Date: Mon Oct 17 13:29:02 PDT 2022

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

Frame size: 10 pixels

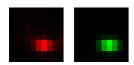
Coordinates: 145 um (x), 33.1 um (y), 30.9 um (z)

Corresponding bead: Not found

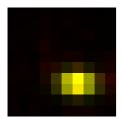
FWHM	Non corrected	Corrected	Theoretical
min	366 nm	379 nm	223 nm
max	564 nm	583 nm	223 nm
Z	1.85 um	1.86 um	885 nm
Asymmetry	0.65		
Theta	-2.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 611.979 (brightness)

B = 117.439 (background)

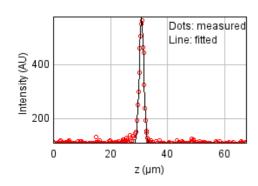
a = 0.423 px

b = -0.022 px

c = 0.999 px

xc = 5.940 pxyc = 6.440 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23668.3950

Standard deviation: 8.78042

R^2: 0.98254 Parameters: a = 111.33904 b = 579.39922 c = 30.94974

Date: Mon Oct 17 13:29:02 PDT 2022

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

Frame size: 10 pixels

Coordinates: -42.4 um (x), 22.3 um (y), 31.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	399 nm	412 nm	223 nm
max	469 nm	485 nm	223 nm
Z	1.12 um	1.13 um	885 nm
Asymmetry	0.851		
Theta	73.6°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 1896.687 (brightness)

B = 134.807 (background)

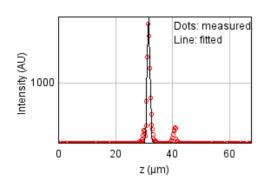
a = 0.824 px

b = 0.063 px

c = 0.629 px

xc = 5.200 pxyc = 6.808 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 489203.163

Standard deviation: 39.91861

R^2: 0.96331 Parameters: a = 123.29573 b = 1975.19176

c = 31.67215

# Bead 1403 (Rejected)

Date: Mon Oct 17 13:29:02 PDT 2022

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

Frame size: 10 pixels

Coordinates: 163 um (x), -8.04 um (y), 29.8 um (z)

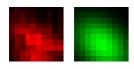
Corresponding bead: Not found

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

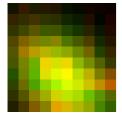
FWHM	Non corrected	Corrected	Theoretical
min	1.32 um	1.36 um	223 nm
max	1.92 um	1.99 um	223 nm
Z	1.59 um	1.6 um	885 nm
Asymmetry	0.687		
Theta	-43.1°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.822$$



Parameters:

A = 104.203 (brightness)

B = 103.667 (background)

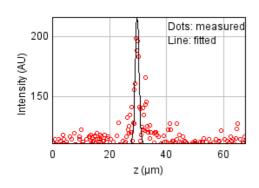
a = 0.055 px

b = -0.020 px

c = 0.058 px

xc = 4.658 pxyc = 6.530 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24373.1695

Standard deviation: 8.91019

R^2: 0.70408 Parameters:

a = 111.11153

b = 216.12051

c = 29.75025

Date: Mon Oct 17 13:29:02 PDT 2022

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

Frame size: 10 pixels

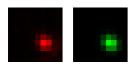
Coordinates: 55.3 um (x), -16.3 um (y), 31.6 um (z)

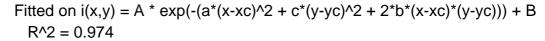
Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	400 nm	413 nm	223 nm
max	476 nm	492 nm	223 nm
Z	1.59 um	1.6 um	885 nm
Asymmetry	0.841		
Theta	-38.0°		

### XY profile & fitting parameters :

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







Parameters:

A = 1134.335 (brightness)

B = 124.626 (background)

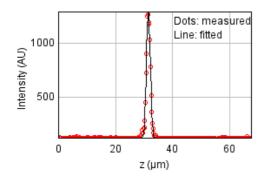
a = 0.687 px

b = -0.120 px

c = 0.746 px

xc = 6.346 pxyc = 6.065 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 52272.7228

Standard deviation: 13.04873

R^2: 0.99301 Parameters:

a = 114.23190

b = 1304.37792

c = 31.59767

Date: Mon Oct 17 13:29:02 PDT 2022

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

Frame size: 10 pixels

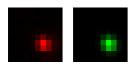
Coordinates: 88.0 um (x), -19.6 um (y), 31.4 um (z)

Corresponding bead: Not found

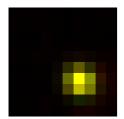
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	437 nm	223 nm
max	458 nm	474 nm	223 nm
Z	1.25 um	1.25 um	885 nm
Asymmetry	0.922		
Theta	-48.7°		

### 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 = 1485.236 (brightness)

B = 126.725 (background)

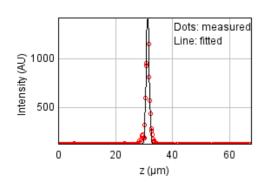
a = 0.703 px

b = -0.056 px

c = 0.688 px

xc = 6.131 pxyc = 6.273 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 186730.543

Standard deviation: 24.66258

R^2: 0.97539 Parameters:

a = 115.21151

b = 1451.51089

c = 31.36362

Date: Mon Oct 17 13:29:02 PDT 2022

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

Frame size: 10 pixels

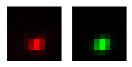
Coordinates: -134 um (x), -33.8 um (y), 30.5 um (z)

Corresponding bead: Not found

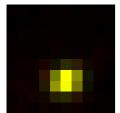
FWHM	Non corrected	Corrected	Theoretical
min	379 nm	392 nm	223 nm
max	465 nm	480 nm	223 nm
Z	1.29 um	1.29 um	885 nm
Asymmetry	0.817		
Theta	19.7°		

### XY profile & fitting parameters :

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



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



A = 617.248 (brightness)

B = 116.321 (background)

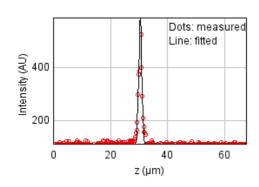
a = 0.657 px

b = 0.098 px

c = 0.897 px

xc = 4.971 pxyc = 6.500 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 35477.6673

Standard deviation: 10.75000

R^2: 0.96442 Parameters:

a = 112.84180

b = 586.91852

c = 30.51704

Date: Mon Oct 17 13:29:02 PDT 2022

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

Frame size: 10 pixels

Coordinates: 155 um (x), -59.7 um (y), 30.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	373 nm	385 nm	223 nm
max	818 nm	846 nm	223 nm
Z	1.76 um	1.77 um	885 nm
Asymmetry	0.456		
Theta	-34.8°		

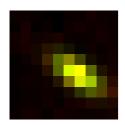
## XY profile & fitting parameters :

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





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



Parameters:

A = 289.579 (brightness)

B = 114.380 (background)

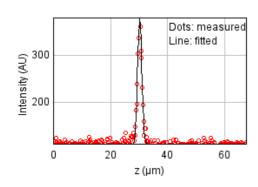
a = 0.450 px

b = -0.358 px

c = 0.716 px

xc = 5.786 pxyc = 5.327 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 14619.2487

Standard deviation: 6.90070

R^2: 0.96659 Parameters:

a = 109.92839

b = 380.43672

c = 30.32185

# Bead 1408 (Rejected)

Date: Mon Oct 17 13:29:02 PDT 2022

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

Frame size: 10 pixels

Coordinates: -132 um (x), -85.3 um (y), 10.4 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	800 nm	827 nm	223 nm
max	1.36 um	1.41 um	223 nm
Z	3.55 um	3.57 um	885 nm
Asymmetry	0.588		
Theta	-37.5°		

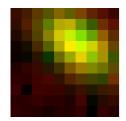
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.813$$



Parameters:

A = 90.018 (brightness)

B = 119.953 (background)

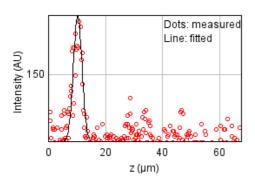
a = 0.123 px

b = -0.066 px

c = 0.159 px

xc = 5.628 pxyc = 2.724 px

### **Z profile & fitting parameters:**



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

Sum of residuals squared: 22725.7611

Standard deviation: 8.60379

R^2: 0.72364 Parameters:

a = 111.52526

b = 184.43052

c = 10.35976

d = 1.50869

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

Coordinates: -68.9 um (x), 63.2 um (y), 32.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	449 nm	464 nm	223 nm
max	488 nm	504 nm	223 nm
Z	1.51 um	1.51 um	885 nm
Asymmetry	0.92		
Theta	5.9°		

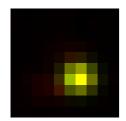
### XY profile & fitting parameters :

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





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



Parameters:

 $A = 1279.228 \quad (brightness)$ 

B = 133.732 (background)

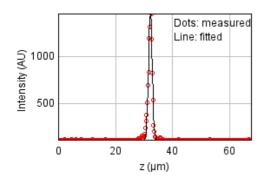
a = 0.565 px

b = 0.010 px

c = 0.666 px

xc = 5.775 pxyc = 5.868 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 116831.369

Standard deviation: 19.50790

R^2: 0.98699 Parameters: a = 115.53178 b = 1450.03057 c = 32.30160

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

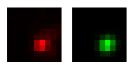
Coordinates: 91.7 um (x), 44.8 um (y), 31.6 um (z)

Corresponding bead: Not found

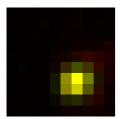
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	437 nm	223 nm
max	484 nm	501 nm	223 nm
Z	1.4 um	1.41 um	885 nm
Asymmetry	0.874		
Theta	36.3°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.944$$



Parameters:

A = 790.350 (brightness)

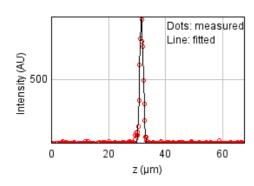
B = 124.187 (background) a = 0.634 px

b = 0.085 px

c = 0.687 px

xc = 5.920 pxyc = 6.340 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36908.9885

Standard deviation: 10.96470

R^2: 0.98698 Parameters: a = 112.93177 b = 888.35094 c = 31.63405

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

Coordinates: -24.2 um (x), 41.6 um (y), 31.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	459 nm	474 nm	223 nm
max	597 nm	617 nm	223 nm
Z	1.35 um	1.36 um	885 nm
Asymmetry	0.768		
Theta	82.8°		

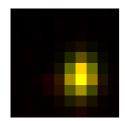
### XY profile & fitting parameters :

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





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



Parameters:

A = 1434.154 (brightness)

