Asymmetry	0.925		
Theta	-84.8°		

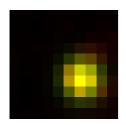
## XY profile & fitting parameters :

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





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



Parameters:

A = 824.498 (brightness)

B = 120.519 (background)

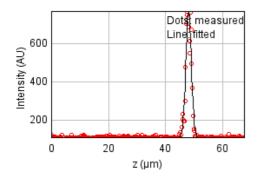
a = 0.388 px

b = -0.005 px

c = 0.333 px

xc = 6.198 pxyc = 5.810 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 176226.712

Standard deviation: 23.95889

R^2: 0.94762 Parameters:

a = 112.26732

b = 764.92283

c = 48.13928

## Bead 2146 (Rejected)

Date: Mon Oct 17 13:29:25 PDT 2022

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

Frame size: 10 pixels

Coordinates: 76.8 um (x), 42.4 nm (y), 48.1 um (z)

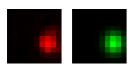
Corresponding bead: Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	585 nm	605 nm	223 nm
max	640 nm	662 nm	223 nm
Z	2.31 um	2.31 um	885 nm
Asymmetry	0.914		
Theta	-87.6°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 829.659 (brightness) B = 116.834 (background)

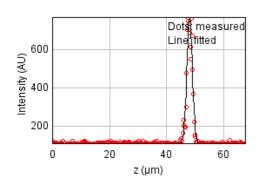
a = 0.392 px

b = -0.003 px

c = 0.327 px

xc = 7.191 pxyc = 5.807 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 176226.712

Standard deviation: 23.95889

R^2: 0.94762

Parameters: a = 112.26732

b = 764.92283

c = 48.13928

Date: Mon Oct 17 13:29:26 PDT 2022

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

Frame size: 10 pixels

Coordinates: -130 um (x), -31.4 um (y), 47.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	478 nm	494 nm	223 nm
max	556 nm	575 nm	223 nm
Z	1.31 um	1.32 um	885 nm
Asymmetry	0.86		
Theta	70.9°		

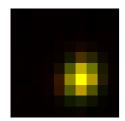
## XY profile & fitting parameters :

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





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



Parameters:

A = 1228.846 (brightness)

B = 119.462 (background)

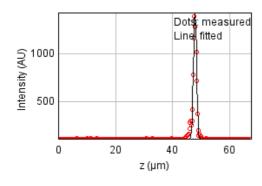
a = 0.570 px

b = 0.047 px

c = 0.451 px

xc = 6.058 pxyc = 5.916 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 282396.492

Standard deviation: 30.32917

R^2: 0.96380 Parameters: a = 113.26263b = 1426.11938c = 47.92035

Date: Mon Oct 17 13:29:26 PDT 2022

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

Frame size: 10 pixels

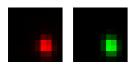
Coordinates: -38.2 um (x), -33.1 um (y), 48.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	399 nm	413 nm	223 nm
max	517 nm	534 nm	223 nm
Z	1.28 um	1.28 um	885 nm
Asymmetry	0.773		
Theta	-81.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.991$ 



Parameters:

A = 2430.919 (brightness)

B = 126.585 (background)

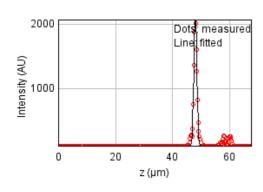
a = 0.834 px

b = -0.050 px

c = 0.510 px

xc = 6.430 pxyc = 6.599 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 378743.766

Standard deviation: 35.12397

R^2: 0.97747 Parameters: a = 122.99015 b = 2088.57401

c = 48.05270

Date: Mon Oct 17 13:29:26 PDT 2022

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

Frame size: 10 pixels

Coordinates: 16.3 um (x), -67.0 um (y), 48.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	488 nm	504 nm	223 nm
max	587 nm	607 nm	223 nm
Z	1.43 um	1.43 um	885 nm
Asymmetry	0.831		
Theta	-54.7°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 1473.922 (brightness)

B = 123.761 (background)

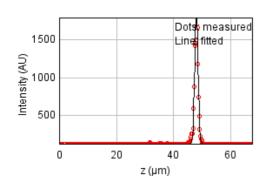
a = 0.505 px

b = -0.082 px

c = 0.448 px

xc = 6.151 pxyc = 5.621 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 306797.732

Standard deviation: 31.61236

R^2: 0.97800 Parameters: a = 115.81562b = 1813.90567c = 48.05639

Date: Mon Oct 17 13:29:26 PDT 2022

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

Frame size: 10 pixels

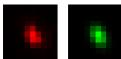
Coordinates: 116 um (x), -79.3 um (y), 47.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	412 nm	425 nm	223 nm
max	619 nm	640 nm	223 nm
Z	1.3 um	1.3 um	885 nm
Asymmetry	0.665		
Theta	-62.8°		

### 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 = 1250.223 (brightness)

B = 122.528 (background)

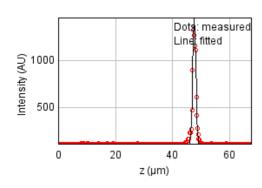
a = 0.700 px

b = -0.180 px

c = 0.443 px

xc = 5.109 pxyc = 5.322 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 182160.119

Standard deviation: 24.35889

R^2: 0.97759 Parameters: a = 112.50873b = 1470.02728

c = 47.65114

Date: Mon Oct 17 13:29:26 PDT 2022

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

Frame size: 10 pixels

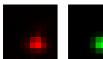
Coordinates: -149 um (x), -82.9 um (y), 47.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	425 nm	440 nm	223 nm
max	494 nm	511 nm	223 nm
Z	1.44 um	1.44 um	885 nm
Asymmetry	0.861		
Theta	-1.4°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 1343.068 (brightness)

B = 120.688 (background)

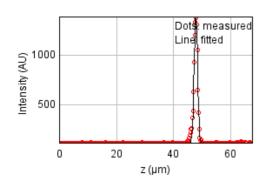
a = 0.550 px

b = -0.005 px

c = 0.741 px

xc = 5.729 pxyc = 6.759 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 82050.1560

Standard deviation: 16.34822

R^2: 0.98965 Parameters: a = 113.92580b = 1398.23610c = 47.86624

Date: Mon Oct 17 13:29:26 PDT 2022

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

Frame size: 10 pixels

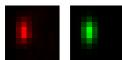
Coordinates: -17.8 um (x), 68.3 um (y), 47.8 um (z)

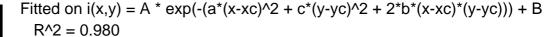
Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	365 nm	377 nm	223 nm
max	683 nm	706 nm	223 nm
Z	1.06 um	1.06 um	885 nm
Asymmetry	0.534		
Theta	90.0°		

### XY profile & fitting parameters :

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







Parameters:

A = 1344.093 (brightness)

B = 146.868 (background)