B = 125.305 (background)

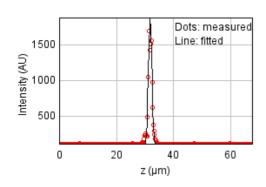
a = 0.633 px

b = 0.033 px

c = 0.380 px

xc = 5.970 pxyc = 5.760 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 698070.725

Standard deviation: 47.68486

R^2: 0.95251 Parameters:

a = 116.97998

b = 1882.86450

c = 31.86388

## Bead 1412 (Rejected)

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

Coordinates: -154 um (x), 17.7 um (y), 5.41 um (z)

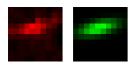
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

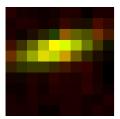
FWHM	Non corrected	Corrected	Theoretical
min	413 nm	427 nm	223 nm
max	1.18 um	1.22 um	223 nm
Z	2.08 um	2.09 um	885 nm
Asymmetry	0.349		
Theta	13.4°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.909$$



A = 168.988 (brightness)

B = 112.542 (background)

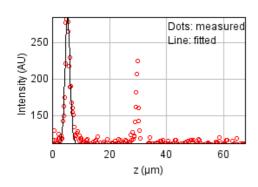
a = 0.133 px

b = 0.156 px

c = 0.749 px

xc = 4.170 pxyc = 3.365 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 51865.0400

Standard deviation: 12.99775

R^2: 0.79620 Parameters:

a = 112.18393

b = 284.82741

c = 5.40968

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

Coordinates: 65.2 um (x), -1.52 um (y), 32.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	457 nm	472 nm	223 nm
max	497 nm	513 nm	223 nm
Z	1.82 um	1.83 um	885 nm
Asymmetry	0.92		
Theta	-53.7°		

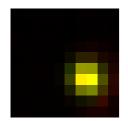
### XY profile & fitting parameters :

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





Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.963$ 



Parameters:

A = 1179.465 (brightness)

B = 125.418 (background)

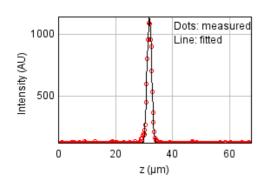
a = 0.608 px

b = -0.047 px

c = 0.579 px

xc = 6.561 pxyc = 5.912 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 32214.8696

Standard deviation: 10.24375

R^2: 0.99498 Parameters: a = 112.73654 b = 1145.94146

c = 31.95237d = 0.77311

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

Coordinates: 79.9 um (x), -20.7 um (y), 31.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	522 nm	539 nm	223 nm
max	554 nm	572 nm	223 nm
Z	1.58 um	1.59 um	885 nm
Asymmetry	0.943		
Theta	-38.1°		

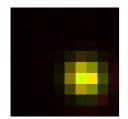
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.961$$



Parameters:

A = 952.059 (brightness)

B = 116.470 (background)

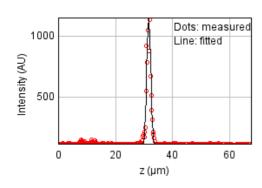
a = 0.459 px

b = -0.027 px

c = 0.472 px

xc = 6.352 pxyc = 5.967 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 302052.258

Standard deviation: 31.36692

R^2: 0.94899 Parameters: a = 115.78213 b = 1152.55154

c = 31.73191

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

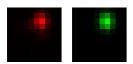
Coordinates: -61.2 um (x), -43.6 um (y), 38.9 um (z)

Corresponding bead: Not found

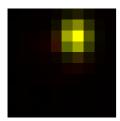
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	437 nm	223 nm
max	507 nm	524 nm	223 nm
Z	1.33 um	1.33 um	885 nm
Asymmetry	0.834		
Theta	-88.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1631.531 (brightness)

B = 131.336 (background)

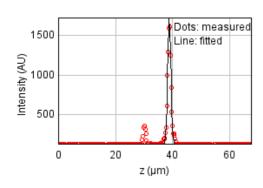
a = 0.750 px

b = -0.007 px

c = 0.522 px

xc = 5.783 pxyc = 2.086 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 310133.879

Standard deviation: 31.78377

R^2: 0.97348 Parameters: a = 120.23573 b = 1727.88379

c = 38.91948d = 0.56332

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

Coordinates: 66.2 um (x), -94.1 um (y), 31.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	531 nm	548 nm	223 nm
max	573 nm	593 nm	223 nm
Z	1.6 um	1.61 um	885 nm
Asymmetry	0.925		
Theta	26.4°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 1000.245 (brightness)

B = 123.857 (background)

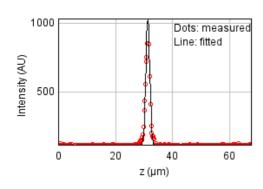
a = 0.422 px

b = 0.027 px

c = 0.463 px

xc = 5.919 pxyc = 5.794 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 128991.053

Standard deviation: 20.49796

R^2: 0.97183 Parameters: a = 113.76828 b = 1030.51887 c = 31.41654

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

Frame size: 10 pixels

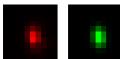
Coordinates: 11.9 um (x), 12.0 um (y), 31.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	371 nm	384 nm	223 nm
max	562 nm	581 nm	223 nm
Z	1.25 um	1.26 um	885 nm
Asymmetry	0.661		
Theta	-83.0°		

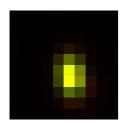
### XY profile & fitting parameters :

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





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



Parameters:

A = 1667.910 (brightness)

B = 131.154 (background)

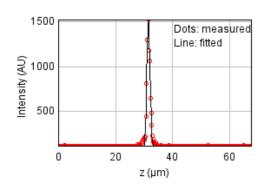
a = 0.965 px

b = -0.067 px

c = 0.433 px

xc = 5.178 pxyc = 5.526 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 130191.230

Standard deviation: 20.59310

R^2: 0.98465 Parameters: a = 115.07973b = 1530.54268

c = 31.62426

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

Frame size: 10 pixels

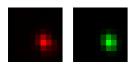
Coordinates: 13.9 um (x), -634 nm (y), 31.9 um (z)

Corresponding bead: Not found

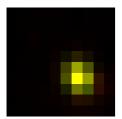
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	408 nm	223 nm
max	480 nm	496 nm	223 nm
Z	1.4 um	1.41 um	885 nm
Asymmetry	0.822		
Theta	-68.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1388.456 (brightness)

B = 128.131 (background)

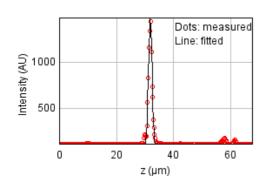
a = 0.824 px

b = -0.095 px

c = 0.619 px

xc = 6.185 pxyc = 5.883 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 112193.164

Standard deviation: 19.11675

R^2: 0.98699 Parameters: a = 118.32116 b = 1472.90061 c = 31.90352

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

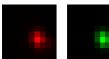
Coordinates: 13.9 um (x), -634 nm (y), 31.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	395 nm	408 nm	223 nm
max	480 nm	496 nm	223 nm
Z	1.4 um	1.41 um	885 nm
Asymmetry	0.822		
Theta	-68.6°		

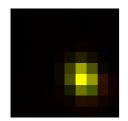
### XY profile & fitting parameters :

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





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



Parameters:

A = 1388.456 (brightness)

B = 128.131 (background)

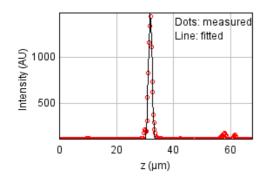
a = 0.824 px

b = -0.095 px

c = 0.619 px

xc = 6.185 pxyc = 5.883 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 112193.164

Standard deviation: 19.11675

R^2: 0.98699 Parameters: a = 118.32116b = 1472.90061c = 31.90352

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

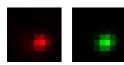
Coordinates: -104 um (x), -4.62 um (y), 32.1 um (z)

Corresponding bead: Not found

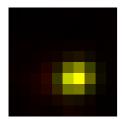
FWHM	Non corrected	Corrected	Theoretical
min	433 nm	448 nm	223 nm
max	504 nm	521 nm	223 nm
Z	1.62 um	1.63 um	885 nm
Asymmetry	0.859		
Theta	24.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1039.891 (brightness)

B = 133.211 (background)

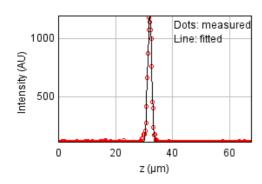
a = 0.561 px

b = 0.071 px

c = 0.684 px

xc = 5.677 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: 40883.8222

Standard deviation: 11.54002

R^2: 0.99358 Parameters: a = 113.63394 b = 1200.86247 c = 32.05442

# Bead 1421 (Rejected)

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

Coordinates: 162 um (x), -8.02 um (y), 29.8 um (z)

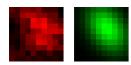
Corresponding bead: Not found

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

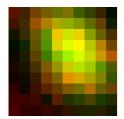
FWHM	Non corrected	Corrected	Theoretical
min	1.06 um	1.1 um	223 nm
max	1.57 um	1.62 um	223 nm
Z	1.59 um	1.6 um	885 nm
Asymmetry	0.679		
Theta	-55.7°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.761$$



Parameters:

A = 88.521 (brightness)

B = 123.888 (background)

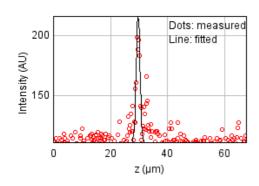
a = 0.098 px

b = -0.030 px

c = 0.075 px

xc = 5.537 pxyc = 3.457 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 24373.1695

Standard deviation: 8.91019

R^2: 0.70408 Parameters:

a = 111.11153

b = 216.12051

c = 29.75025

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

Coordinates: 162 um (x), -10.7 um (y), 31.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	361 nm	374 nm	223 nm
max	871 nm	901 nm	223 nm
Z	1.68 um	1.69 um	885 nm
Asymmetry	0.415		
Theta	-26.1°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 400.245 (brightness)

B = 119.232 (background)

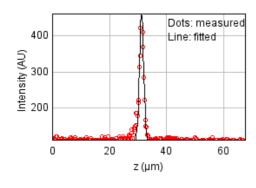
a = 0.342 px

b = -0.336 px

c = 0.863 px

xc = 5.826 pxyc = 6.533 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 27892.7619

Standard deviation: 9.53184

R^2: 0.96079 Parameters:

a = 111.23041

b = 462.32989

c = 31.31532

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

Coordinates: 147 um (x), -28.4 um (y), 31.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	384 nm	397 nm	223 nm
max	970 nm	1.0 um	223 nm
Z	1.52 um	1.53 um	885 nm
Asymmetry	0.395		
Theta	-29.4°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 518.889 (brightness)

B = 117.411 (background)

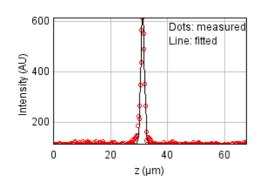
a = 0.328 px

b = -0.329 px

c = 0.727 px

xc = 6.279 pxyc = 6.142 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 29315.9397

Standard deviation: 9.77198

R^2: 0.97814 Parameters:

a = 111.77555

b = 621.92716

c = 31.34202

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

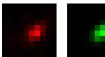
Coordinates: -146 um (x), -35.6 um (y), 31.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	366 nm	378 nm	223 nm
max	580 nm	600 nm	223 nm
Z	1.17 um	1.18 um	885 nm
Asymmetry	0.631		
Theta	45.3°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 769.679 (brightness)

B = 122.750 (background)

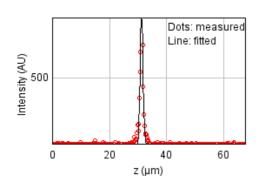
a = 0.703 px

b = 0.302 px

c = 0.698 px

xc = 5.769 pxyc = 4.858 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 55726.6478

Standard deviation: 13.47294

R^2: 0.97549 Parameters:

a = 112.28376

b = 865.95652

c = 31.32480

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

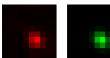
Coordinates: 105 um (x), -46.7 um (y), 31.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	403 nm	417 nm	223 nm
max	477 nm	493 nm	223 nm
Z	1.26 um	1.26 um	885 nm
Asymmetry	0.846		
Theta	-47.0°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 1023.808 (brightness)

B = 119.541 (background)

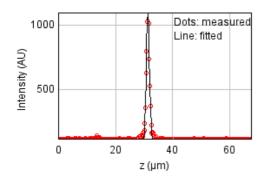
a = 0.716 px

b = -0.117 px

c = 0.699 px

xc = 5.745 pxyc = 6.057 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 32713.0392

Standard deviation: 10.32265

R^2: 0.99189 Parameters: a = 113.72539

b = 1092.30033

c = 31.43475

Date: Mon Oct 17 13:29:03 PDT 2022

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

Frame size: 10 pixels

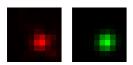
Coordinates: 98.3 um (x), -83.6 um (y), 31.6 um (z)

Corresponding bead: Not found

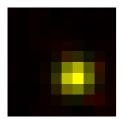
FWHM	Non corrected	Corrected	Theoretical
min	488 nm	504 nm	223 nm
max	515 nm	533 nm	223 nm
Z	1.6 um	1.61 um	885 nm
Asymmetry	0.946		
Theta	31.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 801.112 (brightness)

B = 124.514 (background)

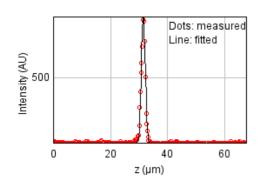
a = 0.521 px

b = 0.026 px

c = 0.549 px

xc = 5.765 pxyc = 5.856 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 53022.1465

Standard deviation: 13.14194

R^2: 0.98302 Parameters: a = 111.81547 b = 874.13454

c = 31.57832

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: -147 um (x), -87.9 um (y), 31.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	410 nm	424 nm	223 nm
max	677 nm	699 nm	223 nm
Z	1.75 um	1.76 um	885 nm
Asymmetry	0.606		
Theta	57.4°		

### 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 = 675.321 (brightness)

B = 123.819 (background)

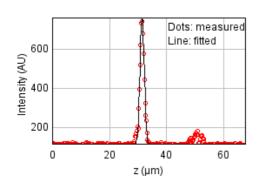
a = 0.651 px

b = 0.229 px

c = 0.439 px

xc = 5.364 pxyc = 5.531 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 58033.8012

Standard deviation: 13.74901

R^2: 0.97664 Parameters: a = 114.49702

b = 764.15297

c = 31.51453

## Bead 1428 (Rejected)

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: 90.4 um (x), 72.1 um (y), 32.3 um (z)

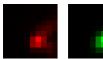
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	446 nm	461 nm	223 nm
max	573 nm	592 nm	223 nm
Z	1.67 um	1.67 um	885 nm
Asymmetry	0.778		
Theta	43.9°		

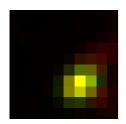
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.881$$



Parameters:

A = 732.239 (brightness) B = 130.288 (background)

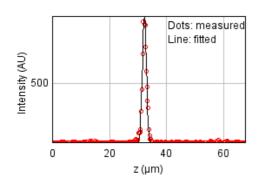
a = 0.537 px

b = 0.133 px

c = 0.548 px

xc = 6.090 pxyc = 6.259 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57274.0023

Standard deviation: 13.65871

R^2: 0.98488 Parameters: a = 113.32176

b = 937.22232

c = 32.31311

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

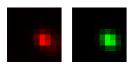
Coordinates: 45.2 um (x), -11.6 um (y), 32.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	420 nm	434 nm	223 nm
max	506 nm	523 nm	223 nm
Z	1.76 um	1.76 um	885 nm
Asymmetry	0.83		
Theta	-38.5°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.961$$



Parameters:

A = 1229.710 (brightness)

B = 126.051 (background)

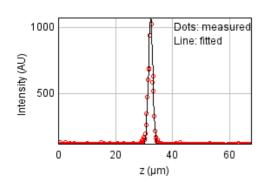
a = 0.616 px

b = -0.115 px

c = 0.669 px

xc = 6.311 pxyc = 5.540 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 167601.034

Standard deviation: 23.36518

R^2: 0.96948 Parameters: a = 114.52628 b = 1074.51697 c = 32.38880

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

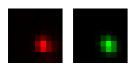
Coordinates: 72.8 um (x), -37.0 um (y), 31.8 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	413 nm	427 nm	223 nm
max	482 nm	498 nm	223 nm
Z	1.24 um	1.24 um	885 nm
Asymmetry	0.857		
Theta	-55.6°		

### XY profile & fitting parameters :

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



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



A = 1215.410 (brightness)

B = 123.688 (background)

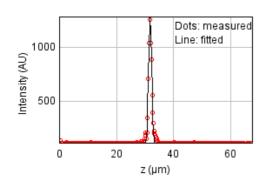
a = 0.720 px

b = -0.098 px

c = 0.644 px

xc = 6.041 pxyc = 6.310 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 93846.0130

Standard deviation: 17.48392

R^2: 0.98379 Parameters: a = 114.28261 b = 1291.05977 c = 31.84970

# Bead 1431 (Rejected)

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: -67.3 um (x), -67.8 um (y), 20.0 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	1.9 um	1.9 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

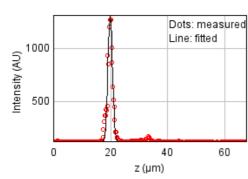
(red: the original data, green: the fit, yellow: the two merged)



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: 290687.682

Standard deviation: 30.77118

R^2: 0.96876 Parameters: a = 117.13832 b = 1321.73330

c = 19.95759

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

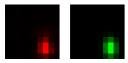
Coordinates: -42.5 um (x), -87.9 um (y), 64.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	367 nm	380 nm	223 nm
max	548 nm	566 nm	223 nm
Z	1.23 um	1.24 um	885 nm
Asymmetry	0.671		
Theta	-85.9°		

### 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 = 1452.416 (brightness)

B = 125.284 (background)

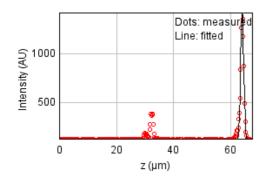
a = 0.992 px

b = -0.039 px

c = 0.450 px

xc = 6.901 pxyc = 7.482 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 441407.815

Standard deviation: 37.91847

R^2: 0.94147 Parameters:

a = 123.80043

b = 1439.43786

c = 64.10520

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

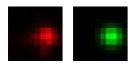
Coordinates: -46.5 um (x), -93.7 um (y), 31.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	577 nm	597 nm	223 nm
max	636 nm	657 nm	223 nm
Z	1.57 um	1.57 um	885 nm
Asymmetry	0.908		
Theta	-5.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 900.918 (brightness)

B = 128.573 (background)

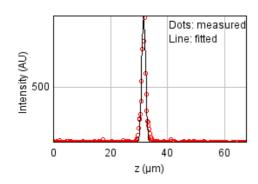
a = 0.333 px

b = -0.007 px

c = 0.402 px

xc = 6.577 pxyc = 5.035 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 149867.995

Standard deviation: 22.09456

R^2: 0.96412 Parameters:

a = 115.55184

b = 998.17778

c = 31.70617

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: -5.29 um (x), 87.6 um (y), 32.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	443 nm	458 nm	223 nm
max	595 nm	615 nm	223 nm
Z	1.39 um	1.4 um	885 nm
Asymmetry	0.744		
Theta	-87.8°		

### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.961$$



Parameters:

 $A = 1055.867 \quad (brightness)$ 

B = 139.083 (background)

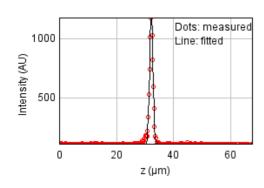
a = 0.683 px

b = -0.012 px

c = 0.379 px

xc = 5.945 pxyc = 6.639 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 33421.3337

Standard deviation: 10.43380

R^2: 0.99372 Parameters: a = 115.45581 b = 1186.24376 c = 32.26065

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: -76.6 um (x), 88.0 um (y), 32.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	489 nm	506 nm	223 nm
max	651 nm	673 nm	223 nm
Z	1.44 um	1.44 um	885 nm
Asymmetry	0.752		
Theta	-73.1°		

### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.902$$



Parameters:

A = 848.340 (brightness)

B = 133.622 (background)

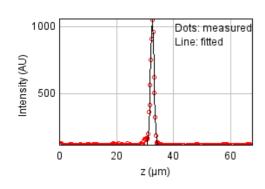
a = 0.540 px

b = -0.068 px

c = 0.338 px

xc = 5.746 pxyc = 6.077 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 56884.8999

Standard deviation: 13.61223

R^2: 0.98693 Parameters: a = 114.12722 b = 1063.91878

c = 32.62193

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

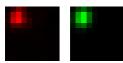
Coordinates: 30.8 um (x), 51.4 um (y), 53.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	458 nm	473 nm	223 nm
max	540 nm	558 nm	223 nm
Z	1.26 um	1.26 um	885 nm
Asymmetry	0.847		
Theta	77.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1307.592 (brightness)