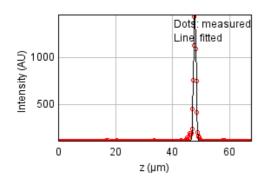
a = 1.007 px

b = 0.000 px

c = 0.287 px

xc = 2.960 pxyc = 4.328 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 50165.4079

Standard deviation: 12.78301

R^2: 0.99251 Parameters: a = 114.99710 b = 1488.40933 c = 47.84466

Date: Mon Oct 17 13:29:27 PDT 2022

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

Frame size: 10 pixels

Coordinates: -97.1 um (x), 44.6 um (y), 47.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	384 nm	396 nm	223 nm
max	604 nm	624 nm	223 nm
Z	1.42 um	1.42 um	885 nm
Asymmetry	0.635		
Theta	-83.4°		

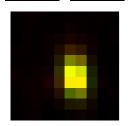
### XY profile & fitting parameters :

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





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



Parameters:

A = 1128.165 (brightness)

B = 126.012 (background)

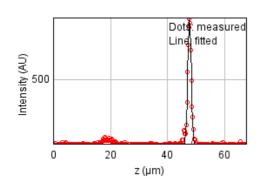
a = 0.905 px

b = -0.062 px

c = 0.375 px

xc = 5.461 pxyc = 5.476 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 49245.9964

Standard deviation: 12.66532

R^2: 0.98154 Parameters:

a = 117.16097

b = 863.93250

c = 47.72754

Date: Mon Oct 17 13:29:27 PDT 2022

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

Frame size: 10 pixels

Coordinates: -93.5 um (x), 5.41 um (y), 47.8 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	389 nm	402 nm	223 nm
max	555 nm	574 nm	223 nm
Z	1.52 um	1.53 um	885 nm
Asymmetry	0.701		
Theta	-68.1°		

### 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 = 1194.185 (brightness)

B = 125.389 (background)

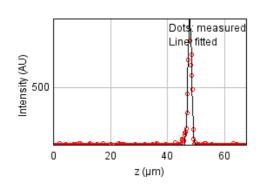
a = 0.824 px

b = -0.156 px

c = 0.499 px

xc = 6.050 pxyc = 6.408 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 237455.159

Standard deviation: 27.81132

R^2: 0.93946 Parameters: a = 113.39443

b = 969.72849

c = 47.82960

Date: Mon Oct 17 13:29:27 PDT 2022

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

Frame size: 10 pixels

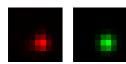
Coordinates: -72.0 um (x), -10.4 um (y), 47.9 um (z)

Corresponding bead: Not found

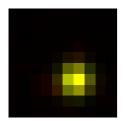
FWHM	Non corrected	Corrected	Theoretical
min	453 nm	468 nm	223 nm
max	462 nm	477 nm	223 nm
Z	1.26 um	1.27 um	885 nm
Asymmetry	0.982		
Theta	80.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1199.202 (brightness)

B = 120.460 (background)

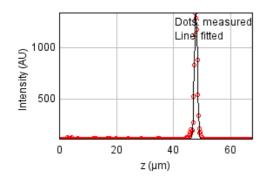
a = 0.653 px

b = 0.004 px

c = 0.631 px

xc = 5.702 pxyc = 6.059 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 44981.7931

Standard deviation: 12.10457

R^2: 0.99311 Parameters:

a = 115.59530

b = 1358.50152

c = 47.86698

Date: Mon Oct 17 13:29:27 PDT 2022

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

Frame size: 10 pixels

Coordinates: -138 um (x), -27.5 um (y), 48.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	359 nm	371 nm	223 nm
max	506 nm	523 nm	223 nm
Z	1.14 um	1.15 um	885 nm
Asymmetry	0.709		
Theta	80.7°		

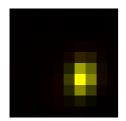
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.991$$



Parameters:

A = 1789.548 (brightness)

B = 130.755 (background)

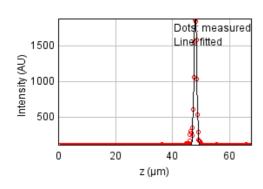
a = 1.030 px

b = 0.083 px

c = 0.539 px

xc = 6.199 pxyc = 5.889 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 125744.634

Standard deviation: 20.23837

R^2: 0.99001 Parameters: a = 113.86947 b = 1923.33727 c = 48.06231

Date: Mon Oct 17 13:29:27 PDT 2022

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

Frame size: 10 pixels

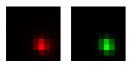
Coordinates: 126 um (x), -33.6 um (y), 47.9 um (z)

Corresponding bead: Not found

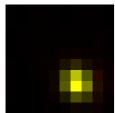
FWHM	Non corrected	Corrected	Theoretical
min	388 nm	401 nm	223 nm
max	447 nm	463 nm	223 nm
Z	1.26 um	1.26 um	885 nm
Asymmetry	0.866		
Theta	-64.4°		

### XY profile & fitting parameters :

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



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



Parameters:

 $A = 1339.075 \quad (brightness)$ 

B = 121.559 (background)

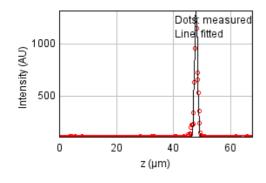
a = 0.852 px

b = -0.087 px

c = 0.712 px

xc = 6.087 pxyc = 6.701 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 167037.247

Standard deviation: 23.32585

R^2: 0.97330 Parameters: a = 112.36762 b = 1320.26070 c = 47.94097

Date: Mon Oct 17 13:29:27 PDT 2022

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

Frame size: 10 pixels

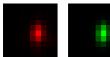
Coordinates: -15.9 um (x), -52.8 um (y), 47.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	366 nm	378 nm	223 nm
max	575 nm	594 nm	223 nm
Z	1.09 um	1.1 um	885 nm
Asymmetry	0.637		
Theta	85.1°		

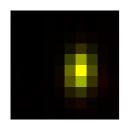
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.989$$



Parameters:

A = 1884.589 (brightness)

B = 129.007 (background)

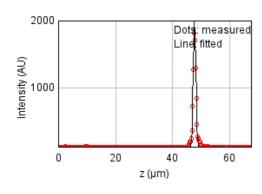
a = 0.998 px

b = 0.050 px

c = 0.411 px

xc = 5.924 pxyc = 5.051 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 101292.441

Standard deviation: 18.16433

R^2: 0.99224 Parameters: a = 117.31838b = 2003.01701c = 47.74941

Date: Mon Oct 17 13:29:27 PDT 2022

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

Frame size: 10 pixels

Coordinates: -72.9 um (x), -75.5 um (y), 47.4 um (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	367 nm	380 nm	223 nm
max	592 nm	612 nm	223 nm
Z	1.13 um	1.14 um	885 nm
Asymmetry	0.621		
Theta	83.3°		

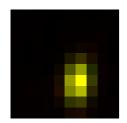
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.991$$



Parameters:

 $A = 1458.040 \quad (brightness)$ 

B = 124.321 (background)