B = 124.135 (background)

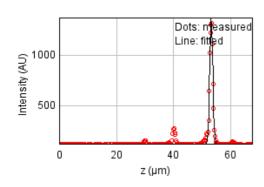
a = 0.632 px

b = 0.040 px

c = 0.469 px

xc = 1.789 pxyc = 1.536 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 180861.112

Standard deviation: 24.27188

R^2: 0.97307 Parameters: a = 121.39845

b = 1370.77263

c = 53.27501

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

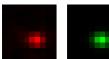
Coordinates: -162 um (x), 33.2 um (y), 31.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	389 nm	402 nm	223 nm
max	523 nm	541 nm	223 nm
Z	1.56 um	1.56 um	885 nm
Asymmetry	0.743		
Theta	-3.6°		

### 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 = 468.090 (brightness)

B = 113.272 (background)

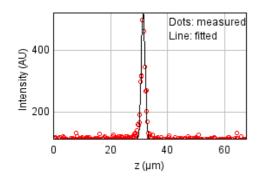
a = 0.492 px

b = -0.025 px

c = 0.886 px

xc = 5.820 pxyc = 6.031 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 38934.2506

Standard deviation: 11.26151

R^2: 0.95786 Parameters: a = 111.65712b = 526.54932c = 31.54047

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: -45.2 um (x), -13.0 um (y), 32.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	419 nm	433 nm	223 nm
max	494 nm	510 nm	223 nm
Z	1.47 um	1.47 um	885 nm
Asymmetry	0.848		
Theta	75.3°		

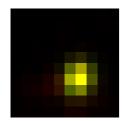
### XY profile & fitting parameters :

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





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



Parameters:

A = 1925.204 (brightness)

B = 139.269 (background)

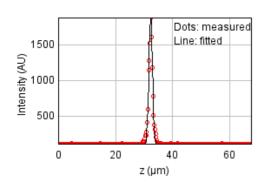
a = 0.752 px

b = 0.053 px

c = 0.565 px

xc = 5.768 pxyc = 5.917 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 178666.112

Standard deviation: 24.12414

R^2: 0.98839 Parameters: a = 115.56592 b = 1886.14602 c = 32.40807

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

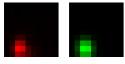
Coordinates: 18.8 um (x), -35.6 um (y), 42.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	448 nm	463 nm	223 nm
max	553 nm	571 nm	223 nm
Z	1.38 um	1.39 um	885 nm
Asymmetry	0.811		
Theta	-85.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1842.662 (brightness)

B = 128.325 (background)

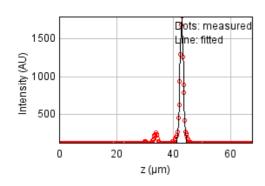
a = 0.667 px

b = -0.019 px

c = 0.441 px

xc = 2.452 pxyc = 8.007 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 250473.932

Standard deviation: 28.56354

R^2: 0.98076 Parameters: a = 120.56344

b = 1788.46888

c = 42.91031

### Bead 1440 (Rejected)

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: -52.7 um (x), -92.6 um (y), 32.8 um (z)

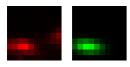
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

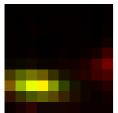
FWHM	Non corrected	Corrected	Theoretical
min	373 nm	385 nm	223 nm
max	851 nm	880 nm	223 nm
Z	1.35 um	1.36 um	885 nm
Asymmetry	0.438		
Theta	-6.6°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.840$$



Parameters:

A = 999.114 (brightness)

B = 153.519 (background)

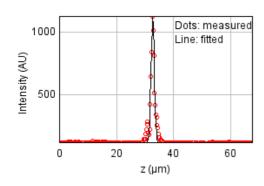
a = 0.195 px

b = -0.089 px

c = 0.955 px

xc = 2.310 pxyc = 6.945 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 178377.615

Standard deviation: 24.10466

R^2: 0.96239 Parameters:

a = 118.35680

b = 1127.50817

c = 32.76157

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

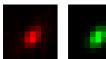
Coordinates: -152 um (x), -93.2 um (y), 32.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	409 nm	423 nm	223 nm
max	624 nm	645 nm	223 nm
Z	1.84 um	1.85 um	885 nm
Asymmetry	0.655		
Theta	50.7°		

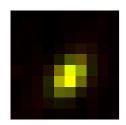
### XY profile & fitting parameters :

(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 = 698.575 (brightness)

B = 122.874 (background)

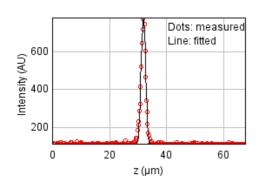
a = 0.619 px

b = 0.224 px

c = 0.528 px

xc = 4.950 pxyc = 5.550 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30675.6373

Standard deviation: 9.99603

R^2: 0.98886 Parameters: a = 110.75924

b = 781.63052

c = 31.95528

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: -137 um (x), 65.5 um (y), 32.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	513 nm	530 nm	223 nm
max	577 nm	597 nm	223 nm
Z	1.66 um	1.66 um	885 nm
Asymmetry	0.888		
Theta	-25.2°		

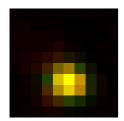
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.939$$



Parameters:

A = 562.111 (brightness)

B = 118.370 (background)

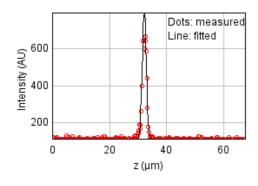
a = 0.422 px

b = -0.041 px

c = 0.490 px

xc = 4.870 pxyc = 6.260 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 133231.214

Standard deviation: 20.83214

R^2: 0.95073 Parameters: a = 111.72921

b = 797.71615

c = 32.26499

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: -159 um (x), 30.8 um (y), 32.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	455 nm	470 nm	223 nm
max	546 nm	564 nm	223 nm
Z	1.39 um	1.4 um	885 nm
Asymmetry	0.834		
Theta	-63.9°		

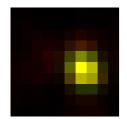
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.947$$



Parameters:

A = 598.919 (brightness)

B = 126.862 (background)

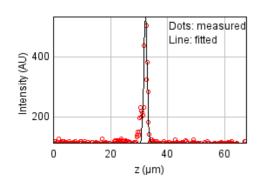
a = 0.610 px

b = -0.078 px

c = 0.489 px

xc = 6.276 pxyc = 5.179 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 85266.1585

Standard deviation: 16.66553

R^2: 0.90569 Parameters: a = 111.93997 b = 533.49181 c = 32.33937

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

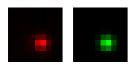
Coordinates: -134 um (x), -5.73 um (y), 32.0 um (z)

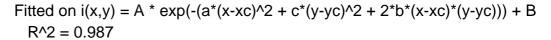
Corresponding bead: Not found

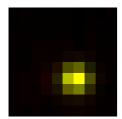
FWHM	Non corrected	Corrected	Theoretical
min	403 nm	417 nm	223 nm
max	426 nm	441 nm	223 nm
Z	1.34 um	1.35 um	885 nm
Asymmetry	0.945		
Theta	-1.3°		

### XY profile & fitting parameters :

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







Parameters:

A = 902.346 (brightness)

B = 120.083 (background)

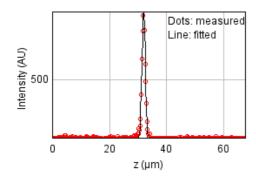
a = 0.738 px

b = -0.002 px

c = 0.826 px

xc = 5.694 pxyc = 6.068 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30249.2586

Standard deviation: 9.92632

R^2: 0.99065 Parameters: a = 112.24903

b = 960.39517

c = 32.03477

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

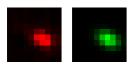
Coordinates: 128 um (x), -5.8 um (y), 31.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	434 nm	449 nm	223 nm
max	661 nm	684 nm	223 nm
Z	1.41 um	1.41 um	885 nm
Asymmetry	0.656		
Theta	-24.3°		

### XY profile & fitting parameters :

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



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



A = 554.778 (brightness)

B = 115.533 (background)

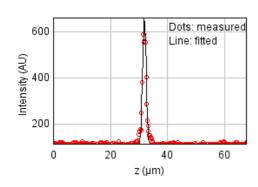
a = 0.375 px

b = -0.152 px

c = 0.644 px

xc = 6.120 pxyc = 5.384 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 64227.6582

Standard deviation: 14.46411

R^2: 0.95658 Parameters: a = 111.28517 b = 661.70725 c = 31.94630

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

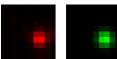
Coordinates: 104 um (x), -7.23 um (y), 31.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	464 nm	479 nm	223 nm
max	473 nm	489 nm	223 nm
Z	1.31 um	1.32 um	885 nm
Asymmetry	0.98		
Theta	-32.3°		

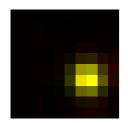
### XY profile & fitting parameters :

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





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



Parameters:

A = 675.244 (brightness)

B = 116.252 (background)

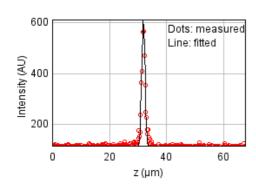
a = 0.606 px

b = -0.011 px

c = 0.617 px

xc = 6.609 pxyc = 5.848 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36103.4485

Standard deviation: 10.84439

R^2: 0.96783 Parameters: a = 113.33208b = 612.55684c = 31.92870

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

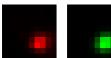
Coordinates: 122 um (x), -10.5 um (y), 32.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	471 nm	487 nm	223 nm
max	532 nm	550 nm	223 nm
Z	1.53 um	1.53 um	885 nm
Asymmetry	0.885		
Theta	27.5°		

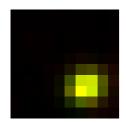
### XY profile & fitting parameters :

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





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



Parameters:

A = 1000.744 (brightness)

B = 117.212 (background)

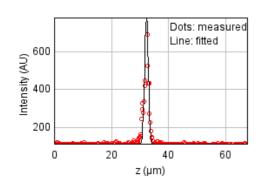
a = 0.502 px

b = 0.054 px

c = 0.577 px

xc = 6.465 pxyc = 6.577 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 215898.902