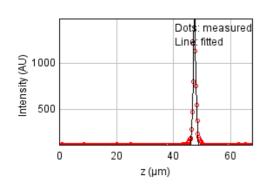
a = 0.986 px

b = 0.071 px

c = 0.392 px

xc = 5.742 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: 82393.7552

Standard deviation: 16.38242

R^2: 0.98901 Parameters: a = 115.83735 b = 1516.79392

c = 47.40702

Date: Mon Oct 17 13:29:27 PDT 2022

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

Frame size: 10 pixels

Coordinates: 126 um (x), 68.1 um (y), 48.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	440 nm	455 nm	223 nm
max	616 nm	636 nm	223 nm
Z	1.62 um	1.62 um	885 nm
Asymmetry	0.714		
Theta	63.5°		

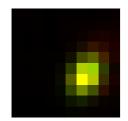
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.948$$



Parameters:

A = 1021.564 (brightness)

B = 124.848 (background)

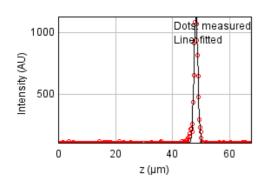
a = 0.626 px

b = 0.136 px

c = 0.422 px

xc = 6.379 pxyc = 5.629 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 60683.9475

Standard deviation: 14.05943

R^2: 0.98921 Parameters: a = 111.39426b = 1132.37799

c = 48.26554

Date: Mon Oct 17 13:29:28 PDT 2022

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

Frame size: 10 pixels

Coordinates: 4.06 um (x), 55.8 um (y), 48.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	435 nm	449 nm	223 nm
max	573 nm	593 nm	223 nm
Z	1.53 um	1.54 um	885 nm
Asymmetry	0.758		
Theta	73.5°		

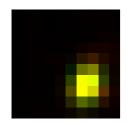
### XY profile & fitting parameters :

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





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



Parameters:

A = 1774.340 (brightness)

B = 128.971 (background)

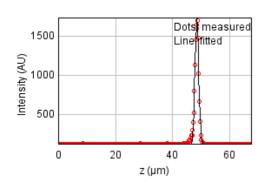
a = 0.686 px

b = 0.082 px

c = 0.433 px

xc = 6.451 pxyc = 6.392 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 103565.705

Standard deviation: 18.36702

R^2: 0.99234 Parameters: a = 114.26871 b = 1740.85016

c = 48.58609

# Bead 2162 (Rejected)

Date: Mon Oct 17 13:29:28 PDT 2022

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

Frame size: 10 pixels

Coordinates: 124 um (x), 53.6 um (y), 47.4 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	517 nm	534 nm	223 nm
max	917 nm	948 nm	223 nm
Z	1.31 um	1.31 um	885 nm
Asymmetry	0.563		
Theta	70.8°		

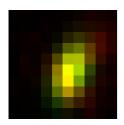
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.921$$



Parameters:

A = 474.619 (brightness)

B = 127.654 (background)

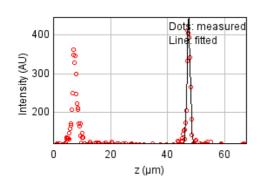
a = 0.466 px

b = 0.107 px

c = 0.197 px

xc = 5.254 pxyc = 5.155 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 360915.055

Standard deviation: 34.28730

R^2: 0.56392 Parameters:

a = 120.17738

b = 447.89111

c = 47.43589

Date: Mon Oct 17 13:29:28 PDT 2022

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

Frame size: 10 pixels

Coordinates: -24.0 um (x), 43.3 um (y), 48.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	355 nm	366 nm	223 nm
max	597 nm	617 nm	223 nm
Z	1.04 um	1.05 um	885 nm
Asymmetry	0.594		
Theta	77.0°		

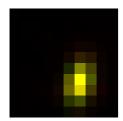
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.988$$



Parameters:

A = 2001.683 (brightness)

B = 128.152 (background)

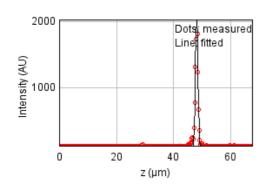
a = 1.033 px

b = 0.151 px

c = 0.411 px

xc = 5.958 pxyc = 6.284 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 87586.9739

Standard deviation: 16.89081

R^2: 0.99310 Parameters: a = 116.47881b = 2020.42951c = 48.16930

Date: Mon Oct 17 13:29:28 PDT 2022

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

Frame size: 10 pixels

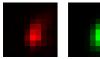
Coordinates: 107 um (x), 39.5 um (y), 47.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	453 nm	468 nm	223 nm
max	756 nm	782 nm	223 nm
Z	1.54 um	1.54 um	885 nm
Asymmetry	0.599		
Theta	74.0°		

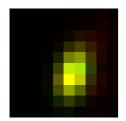
### XY profile & fitting parameters :

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





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



Parameters:

A = 900.319 (brightness)

B = 125.993 (background)

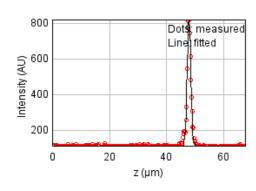
a = 0.623 px

b = 0.111 px

c = 0.267 px

xc = 5.397 pxyc = 5.496 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 52716.5032

Standard deviation: 13.10401

R^2: 0.97970 Parameters:

a = 112.23156

b = 820.49621

c = 47.92613

Date: Mon Oct 17 13:29:28 PDT 2022

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

Frame size: 10 pixels

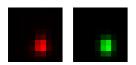
Coordinates: -47.6 um (x), 37.5 um (y), 48.4 um (z)

Corresponding bead: Not found

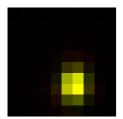
FWHM	Non corrected	Corrected	Theoretical
min	382 nm	395 nm	223 nm
max	482 nm	498 nm	223 nm
Z	1.25 um	1.26 um	885 nm
Asymmetry	0.793		
Theta	88.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.990$ 



Parameters:

A = 2153.169 (brightness)

B = 124.429 (background)

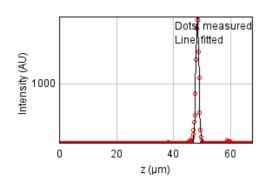
a = 0.919 px

b = 0.008 px

c = 0.578 px

xc = 5.650 pxyc = 6.612 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 95240.0709

Standard deviation: 17.61330

R^2: 0.99355 Parameters: a = 115.99944

b = 1994.19085

c = 48.42811

Date: Mon Oct 17 13:29:28 PDT 2022

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

Frame size: 10 pixels

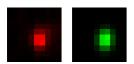
Coordinates: 156 um (x), 27.6 um (y), 47.9 um (z)

Corresponding bead: Not found

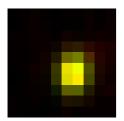
FWHM	Non corrected	Corrected	Theoretical
min	456 nm	471 nm	223 nm
max	582 nm	602 nm	223 nm
Z	1.33 um	1.34 um	885 nm
Asymmetry	0.783		
Theta	84.8°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.969$$