Standard deviation: 26.51893

R^2: 0.91146 Parameters: a = 113.60021b = 777.38805c = 32.34340

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

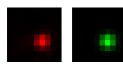
Coordinates: -153 um (x), -12.9 um (y), 32.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	427 nm	441 nm	223 nm
max	447 nm	462 nm	223 nm
Z	1.4 um	1.4 um	885 nm
Asymmetry	0.954		
Theta	16.8°		

### XY profile & fitting parameters :

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



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



A = 1484.152 (brightness)

B = 125.425 (background)

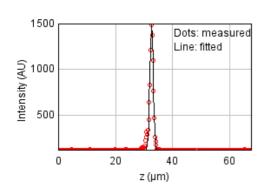
a = 0.677 px

b = 0.018 px

c = 0.732 px

xc = 6.026 pxyc = 5.743 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 125051.268

Standard deviation: 20.18250

R^2: 0.98633 Parameters:

a = 113.33446

b = 1509.31718

c = 32.72044

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

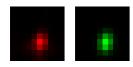
Coordinates: -24.6 um (x), -16.5 um (y), 32.6 um (z)

Corresponding bead: Not found

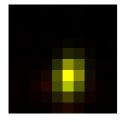
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	408 nm	223 nm
max	575 nm	595 nm	223 nm
Z	1.21 um	1.21 um	885 nm
Asymmetry	0.687		
Theta	80.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1870.381 (brightness)

B = 134.251 (background)

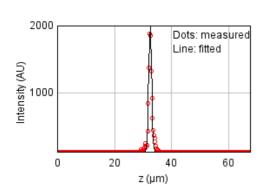
a = 0.848 px

b = 0.075 px

c = 0.418 px

xc = 5.118 pxyc = 6.147 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 223761.242

Standard deviation: 26.99748

R^2: 0.98457 Parameters: a = 116.99391 b = 2002.42806 c = 32.57923

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: 27.3 um (x), -21.6 um (y), 32.5 um (z)

Corresponding bead: Not found

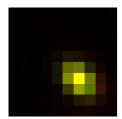
FWHM	Non corrected	Corrected	Theoretical
min	396 nm	410 nm	223 nm
max	560 nm	579 nm	223 nm
Z	1.35 um	1.35 um	885 nm
Asymmetry	0.707		
Theta	-47.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1251.825 (brightness)

B = 125.043 (background)

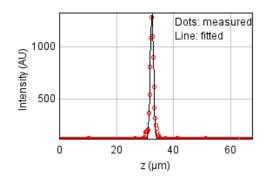
a = 0.662 px

b = -0.212 px

c = 0.621 px

xc = 5.981 pxyc = 6.106 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 74526.1195

Standard deviation: 15.58063

R^2: 0.98898 Parameters: a = 114.42507 b = 1338.26050 c = 32.48806

Date: Mon Oct 17 13:29:04 PDT 2022

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

Frame size: 10 pixels

Coordinates: 19.0 um (x), -68.4 um (y), 32.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	418 nm	432 nm	223 nm
max	548 nm	566 nm	223 nm
Z	1.33 um	1.34 um	885 nm
Asymmetry	0.763		
Theta	-74.8°		

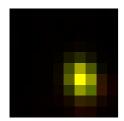
### XY profile & fitting parameters :

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





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



Parameters:

A = 1913.052 (brightness)

B = 136.243 (background)

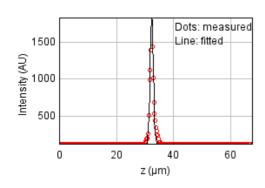
a = 0.747 px

b = -0.081 px

c = 0.469 px

xc = 6.162 pxyc = 5.989 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 348721.468

Standard deviation: 33.70312

R^2: 0.97438 Parameters: a = 117.38459 b = 1849.75201 c = 32.42507

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -111 um (x), -81.6 um (y), 32.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	417 nm	431 nm	223 nm
max	655 nm	677 nm	223 nm
Z	1.31 um	1.32 um	885 nm
Asymmetry	0.637		
Theta	71.8°		

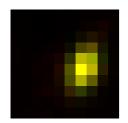
### XY profile & fitting parameters :

(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 = 1106.432 (brightness)

B = 130.456 (background)

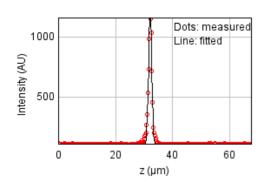
a = 0.726 px

b = 0.136 px

c = 0.357 px

xc = 6.283 pxyc = 4.851 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57624.0785

Standard deviation: 13.70039

R^2: 0.98833 Parameters: a = 114.25351 b = 1172.52361 c = 32.21169

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -136 um (x), 88.9 um (y), 32.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	436 nm	451 nm	223 nm
max	520 nm	537 nm	223 nm
Z	1.45 um	1.45 um	885 nm
Asymmetry	0.839		
Theta	-46.4°		

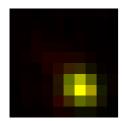
### XY profile & fitting parameters :

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





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



Parameters:

A = 851.744 (brightness)

B = 128.051 (background)

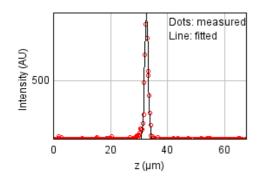
a = 0.606 px

b = -0.104 px

c = 0.596 px

xc = 6.055 pxyc = 6.782 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 65675.0311

Standard deviation: 14.62618

R^2: 0.98143 Parameters:

a = 114.11628

b = 965.02715

c = 32.66898

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: 138 um (x), 80.6 um (y), 32.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	354 nm	366 nm	223 nm
max	622 nm	643 nm	223 nm
Z	1.5 um	1.51 um	885 nm
Asymmetry	0.569		
Theta	29.4°		

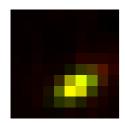
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.945$$



Parameters:

A = 806.244 (brightness)

B = 125.831 (background)

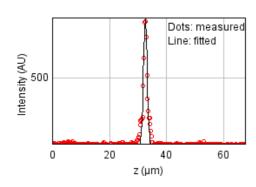
a = 0.521 px

b = 0.310 px

c = 0.896 px

xc = 5.616 pxyc = 6.521 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 111639.178

Standard deviation: 19.06949

R^2: 0.96062 Parameters: a = 113.24591 b = 854.28684

c = 32.63305

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -4.13 um (x), 60.1 um (y), 32.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	361 nm	373 nm	223 nm
max	656 nm	678 nm	223 nm
Z	1.17 um	1.17 um	885 nm
Asymmetry	0.55		
Theta	80.1°		

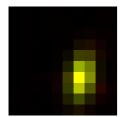
### XY profile & fitting parameters :

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





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



Parameters:

A = 1357.586 (brightness)

B = 124.208 (background)

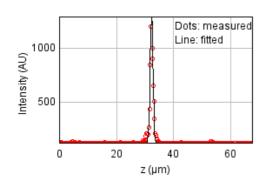
a = 1.010 px

b = 0.122 px

c = 0.333 px

xc = 6.213 pxyc = 5.999 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 188041.389

Standard deviation: 24.74899

R^2: 0.96676 Parameters: a = 115.80708 b = 1300.37583 c = 32.37916

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

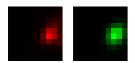
Coordinates: 64.8 um (x), 55.7 um (y), 41.5 um (z)

Corresponding bead: Not found

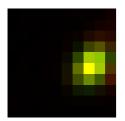
FWHM	Non corrected	Corrected	Theoretical
min	471 nm	487 nm	223 nm
max	615 nm	636 nm	223 nm
Z	1.6 um	1.61 um	885 nm
Asymmetry	0.765		
Theta	56.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$  $R^2 = 0.940$ 



Parameters:

A = 1031.264 (brightness)

B = 122.782 (background)

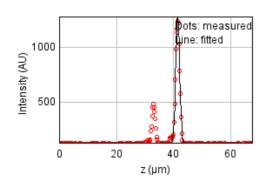
a = 0.529 px

b = 0.116 px

c = 0.431 px

xc = 7.338 pxyc = 4.689 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 684953.841

Standard deviation: 47.23473

R^2: 0.91279 Parameters: a = 124.43480b = 1288.12655

c = 41.50878

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

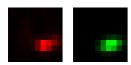
Coordinates: 150 um (x), 47.7 um (y), 32.0 um (z)

Corresponding bead: Not found

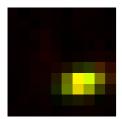
FWHM	Non corrected	Corrected	Theoretical
min	360 nm	372 nm	223 nm
max	612 nm	633 nm	223 nm
Z	1.29 um	1.3 um	885 nm
Asymmetry	0.588		
Theta	12.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.961$ 



Parameters:

A = 521.641 (brightness)

B = 115.122 (background)

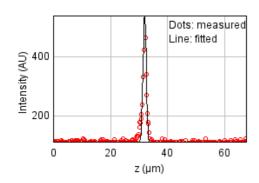
a = 0.389 px

b = 0.142 px

c = 1.003 px

xc = 6.414 pxyc = 6.365 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37337.9316

Standard deviation: 11.02823

R^2: 0.95527 Parameters:

a = 111.36925

b = 542.63236

c = 32.02926

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -159 um (x), 30.8 um (y), 32.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	457 nm	473 nm	223 nm
max	548 nm	567 nm	223 nm
Z	1.39 um	1.4 um	885 nm
Asymmetry	0.834		
Theta	-63.9°		

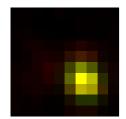
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.947$$



Parameters:

A = 598.453 (brightness)

B = 125.541 (background)

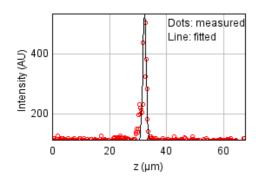
a = 0.604 px

b = -0.077 px

c = 0.484 px

xc = 6.276 pxyc = 6.177 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 85266.1585

Standard deviation: 16.66553

R^2: 0.90569 Parameters: a = 111.93997

b = 533.49181

c = 32.33937

### Bead 1459 (Rejected)

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: 97.0 um (x), 7.04 um (y), 25.8 um (z)

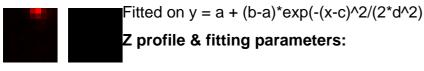
Corresponding bead: Not found

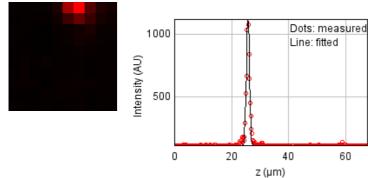
Reason of rejection: R or C parameter off limits.

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

### XY profile & fitting parameters :

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





Fitted on  $y = a + (b-a)^* \exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 73377.7709

Standard deviation: 15.46013

R^2: 0.98325 Parameters: a = 115.30801 b = 1123.93040 c = 25.81553

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

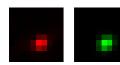
Coordinates: -155 um (x), -687 nm (y), 32.6 um (z)

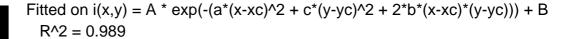
Corresponding bead: Not found

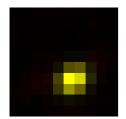
FWHM	Non corrected	Corrected	Theoretical
min	376 nm	389 nm	223 nm
max	452 nm	468 nm	223 nm
Z	1.35 um	1.35 um	885 nm
Asymmetry	0.831		
Theta	34.4°		

### XY profile & fitting parameters :

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







Parameters:

A = 1275.569 (brightness)

B = 125.610 (background)

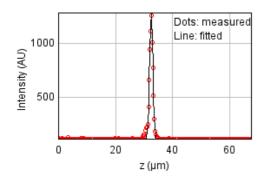
a = 0.749 px

b = 0.137 px

c = 0.855 px

xc = 5.362 pxyc = 6.120 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 54093.2772

Standard deviation: 13.27402

R^2: 0.99129 Parameters:

a = 112.13026

b = 1285.52530

c = 32.60836

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

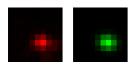
Coordinates: 32.1 um (x), -70.8 um (y), 32.2 um (z)

Corresponding bead: Not found

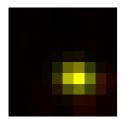
FWHM	Non corrected	Corrected	Theoretical
min	416 nm	430 nm	223 nm
max	524 nm	542 nm	223 nm
Z	1.33 um	1.33 um	885 nm
Asymmetry	0.794		
Theta	-10.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 992.256 (brightness)

B = 126.990 (background)

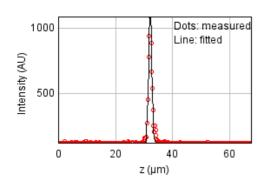
a = 0.497 px

b = -0.049 px

c = 0.767 px

xc = 5.807 pxyc = 5.958 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 74356.2513

Standard deviation: 15.56287

R^2: 0.98318 Parameters: a = 114.03879b = 1106.72919

c = 32.23624

### Bead 1462 (Rejected)

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -113 um (x), 80.4 um (y), 32.5 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	465 nm	481 nm	223 nm
max	532 nm	550 nm	223 nm
Z	1.98 um	1.99 um	885 nm
Asymmetry	0.874		
Theta	-36.8°		

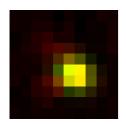
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.890$$



Parameters:

A = 390.741 (brightness)

B = 126.798 (background)

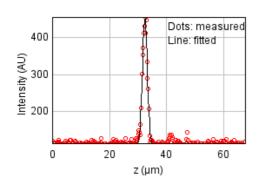
a = 0.526 px

b = -0.070 px

c = 0.568 px

xc = 5.506 pxyc = 5.386 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23698.1685

Standard deviation: 8.78594

R^2: 0.96957 Parameters:

a = 113.38638

b = 455.03907

c = 32.49218

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: 4.13 um (x), 71.7 um (y), 32.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	398 nm	411 nm	223 nm
max	680 nm	703 nm	223 nm
Z	1.18 um	1.18 um	885 nm
Asymmetry	0.585		
Theta	85.6°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 945.840 (brightness)

B = 123.096 (background)

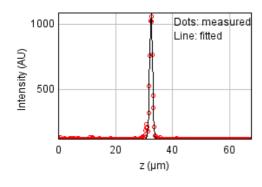
a = 0.845 px

b = 0.043 px

c = 0.293 px

xc = 5.768 pxyc = 6.100 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 51973.2034

Standard deviation: 13.01130

R^2: 0.98623 Parameters: a = 115.41732b = 1089.34726c = 32.55396

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

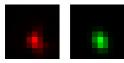
Coordinates: -7.69 um (x), 71.2 um (y), 32.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	396 nm	410 nm	223 nm
max	531 nm	549 nm	223 nm
Z	1.2 um	1.2 um	885 nm
Asymmetry	0.746		
Theta	-65.7°		

### XY profile & fitting parameters :

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



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



Parameters:

 $A = 1118.578 \quad (brightness)$ 

B = 123.293 (background)

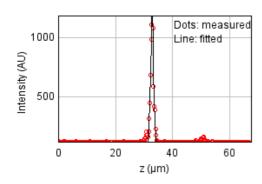
a = 0.791 px

b = -0.142 px

c = 0.540 px

xc = 5.039 pxyc = 6.266 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 100293.852

Standard deviation: 18.07457

R^2: 0.97919 Parameters:

a = 116.76773

b = 1204.12449

c = 32.89700

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -77.8 um (x), 54.0 um (y), 63.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	384 nm	397 nm	223 nm
max	498 nm	514 nm	223 nm
Z	1.37 um	1.37 um	885 nm
Asymmetry	0.771		
Theta	85.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1368.174 (brightness)

B = 120.639 (background)

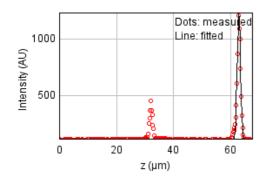
a = 0.908 px

b = 0.028 px

c = 0.544 px

xc = 6.448 pxyc = 2.627 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 453484.019

Standard deviation: 38.43367

R^2: 0.92490 Parameters:

a = 121.47574

b = 1231.03057

c = 62.95058

### Bead 1466 (Rejected)

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -63.8 um (x), 39.6 um (y), 32.9 um (z)

Corresponding bead: Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	554 nm	573 nm	223 nm
max	680 nm	703 nm	223 nm
Z	1.72 um	1.73 um	885 nm
Asymmetry	0.816		
Theta	76.6°		

### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.922$$



xc = 6.121 px

yc = 6.159 px

### Parameters:

A = 690.010 (brightness)

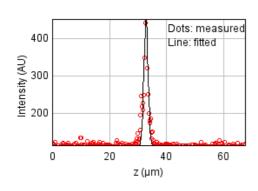
B = 128.313 (background)

a = 0.429 px

b = 0.033 px

c = 0.298 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 61450.1106

Standard deviation: 14.14791

R^2: 0.91378

Parameters: a = 114.41632

450.00540

b = 453.23749

c = 32.86190

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

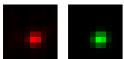
Coordinates: -153 um (x), 3.76 um (y), 32.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	386 nm	399 nm	223 nm
max	439 nm	454 nm	223 nm
Z	1.38 um	1.39 um	885 nm
Asymmetry	0.879		
Theta	18.9°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 1081.984 (brightness)

B = 122.835 (background)

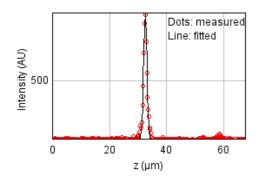
a = 0.717 px

b = 0.063 px

c = 0.879 px

xc = 5.385 pxyc = 5.893 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57882.4717

Standard deviation: 13.73107

R^2: 0.98203 Parameters: a = 115.37037b = 946.03242c = 32.61832

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -115 um (x), 2.85 um (y), 32.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	423 nm	438 nm	223 nm
max	472 nm	488 nm	223 nm
Z	1.32 um	1.33 um	885 nm
Asymmetry	0.896		
Theta	-86.5°		

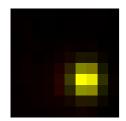
### XY profile & fitting parameters :

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





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



Parameters:

A = 1228.926 (brightness)

B = 130.936 (background)

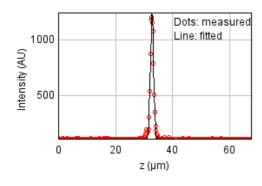
a = 0.748 px

b = -0.009 px

c = 0.602 px

xc = 6.442 pxyc = 6.044 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 55895.4194

Standard deviation: 13.49332

R^2: 0.99026 Parameters: a = 114.56871b = 1251.88537

c = 32.86557

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: 22.7 um (x), -10.1 um (y), 33.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	447 nm	463 nm	223 nm
max	533 nm	551 nm	223 nm
Z	1.46 um	1.46 um	885 nm
Asymmetry	0.839		
Theta	-77.5°		

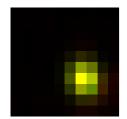
### XY profile & fitting parameters :

(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:

 $A = 1411.272 \quad (brightness)$ 

B = 129.275 (background)

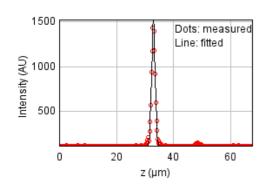
a = 0.661 px

b = -0.042 px

c = 0.481 px

xc = 6.317 pxyc = 6.029 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 47267.3185

Standard deviation: 12.40827

R^2: 0.99504 Parameters: a = 116.33455

b = 1517.61591

c = 33.00081

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

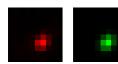
Coordinates: -144 um (x), -19.6 um (y), 32.7 um (z)

Corresponding bead: Not found

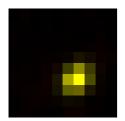
FWHM	Non corrected	Corrected	Theoretical
min	371 nm	384 nm	223 nm
max	469 nm	485 nm	223 nm
Z	1.24 um	1.25 um	885 nm
Asymmetry	0.791		
Theta	48.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1143.324 (brightness)

B = 119.669 (background)

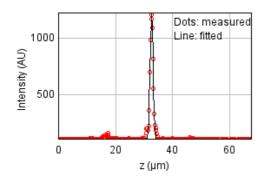
a = 0.813 px

b = 0.181 px

c = 0.771 px

xc = 5.773 pxyc = 5.951 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 61818.5886

Standard deviation: 14.19026

R^2: 0.98801 Parameters: a = 115.02202 b = 1224.18444

c = 32.73168

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -29.3 um (x), -38.5 um (y), 33.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	416 nm	430 nm	223 nm
max	513 nm	531 nm	223 nm
Z	1.33 um	1.33 um	885 nm
Asymmetry	0.81		
Theta	78.9°		

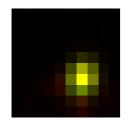
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.949$$



Parameters:

A = 1568.810 (brightness)

B = 137.982 (background)

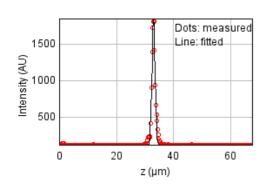
a = 0.767 px

b = 0.051 px

c = 0.519 px

xc = 6.042 pxyc = 5.886 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 228352.817