A = 735.044 (brightness)

B = 120.861 (background)

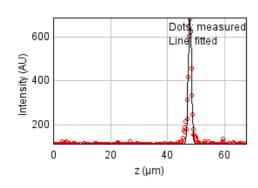
a = 0.644 px

b = 0.023 px

c = 0.398 px

xc = 5.589 pxyc = 5.414 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 40186.8588

Standard deviation: 11.44123

R^2: 0.97398 Parameters: a = 111.70000

b = 695.18075

c = 47.86629

Date: Mon Oct 17 13:29:28 PDT 2022

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

Frame size: 10 pixels

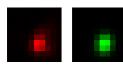
Coordinates: 79.7 um (x), 25.9 um (y), 48.6 um (z)

Corresponding bead: Not found

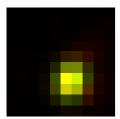
FWHM	Non corrected	Corrected	Theoretical
min	460 nm	476 nm	223 nm
max	555 nm	574 nm	223 nm
Z	1.56 um	1.57 um	885 nm
Asymmetry	0.829		
Theta	77.0°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.955$$



Parameters:

A = 1049.485 (brightness)

B = 129.205 (background)

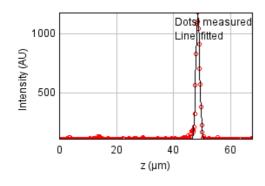
a = 0.624 px

b = 0.043 px

c = 0.446 px

xc = 5.439 pxyc = 6.218 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 67164.3978

Standard deviation: 14.79110

R^2: 0.98870 Parameters:

a = 114.15032

b = 1182.24064

c = 48.57467

# Bead 2168 (Rejected)

Date: Mon Oct 17 13:29:29 PDT 2022

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

Frame size: 10 pixels

Coordinates: 15.2 um (x), 17.2 um (y), 62.8 um (z)

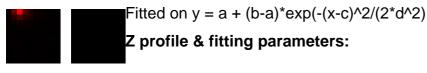
Corresponding bead: Not found

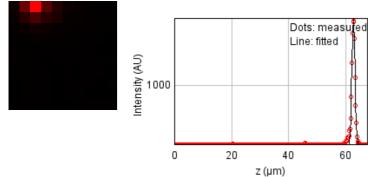
Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	1.28 um	1.29 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: 97852.1813

Standard deviation: 17.85320

R^2: 0.99366 Parameters: a = 116.28901 b = 2013.34028 c = 62.77110

Date: Mon Oct 17 13:29:29 PDT 2022

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

Frame size: 10 pixels

Coordinates: -30.2 um (x), 9.63 um (y), 48.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	369 nm	381 nm	223 nm
max	565 nm	584 nm	223 nm
Z	1.03 um	1.03 um	885 nm
Asymmetry	0.652		
Theta	80.9°		

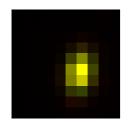
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.991$$



Parameters:

A = 2528.844 (brightness)

B = 136.813 (background)

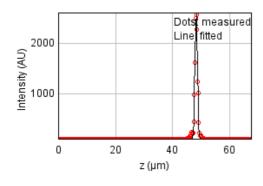
a = 0.974 px

b = 0.088 px

c = 0.434 px

xc = 5.803 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: 224938.511

Standard deviation: 27.06841

R^2: 0.98950 Parameters: a = 116.36853 b = 2599.75888

c = 48.36786

Date: Mon Oct 17 13:29:29 PDT 2022

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

Frame size: 10 pixels

Coordinates: 74.1 um (x), 7.7 um (y), 48.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	426 nm	441 nm	223 nm
max	472 nm	488 nm	223 nm
Z	1.17 um	1.17 um	885 nm
Asymmetry	0.902		
Theta	-7.4°		

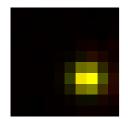
### XY profile & fitting parameters :

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





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



Parameters:

A = 1170.466 (brightness)

B = 125.458 (background)

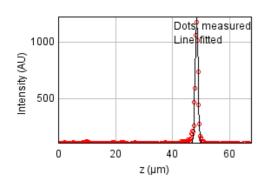
a = 0.604 px

b = -0.018 px

c = 0.737 px

xc = 6.596 pxyc = 6.021 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 69586.5772

Standard deviation: 15.05544

R^2: 0.98609 Parameters:

a = 116.16874

b = 1241.65198

c = 48.51762

## Bead 2171 (Rejected)

Date: Mon Oct 17 13:29:29 PDT 2022

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

Frame size: 10 pixels

Coordinates: 158 um (x), -5.38 um (y), 46.6 um (z)

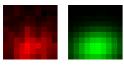
Corresponding bead: Not found

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

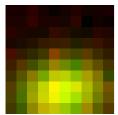
FWHM	Non corrected	Corrected	Theoretical
min	1.11 um	1.15 um	223 nm
max	1.49 um	1.54 um	223 nm
Z	1.44 um	1.44 um	885 nm
Asymmetry	0.747		
Theta	8.7°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.912$$



Parameters:

A = 108.131 (brightness) B = 109.320 (background)

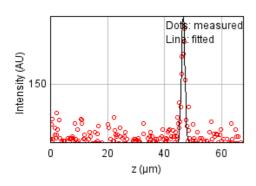
a = 0.062 px

b = 0.007 px

c = 0.108 px

xc = 4.702 pxyc = 7.446 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 15501.6549

Standard deviation: 7.10591

R^2: 0.69127 Parameters: a = 110.61228 b = 196.05425

c = 46.58463d = 0.60957

Date: Mon Oct 17 13:29:29 PDT 2022

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

Frame size: 10 pixels

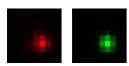
Coordinates: -118 um (x), -12.3 um (y), 47.9 um (z)

Corresponding bead: Not found

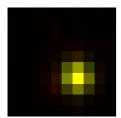
FWHM	Non corrected	Corrected	Theoretical
min	422 nm	436 nm	223 nm
max	458 nm	474 nm	223 nm
Z	1.24 um	1.25 um	885 nm
Asymmetry	0.921		
Theta	-81.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 950.649 (brightness)

B = 121.121 (background)

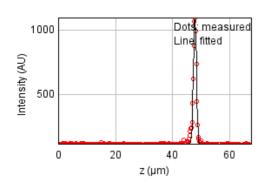
a = 0.751 px

b = -0.017 px

c = 0.642 px

xc = 5.922 pxyc = 5.890 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 55559.9594

Standard deviation: 13.45277

R^2: 0.98644 Parameters: a = 114.07994 b = 1103.66349

c = 47.87926d = 0.52695

Date: Mon Oct 17 13:29:29 PDT 2022

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

Frame size: 10 pixels

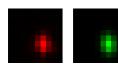
Coordinates: -37.4 um (x), -29.9 um (y), 48.2 um (z)

Corresponding bead: Not found

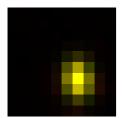
FWHM	Non corrected	Corrected	Theoretical
min	411 nm	425 nm	223 nm
max	577 nm	597 nm	223 nm
Z	1.28 um	1.29 um	885 nm
Asymmetry	0.713		
Theta	-84.5°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.989$$



Parameters:

A = 1665.197 (brightness)

B = 121.418 (background)

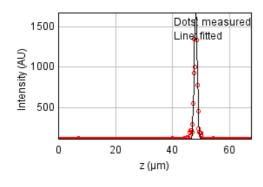
a = 0.790 px

b = -0.038 px

c = 0.407 px

xc = 5.989 pxyc = 6.094 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 470381.349

Standard deviation: 39.14316

R^2: 0.95634 Parameters:

a = 114.88995

b = 1668.62394

c = 48.20625

Date: Mon Oct 17 13:29:29 PDT 2022

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

Frame size: 10 pixels

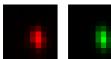
Coordinates: -43.6 um (x), -36.0 um (y), 48.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	372 nm	384 nm	223 nm
max	625 nm	646 nm	223 nm
Z	1.32 um	1.32 um	885 nm
Asymmetry	0.595		
Theta	-81.8°		

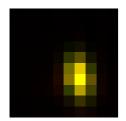
#### XY profile & fitting parameters :

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





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



Parameters:

A = 1799.048 (brightness)

B = 123.672 (background)

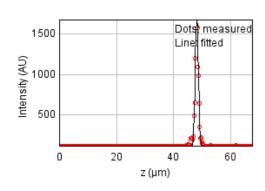
a = 0.959 px

b = -0.088 px

c = 0.356 px

xc = 5.901 pxyc = 5.811 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 486618.981

Standard deviation: 39.81304

R^2: 0.95655 Parameters: a = 114.85147b = 1680.30887

c = 48.22321

Date: Mon Oct 17 13:29:29 PDT 2022

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

Frame size: 10 pixels

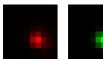
Coordinates: 109 um (x), -45.1 um (y), 48.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	407 nm	421 nm	223 nm
max	468 nm	483 nm	223 nm
Z	1.18 um	1.19 um	885 nm
Asymmetry	0.871		
Theta	-45.7°		

### 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 = 1707.588 (brightness)

B = 126.363 (background)

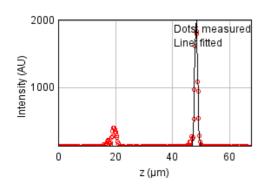
a = 0.714 px

b = -0.097 px

c = 0.709 px

xc = 5.878 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: 740284.510

Standard deviation: 49.10550

R^2: 0.95042 Parameters: a = 124.82421b = 2023.59505c = 48.34164

Date: Mon Oct 17 13:29:30 PDT 2022

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

Frame size: 10 pixels

Coordinates: 158 um (x), -55.5 um (y), 47.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	389 nm	402 nm	223 nm
max	504 nm	521 nm	223 nm
Z	1.23 um	1.24 um	885 nm
Asymmetry	0.771		
Theta	-59.8°		

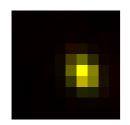
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.988$$



Parameters:

A = 1007.727 (brightness)

B = 117.626 (background)

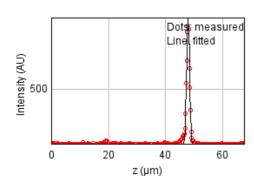
a = 0.797 px

b = -0.157 px

c = 0.619 px

xc = 6.119 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: 44161.3797

Standard deviation: 11.99367

R^2: 0.98651 Parameters: a = 112.55911b = 999.12765

c = 47.94867

Date: Mon Oct 17 13:29:30 PDT 2022

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

Frame size: 10 pixels

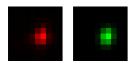
Coordinates: -91.8 um (x), -71.5 um (y), 48.2 um (z)

Corresponding bead: Not found

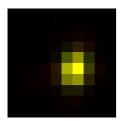
FWHM	Non corrected	Corrected	Theoretical
min	388 nm	402 nm	223 nm
max	504 nm	521 nm	223 nm
Z	1.22 um	1.22 um	885 nm
Asymmetry	0.771		
Theta	75.7°		

#### XY profile & fitting parameters :

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



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



Parameters:

A = 1867.410 (brightness)

B = 130.944 (background)

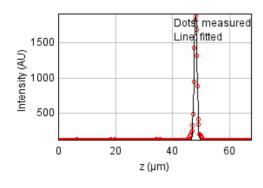
a = 0.868 px

b = 0.086 px

c = 0.551 px

xc = 5.705 pxyc = 5.056 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 75826.2928

Standard deviation: 15.71595

R^2: 0.99426 Parameters: a = 116.25290 b = 1917.57569 c = 48.15386

## Bead 2178 (Rejected)

Date: Mon Oct 17 13:29:30 PDT 2022

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

Frame size: 10 pixels

Coordinates: 145 um (x), -72.2 um (y), 62.2 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	1.5 um	1.51 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

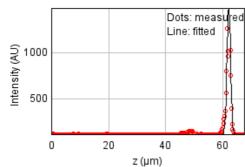
(red: the original data, green: the fit, yellow: the two merged)



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

## Z profile & fitting parameters:





Fitted on  $y = a + (b-a)^* \exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 738085.046

Standard deviation: 49.03250

R^2: 0.92774 Parameters:

a = 115.03680 b = 1497.10047

c = 62.16565

Date: Mon Oct 17 13:29:30 PDT 2022

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

Frame size: 10 pixels

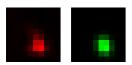
Coordinates: -122 um (x), 90.1 um (y), 48.1 um (z)

Corresponding bead: Not found

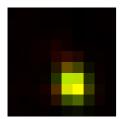
FWHM	Non corrected	Corrected	Theoretical
min	417 nm	431 nm	223 nm
max	512 nm	529 nm	223 nm
Z	1.62 um	1.62 um	885 nm
Asymmetry	0.814		
Theta	-72.8°		

#### XY profile & fitting parameters :

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



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



Parameters:

A = 996.864 (brightness)

B = 127.205 (background)

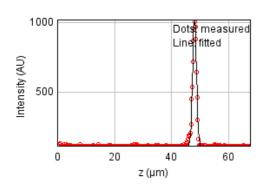
a = 0.749 px

b = -0.074 px

c = 0.535 px

xc = 5.531 pxyc = 6.569 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 41852.2964

Standard deviation: 11.67590

R^2: 0.99059 Parameters: a = 113.39693

b = 1021.63885

c = 48.12428

## Bead 2180 (Rejected)

Date: Mon Oct 17 13:29:30 PDT 2022

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

Frame size: 10 pixels

Coordinates: -14.2 um (x), 85.0 um (y), 62.1 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	67.7 nm	70.0 nm	223 nm
max	174 nm	180 nm	223 nm
Z	1.56 um	1.56 um	885 nm
Asymmetry	0.389		
Theta	0.0°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.001$$