Standard deviation: 27.27307

R^2: 0.98298 Parameters: a = 117.00971 b = 1846.17184 c = 33.04387

### Bead 1472 (Rejected)

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -85.1 um (x), -86.9 um (y), 45.8 um (z)

Corresponding bead: Not found

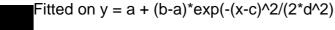
Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	1.34 um	1.35 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

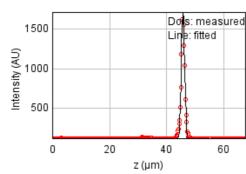
(red: the original data, green: the fit, yellow: the two merged)





# Z profile & fitting parameters:





Fitted on  $y = a + (b-a)^* \exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 105939.342

Standard deviation: 18.57631

R^2: 0.99081 Parameters: a = 115.64289 b = 1716.45410 c = 45.80174

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: 29.1 um (x), 95.6 um (y), 33.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	449 nm	464 nm	223 nm
max	874 nm	903 nm	223 nm
Z	1.58 um	1.58 um	885 nm
Asymmetry	0.514		
Theta	68.0°		

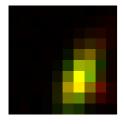
## XY profile & fitting parameters :

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





Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.911$ 



xc = 6.100 pxyc = 6.229 px

#### Parameters:

A = 876.975 (brightness)

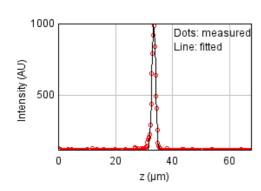
B = 129.912 (background)

a = 0.596 px

b = 0.170 px

c = 0.245 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 34899.8066

Standard deviation: 10.66209

R^2: 0.99157 Parameters: a = 115.24689

b = 1003.71039

c = 33.47234

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

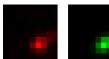
Coordinates: 147 um (x), 94.6 um (y), 32.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	395 nm	408 nm	223 nm
max	555 nm	574 nm	223 nm
Z	1.43 um	1.43 um	885 nm
Asymmetry	0.711		
Theta	33.8°		

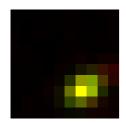
### XY profile & fitting parameters :

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





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



Parameters:

A = 767.550 (brightness)

B = 116.648 (background)

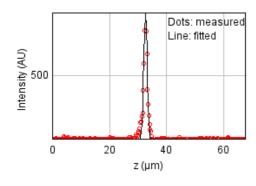
a = 0.568 px

b = 0.197 px

c = 0.730 px

xc = 6.281 pxyc = 6.792 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 60974.0623

Standard deviation: 14.09300

R^2: 0.97930 Parameters: a = 111.33694b = 892.54164c = 32.68595

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -5.89 um (x), 89.8 um (y), 35.1 um (z)

Corresponding bead: Not found

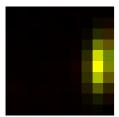
FWHM	Non corrected	Corrected	Theoretical
min	348 nm	359 nm	223 nm
max	776 nm	802 nm	223 nm
Z	1.24 um	1.25 um	885 nm
Asymmetry	0.448		
Theta	85.2°		

# XY profile & fitting parameters :

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



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



Parameters:

A = 1336.334 (brightness)

B = 126.447 (background)

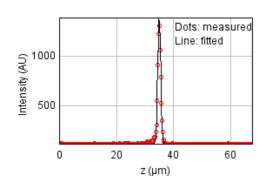
a = 1.105 px

b = 0.074 px

c = 0.229 px

xc = 8.218 pxyc = 4.776 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 49965.1752

Standard deviation: 12.75747

R^2: 0.99265 Parameters: a = 114.25163 b = 1393.02827

c = 35.05279d = 0.52673

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -55.5 um (x), 44.3 um (y), 33.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	384 nm	397 nm	223 nm
max	598 nm	618 nm	223 nm
Z	1.3 um	1.31 um	885 nm
Asymmetry	0.642		
Theta	-85.5°		

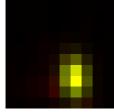
### XY profile & fitting parameters :

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





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



xc = 5.871 px

yc = 6.659 px

#### Parameters:

A = 1329.878 (brightness)

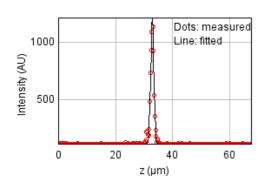
B = 134.889 (background)

a = 0.907 px

b = -0.042 px

c = 0.379 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 64020.1968

Standard deviation: 14.44074

R^2: 0.98802 Parameters: a = 113.96401 b = 1219.18393

c = 32.96313

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -55.5 um (x), 44.3 um (y), 33.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	384 nm	397 nm	223 nm
max	598 nm	618 nm	223 nm
Z	1.3 um	1.31 um	885 nm
Asymmetry	0.642		
Theta	-85.5°		

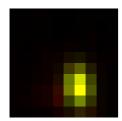
## XY profile & fitting parameters :

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





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



Parameters:

A = 1329.878 (brightness)

B = 134.889 (background)

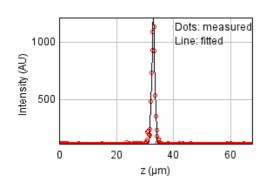
a = 0.907 px

b = -0.042 px

c = 0.379 px

xc = 5.871 pxyc = 6.659 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 64020.1968

Standard deviation: 14.44074

R^2: 0.98802 Parameters: a = 113.96401

b = 1219.18393

c = 32.96313

# Bead 1478 (Rejected)

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

Coordinates: -63.8 um (x), 39.6 um (y), 32.9 um (z)

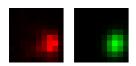
Corresponding bead: Not found

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

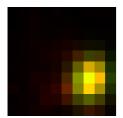
FWHM	Non corrected	Corrected	Theoretical
min	560 nm	579 nm	223 nm
max	679 nm	702 nm	223 nm
Z	1.72 um	1.73 um	885 nm
Asymmetry	0.825		
Theta	75.4°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 685.739 (brightness)

B = 129.183 (background)

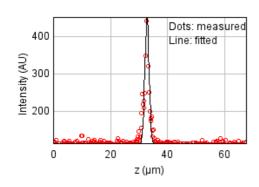
a = 0.419 px

b = 0.033 px

c = 0.299 px

xc = 7.123 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: 61450.1106

Standard deviation: 14.14791

R^2: 0.91378 Parameters:

a = 114.41632

b = 453.23749

c = 32.86190

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

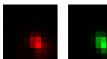
Coordinates: 4.59 um (x), -18.4 um (y), 33.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	367 nm	379 nm	223 nm
max	546 nm	564 nm	223 nm
Z	1.06 um	1.06 um	885 nm
Asymmetry	0.672		
Theta	-58.7°		

## XY profile & fitting parameters :

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





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



Parameters:

A = 1608.406 (brightness)

B = 130.248 (background)

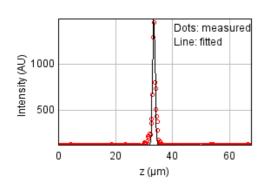
a = 0.850 px

b = -0.243 px

c = 0.597 px

xc = 5.861 pxyc = 6.683 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 397860.607

Standard deviation: 35.99948

R^2: 0.94526 Parameters: a = 118.61453b = 1512.09510

c = 33.51051

Date: Mon Oct 17 13:29:05 PDT 2022

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

Frame size: 10 pixels

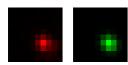
Coordinates: 51.5 um (x), -52.0 um (y), 33.2 um (z)

Corresponding bead: Not found

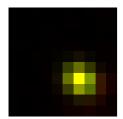
FWHM	Non corrected	Corrected	Theoretical
min	422 nm	436 nm	223 nm
max	485 nm	502 nm	223 nm
Z	1.53 um	1.53 um	885 nm
Asymmetry	0.869		
Theta	-41.5°		

## XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.961$ 



Parameters:

A = 1206.770 (brightness)

B = 127.720 (background)

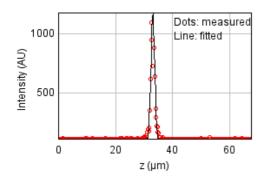
a = 0.651 px

b = -0.092 px

c = 0.673 px

xc = 6.120 pxyc = 6.137 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 376650.183

Standard deviation: 35.02675

R^2: 0.93809 Parameters: a = 114.75540

b = 1178.13277

c = 33.15040

# Bead 1481 (Rejected)

Date: Mon Oct 17 13:29:06 PDT 2022

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

Frame size: 10 pixels

Coordinates: 146 um (x), -62.3 um (y), 10.6 um (z)

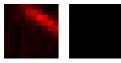
Corresponding bead: Not found

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

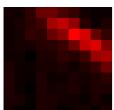
FWHM	Non corrected	Corrected	Theoretical
min	1.55 um	1.6 um	223 nm
max	3.67 um	3.79 um	223 nm
Z	1.53 um	1.54 um	885 nm
Asymmetry	0.422		
Theta	0.0°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.384$$



Parameters:

A = -48.904 (brightness)

B = 154.861 (background)

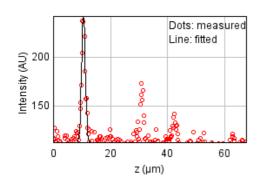
a = 0.017 px

b = -0.032 px

c = 0.029 px

xc = 2.825 pxyc = 6.964 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30952.8516

Standard deviation: 10.04110

R^2: 0.73266 Parameters:

a = 113.03245

b = 242.53126

c = 10.62739

# Bead 1482 (Rejected)

Date: Mon Oct 17 13:29:06 PDT 2022

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

Frame size: 10 pixels

Coordinates: 106 um (x), -67.3 um (y), 51.0 um (z)

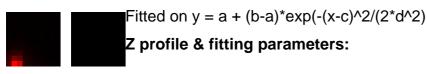
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

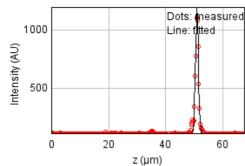
FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	1.19 um	1.19 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

## 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: 59867.9202

Standard deviation: 13.96458

R^2: 0.98712 Parameters: a = 114.48078 b = 1191.01745 c = 51.03464

Date: Mon Oct 17 13:29:06 PDT 2022

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

Frame size: 10 pixels

Coordinates: 152 um (x), -76.4 um (y), 32.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	381 nm	394 nm	223 nm
max	760 nm	786 nm	223 nm
Z	1.48 um	1.49 um	885 nm
Asymmetry	0.501		
Theta	-37.9°		

## XY profile & fitting parameters :

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





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



Parameters:

A = 475.228 (brightness)