Parameters:

A = -28.092 (brightness)

B = 192.740 (background)

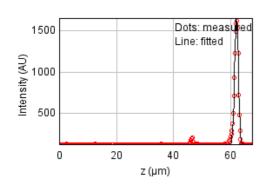
a = 3.449 px

b = 14.268 px

c = 21.389 px

xc = 8.648 pxyc = 15.413 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 138638.813

Standard deviation: 21.25070

R^2: 0.98879 Parameters:

a = 116.20597

b = 1657.70631

c = 62.09288

Date: Mon Oct 17 13:29:31 PDT 2022

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

Frame size: 10 pixels

Coordinates: 71.8 um (x), 63.9 um (y), 48.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	497 nm	514 nm	223 nm
max	573 nm	592 nm	223 nm
Z	1.7 um	1.71 um	885 nm
Asymmetry	0.868		
Theta	82.2°		

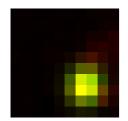
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.924$$



Parameters:

A = 975.557 (brightness)

B = 129.958 (background)

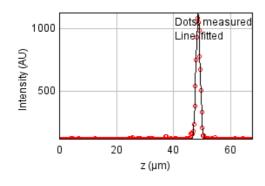
a = 0.541 px

b = 0.018 px

c = 0.412 px

xc = 6.406 pxyc = 6.583 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 37096.5373

Standard deviation: 10.99253

R^2: 0.99361 Parameters: a = 113.46143

b = 1129.19849

c = 48.66606

Date: Mon Oct 17 13:29:31 PDT 2022

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

Frame size: 10 pixels

Coordinates: 120 um (x), 42.7 um (y), 48.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	430 nm	444 nm	223 nm
max	487 nm	504 nm	223 nm
Z	1.22 um	1.22 um	885 nm
Asymmetry	0.882		
Theta	39.9°		

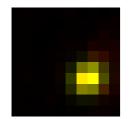
### XY profile & fitting parameters :

(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 = 1215.408 (brightness)

B = 126.488 (background)

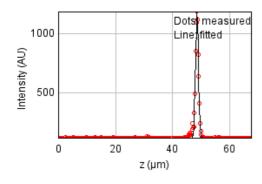
a = 0.632 px

b = 0.079 px

c = 0.660 px

xc = 6.582 pxyc = 5.978 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 54797.7689

Standard deviation: 13.36018

R^2: 0.98837 Parameters: a = 113.64623 b = 1184.45696 c = 48.64573

Date: Mon Oct 17 13:29:31 PDT 2022

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

Frame size: 10 pixels

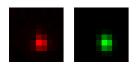
Coordinates: -146 um (x), 34.5 um (y), 48.1 um (z)

Corresponding bead: Not found

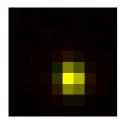
FWHM	Non corrected	Corrected	Theoretical
min	368 nm	380 nm	223 nm
max	444 nm	459 nm	223 nm
Z	1.11 um	1.11 um	885 nm
Asymmetry	0.827		
Theta	-81.8°		

#### XY profile & fitting parameters :

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



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



Parameters:

A = 854.362 (brightness)

B = 117.724 (background)

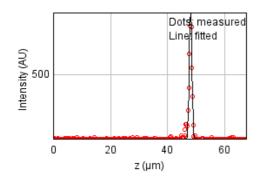
a = 0.987 px

b = -0.044 px

c = 0.686 px

xc = 5.330 pxyc = 6.039 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 40288.0474

Standard deviation: 11.45563

R^2: 0.98172 Parameters: a = 111.39854 b = 875.76945 c = 48.13922

Date: Mon Oct 17 13:29:31 PDT 2022

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

Frame size: 10 pixels

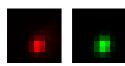
Coordinates: 131 um (x), 23.7 um (y), 48.4 um (z)

Corresponding bead: Not found

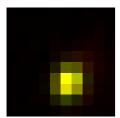
FWHM	Non corrected	Corrected	Theoretical
min	414 nm	428 nm	223 nm
max	500 nm	517 nm	223 nm
Z	1.42 um	1.43 um	885 nm
Asymmetry	0.828		
Theta	68.4°		

## 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 = 1045.274 (brightness)

B = 126.832 (background)

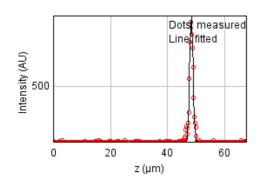
a = 0.751 px

b = 0.085 px

c = 0.571 px

xc = 5.266 pxyc = 6.331 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 66220.4888

Standard deviation: 14.68679

R^2: 0.98239 Parameters: a = 112.03666 b = 998.21923 c = 48.42026

Date: Mon Oct 17 13:29:31 PDT 2022

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

Frame size: 10 pixels

Coordinates: 10.6 um (x), 7.46 um (y), 48.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	429 nm	444 nm	223 nm
max	471 nm	487 nm	223 nm
Z	1.3 um	1.31 um	885 nm
Asymmetry	0.911		
Theta	-86.1°		

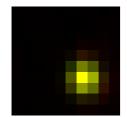
### XY profile & fitting parameters :

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





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



Parameters:

A = 1168.146 (brightness)

B = 122.562 (background)

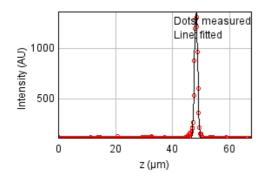
a = 0.727 px

b = -0.008 px

c = 0.605 px

xc = 6.239 pxyc = 6.080 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 49762.1180

Standard deviation: 12.73152

R^2: 0.99275 Parameters: a = 114.68173

b = 1370.03061

c = 48.31519

Date: Mon Oct 17 13:29:31 PDT 2022

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

Frame size: 10 pixels

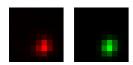
Coordinates: -133 um (x), -605 nm (y), 48.4 um (z)

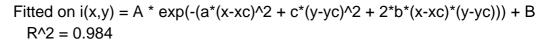
Corresponding bead: Not found

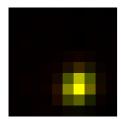
FWHM	Non corrected	Corrected	Theoretical
min	404 nm	418 nm	223 nm
max	471 nm	486 nm	223 nm
Z	1.15 um	1.16 um	885 nm
Asymmetry	0.859		
Theta	62.4°		

### XY profile & fitting parameters :

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







A = 1067.627 (brightness)

B = 119.178 (background)

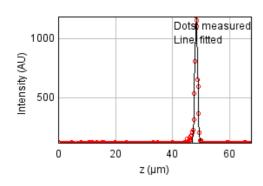
a = 0.776 px

b = 0.089 px

c = 0.652 px

xc = 5.931 pxyc = 6.748 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 85235.7769

Standard deviation: 16.66256

R^2: 0.98120 Parameters: a = 113.27949 b = 1188.50234 c = 48.37925

## Bead 2187 (Rejected)

Date: Mon Oct 17 13:29:32 PDT 2022

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

Frame size: 10 pixels

Coordinates: 158 um (x), -5.83 um (y), 46.6 um (z)

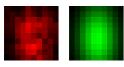
Corresponding bead: Not found

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

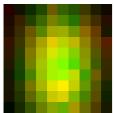
FWHM	Non corrected	Corrected	Theoretical
min	1.26 um	1.3 um	223 nm
max	2.13 um	2.2 um	223 nm
Z	1.44 um	1.44 um	885 nm
Asymmetry	0.59		
Theta	-89.3°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.770$$



Parameters:

A = 107.002 (brightness)

B = 113.581 (background)

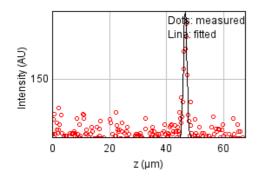
a = 0.085 px

b = -0.001 px

c = 0.030 px

xc = 4.736 pxyc = 5.478 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15501.6549

Standard deviation: 7.10591

R^2: 0.69127 Parameters:

a = 110.61228

b = 196.05425

c = 46.58463

Date: Mon Oct 17 13:29:32 PDT 2022

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

Frame size: 10 pixels

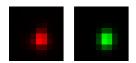
Coordinates: -44.1 um (x), -16.0 um (y), 48.4 um (z)

Corresponding bead: Not found

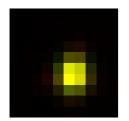
FWHM	Non corrected	Corrected	Theoretical
min	424 nm	439 nm	223 nm
max	508 nm	525 nm	223 nm
Z	1.21 um	1.22 um	885 nm
Asymmetry	0.835		
Theta	85.4°		

#### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$  $R^2 = 0.988$ 



Parameters:

A = 1832.393 (brightness)

B = 127.290 (background)

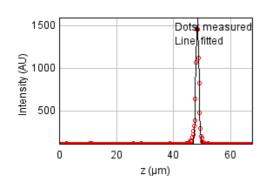
a = 0.744 px

b = 0.018 px

c = 0.522 px

xc = 5.399 pxyc = 5.572 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 81031.2254

Standard deviation: 16.24640

R^2: 0.99093 Parameters: a = 115.33481b = 1595.43381

c = 48.42628

Date: Mon Oct 17 13:29:32 PDT 2022

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

Frame size: 10 pixels

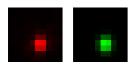
Coordinates: -145 um (x), -21.0 um (y), 48.1 um (z)

Corresponding bead: Not found

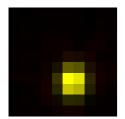
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	409 nm	223 nm
max	458 nm	473 nm	223 nm
Z	1.36 um	1.37 um	885 nm
Asymmetry	0.864		
Theta	89.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.988$ 



Parameters:

A = 961.064 (brightness)

B = 119.938 (background)

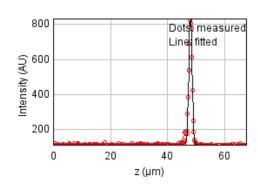
a = 0.858 px

b = 0.004 px

c = 0.640 px

xc = 5.440 pxyc = 6.287 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 32872.1286

Standard deviation: 10.34772

R^2: 0.98645 Parameters: a = 111.37825 b = 838.33978 c = 48.09678

Date: Mon Oct 17 13:29:32 PDT 2022

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

Frame size: 10 pixels

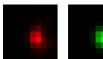
Coordinates: 17.1 um (x), -39.5 um (y), 48.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	421 nm	435 nm	223 nm
max	552 nm	571 nm	223 nm
Z	1.12 um	1.13 um	885 nm
Asymmetry	0.762		
Theta	-80.7°		

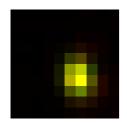
### XY profile & fitting parameters :

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





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



Parameters:

A = 1736.289 (brightness)

B = 131.328 (background)

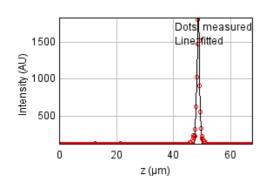
a = 0.751 px

b = -0.051 px

c = 0.448 px

xc = 5.748 pxyc = 5.722 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 77611.4648

Standard deviation: 15.89988

R^2: 0.99335 Parameters: a = 115.95166b = 1876.33837c = 48.72184

Date: Mon Oct 17 13:29:32 PDT 2022

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

Frame size: 10 pixels

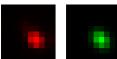
Coordinates: 163 um (x), -45.1 um (y), 48.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	438 nm	453 nm	223 nm
max	561 nm	579 nm	223 nm
Z	1.48 um	1.48 um	885 nm
Asymmetry	0.782		
Theta	-48.5°		

### 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 = 1191.888 (brightness)

B = 119.735 (background)

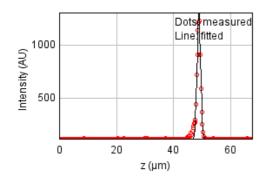
a = 0.579 px

b = -0.135 px

c = 0.546 px

xc = 5.841 pxyc = 5.950 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 217067.131

Standard deviation: 26.59058

R^2: 0.97013 Parameters: a = 111.55755b = 1312.20285c = 48.92667

Date: Mon Oct 17 13:29:32 PDT 2022

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

Frame size: 10 pixels

Coordinates: 31.1 um (x), -51.7 um (y), 48.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	492 nm	508 nm	223 nm
max	594 nm	614 nm	223 nm
Z	1.57 um	1.57 um	885 nm
Asymmetry	0.828		
Theta	-65.8°		

### 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 = 1162.889 (brightness)

B = 118.380 (background)

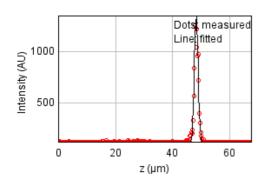
a = 0.526 px

b = -0.065 px

c = 0.410 px

xc = 6.301 pxyc = 5.851 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 286929.632

Standard deviation: 30.57162

R^2: 0.96517 Parameters: a = 114.33131 b = 1354.43484 c = 48.37607

Date: Mon Oct 17 13:29:32 PDT 2022

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

Frame size: 10 pixels

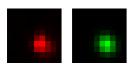
Coordinates: 71.9 um (x), -59.9 um (y), 48.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	506 nm	523 nm	223 nm
max	564 nm	583 nm	223 nm
Z	1.41 um	1.42 um	885 nm
Asymmetry	0.897		
Theta	-53.1°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.964$$



Parameters:

A = 1306.220 (brightness)

B = 122.629 (background)

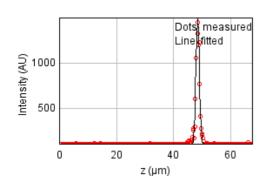
a = 0.487 px

b = -0.049 px

c = 0.458 px

xc = 5.808 pxyc = 6.145 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 265994.938

Standard deviation: 29.43523

R^2: 0.97166 Parameters: a = 113.84197 b = 1510.55364 c = 48.52164

Date: Mon Oct 17 13:29:32 PDT 2022

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

Frame size: 10 pixels

Coordinates: -55.2 um (x), -92.3 um (y), 48.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	357 nm	369 nm	223 nm
max	607 nm	628 nm	223 nm
Z	1.08 um	1.08 um	885 nm
Asymmetry	0.587		
Theta	85.8°		

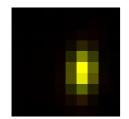
#### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.992$$



Parameters:

A = 1729.271 (brightness)

B = 127.742 (background)

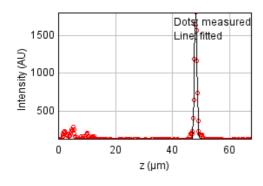
a = 1.050 px

b = 0.051 px

c = 0.367 px

xc = 6.043 pxyc = 5.360 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 304474.753

Standard deviation: 31.49245

R^2: 0.97056 Parameters:

a = 127.40696

b = 1797.27145

c = 48.17877

Date: Mon Oct 17 13:29:33 PDT 2022

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

Frame size: 10 pixels

Coordinates: 121 um (x), 95.8 um (y), 48.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	413 nm	427 nm	223 nm
max	641 nm	662 nm	223 nm
Z	1.52 um	1.52 um	885 nm
Asymmetry	0.645		
Theta	60.5°		

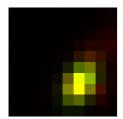
#### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.925$$



Parameters:

 $A = 1216.879 \quad (brightness)$ 

B = 134.005 (background)

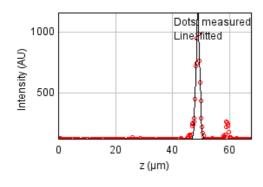
a = 0.675 px

b = 0.197 px

c = 0.438 px

xc = 6.139 pxyc = 6.406 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 208031.999

Standard deviation: 26.03130

R^2: 0.96376 Parameters: a = 116.35964 b = 1166.77801

c = 48.92622d = 0.64414

Date: Mon Oct 17 13:29:33 PDT 2022

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

Frame size: 10 pixels

Coordinates: 97.1 um (x), 94.3 um (y), 48.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	469 nm	485 nm	223 nm
max	686 nm	709 nm	223 nm
Z	1.63 um	1.64 um	885 nm
Asymmetry	0.684		
Theta	62.8°		

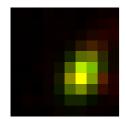
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.906$$



Parameters:

A = 588.903 (brightness)

B = 125.211 (background)

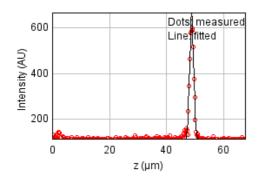
a = 0.542 px

b = 0.132 px

c = 0.353 px

xc = 6.158 pxyc = 5.579 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 42102.5147

Standard deviation: 11.71075

R^2: 0.97485 Parameters: a = 113.94540 b = 664.40534

c = 48.87075

Date: Mon Oct 17 13:29:33 PDT 2022

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

Frame size: 10 pixels

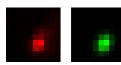
Coordinates: 133 um (x), 66.4 um (y), 48.5 um (z)

Corresponding bead: Not found

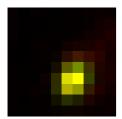
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	531 nm	549 nm	223 nm
Z	1.97 um	1.98 um	885 nm
Asymmetry	0.757		
Theta	61.5°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.937$$



Parameters:

A = 752.255 (brightness)

B = 124.178 (background)

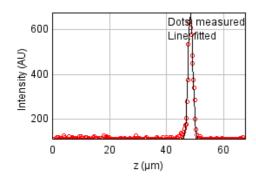
a = 0.749 px

b = 0.148 px

c = 0.556 px

xc = 5.570 pxyc = 6.139 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 44938.4314

Standard deviation: 12.09873

R^2: 0.97855 Parameters: a = 111.64783 b = 675.69378

c = 48.45243

Date: Mon Oct 17 13:29:33 PDT 2022

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

Frame size: 10 pixels

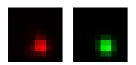
Coordinates: -119 um (x), 46.7 um (y), 48.6 um (z)

Corresponding bead: Not found

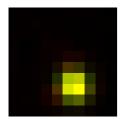
FWHM	Non corrected	Corrected	Theoretical
min	431 nm	446 nm	223 nm
max	474 nm	490 nm	223 nm
Z	1.43 um	1.44 um	885 nm
Asymmetry	0.909		
Theta	-75.6°		

#### 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 = 1231.620 (brightness)

B = 122.287 (background)

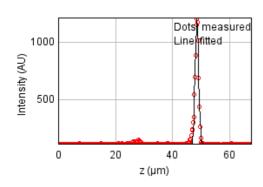
a = 0.715 px

b = -0.030 px

c = 0.604 px

xc = 5.557 pxyc = 6.676 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 79433.9998

Standard deviation: 16.08548

R^2: 0.98620 Parameters: a = 116.00428 b = 1209.11292 c = 48.60769

Date: Mon Oct 17 13:29:34 PDT 2022

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

Frame size: 10 pixels

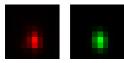
Coordinates: -80.8 um (x), 45.3 um (y), 48.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	369 nm	382 nm	223 nm
max	524 nm	542 nm	223 nm
Z	1.14 um	1.15 um	885 nm
Asymmetry	0.705		
Theta	-85.2°		

#### XY profile & fitting parameters :

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



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



A = 1622.776 (brightness)

B = 130.421 (background)

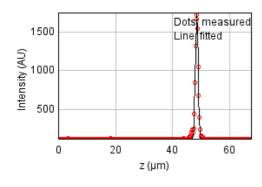
a = 0.980 px

b = -0.042 px

c = 0.492 px

xc = 4.925 pxyc = 6.227 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 63018.4848

Standard deviation: 14.32731

R^2: 0.99386 Parameters: a = 114.95136 b = 1751.37570

c = 48.56978

Date: Mon Oct 17 13:29:34 PDT 2022

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

Frame size: 10 pixels

Coordinates: 102 um (x), 45.2 um (y), 48.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	434 nm	449 nm	223 nm
max	651 nm	673 nm	223 nm
Z	1.64 um	1.65 um	885 nm
Asymmetry	0.667		
Theta	77.0°		

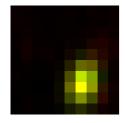
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.962$$



xc = 6.179 pxyc = 6.623 px

#### Parameters:

A = 641.895(brightness)

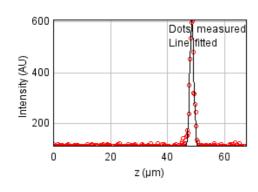
B = 124.329(background)

a = 0.693 px

b = 0.087 px

c = 0.337 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 32084.3117

Standard deviation: 10.22297

R^2: 0.97625 Parameters: a = 112.83129

b = 606.93886

c = 48.57854