B = 114.580 (background)

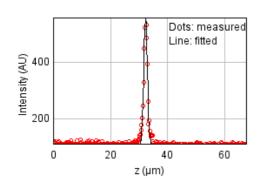
a = 0.494 px

b = -0.336 px

c = 0.664 px

xc = 5.337 pxyc = 6.110 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 21960.6836

Standard deviation: 8.45773

R^2: 0.97813 Parameters: a = 111.55780 b = 558.77427

c = 32.37594

# Bead 1484 (Rejected)

Date: Mon Oct 17 13:29:06 PDT 2022

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

Frame size: 10 pixels

Coordinates: 106 um (x), -82.1 um (y), 41.9 um (z)

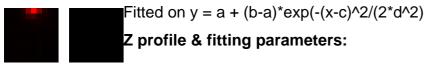
Corresponding bead: Not found

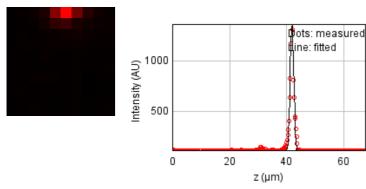
Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	1.45 um	1.45 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

## XY profile & fitting parameters :

(red: the orignal 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: 150092.100

Standard deviation: 22.11107

R^2: 0.98050 Parameters: a = 114.53836 b = 1369.16740 c = 41.93590

Date: Mon Oct 17 13:29:06 PDT 2022

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

Frame size: 10 pixels

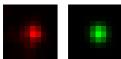
Coordinates: -59.8 um (x), -92.4 um (y), 32.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	492 nm	508 nm	223 nm
max	531 nm	549 nm	223 nm
Z	1.4 um	1.41 um	885 nm
Asymmetry	0.926		
Theta	-82.6°		

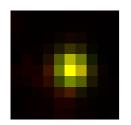
## XY profile & fitting parameters :

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





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



Parameters:

A = 774.031(brightness)

B = 129.393 (background)

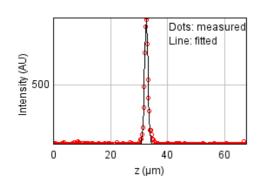
a = 0.554 px

b = -0.010 px

c = 0.477 px

xc = 5.154 pxyc = 4.857 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 39400.0073

Standard deviation: 11.32867

R^2: 0.98759 Parameters: a = 114.05127b = 934.86943c = 32.60998

Date: Mon Oct 17 13:29:06 PDT 2022

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

Frame size: 10 pixels

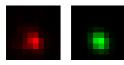
Coordinates: -78.4 um (x), 47.5 um (y), 33.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	471 nm	487 nm	223 nm
max	561 nm	580 nm	223 nm
Z	1.65 um	1.66 um	885 nm
Asymmetry	0.839		
Theta	-55.0°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 950.005 (brightness)

B = 130.966 (background)

a = 0.547 px

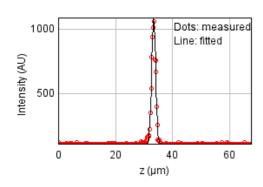
b = -0.084 px

c = 0.485 px

xc = 4.692 px

yc = 6.135 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 63164.8537

Standard deviation: 14.34394

R^2: 0.98793 Parameters: a = 112.55958 b = 1086.74733 c = 33.43999

Date: Mon Oct 17 13:29:06 PDT 2022

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

Frame size: 10 pixels

Coordinates: -94.2 um (x), 20.3 um (y), 33.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	455 nm	470 nm	223 nm
max	488 nm	505 nm	223 nm
Z	1.64 um	1.65 um	885 nm
Asymmetry	0.932		
Theta	71.0°		

## XY profile & fitting parameters :

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





Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.963$ 



Parameters:

A = 1073.768 (brightness)

B = 128.592 (background)

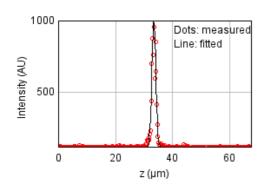
a = 0.639 px

b = 0.026 px

c = 0.572 px

xc = 5.930 pxyc = 6.863 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 222831.570

Standard deviation: 26.94134

R^2: 0.95080 Parameters: a = 112.55606

b = 1004.84625

c = 33.50263

Date: Mon Oct 17 13:29:06 PDT 2022

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

Frame size: 10 pixels

Coordinates: -126 um (x), 14.9 um (y), 33.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	407 nm	421 nm	223 nm
max	488 nm	505 nm	223 nm
Z	1.35 um	1.35 um	885 nm
Asymmetry	0.834		
Theta	40.9°		

## XY profile & fitting parameters :

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





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



A = 1133.755 (brightness)

B = 130.690 (background)

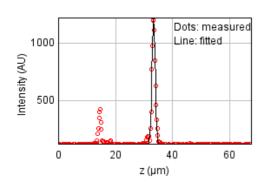
a = 0.668 px

b = 0.122 px

c = 0.703 px

xc = 5.857 pxyc = 6.319 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 398187.586

Standard deviation: 36.01427

R^2: 0.93198 Parameters: a = 121.00979 b = 1225.01322 c = 33.41130

Date: Mon Oct 17 13:29:07 PDT 2022

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

Frame size: 10 pixels

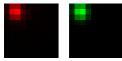
Coordinates: 94.1 um (x), -46.0 um (y), 56.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	421 nm	435 nm	223 nm
max	489 nm	506 nm	223 nm
Z	1.15 um	1.16 um	885 nm
Asymmetry	0.861		
Theta	-78.6°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 1576.343 (brightness)

B = 118.967 (background)

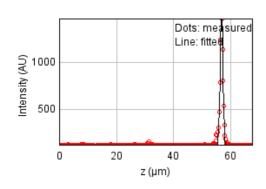
a = 0.749 px

b = -0.038 px

c = 0.569 px

xc = 1.605 pxyc = 0.925 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 88415.7118

Standard deviation: 16.97054

R^2: 0.98802 Parameters:

a = 115.34567

b = 1494.22546

c = 56.86404

Date: Mon Oct 17 13:29:07 PDT 2022

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

Frame size: 10 pixels

Coordinates: 55.1 um (x), -50.2 um (y), 33.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	430 nm	445 nm	223 nm
max	447 nm	463 nm	223 nm
Z	1.34 um	1.34 um	885 nm
Asymmetry	0.962		
Theta	39.5°		

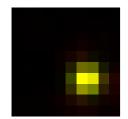
## XY profile & fitting parameters :

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





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



Parameters:

A = 1357.735 (brightness)

B = 129.598 (background)

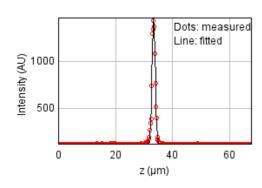
a = 0.692 px

b = 0.027 px

c = 0.702 px

xc = 6.427 pxyc = 6.096 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 106279.351

Standard deviation: 18.60610

R^2: 0.98714 Parameters: a = 113.17238 b = 1467.77407 c = 33.42864

Date: Mon Oct 17 13:29:07 PDT 2022

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

Frame size: 10 pixels

Coordinates: 45.9 um (x), -58.1 um (y), 18.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	450 nm	465 nm	223 nm
max	531 nm	549 nm	223 nm
Z	1.38 um	1.39 um	885 nm
Asymmetry	0.847		
Theta	-7.9°		

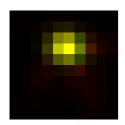
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.952$$



Parameters:

A = 1183.856 (brightness)

B = 143.334 (background)

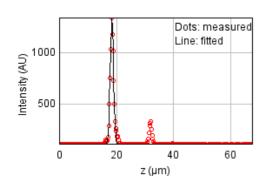
a = 0.479 px

b = -0.025 px

c = 0.659 px

xc = 4.758 pxyc = 2.896 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 241486.730

Standard deviation: 28.04642

R^2: 0.96544 Parameters: a = 119.15759 b = 1332.48926 c = 18.47017

Date: Mon Oct 17 13:29:07 PDT 2022

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

Frame size: 10 pixels

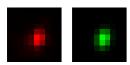
Coordinates: -114 um (x), -66.9 um (y), 32.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	398 nm	412 nm	223 nm
max	544 nm	563 nm	223 nm
Z	1.19 um	1.19 um	885 nm
Asymmetry	0.732		
Theta	73.5°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 1535.402 (brightness)

B = 135.847 (background)

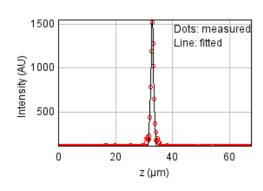
a = 0.814 px

b = 0.107 px

c = 0.484 px

xc = 5.249 pxyc = 5.264 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 80753.3233

Standard deviation: 16.21851

R^2: 0.99028 Parameters: a = 114.25327 b = 1555.94861 c = 32.94684

# Bead 1493 (Rejected)

Date: Mon Oct 17 13:29:07 PDT 2022

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

Frame size: 10 pixels

Coordinates: 162 um (x), 94.4 um (y), 59.8 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	263 nm	264 nm	885 nm
Asymmetry	0.0		
Theta	0.0°		

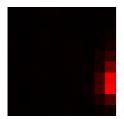
## XY profile & fitting parameters :

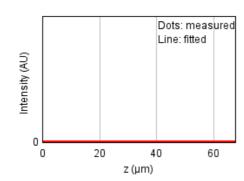
(red: the original data, green: the fit, yellow: the two merged)



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

# Z profile & fitting parameters:





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

Sum of residuals squared: 0.00000E0

Standard deviation: 0.00000E0

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

Date: Mon Oct 17 13:29:07 PDT 2022

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

Frame size: 10 pixels

Coordinates: 12.9 um (x), 71.9 um (y), 33.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	445 nm	460 nm	223 nm
max	706 nm	729 nm	223 nm
Z	1.1 um	1.1 um	885 nm
Asymmetry	0.631		
Theta	73.3°		

## XY profile & fitting parameters :

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





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



Parameters:

A = 792.130 (brightness)

B = 119.750 (background)

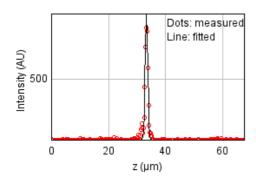
a = 0.644 px

b = 0.112 px

c = 0.303 px

xc = 5.630 pxyc = 5.271 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 56203.6410

Standard deviation: 13.53047

R^2: 0.97700 Parameters:

a = 115.46885

b = 922.78027

c = 33.36973

Date: Mon Oct 17 13:29:07 PDT 2022

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

Frame size: 10 pixels

Coordinates: 12.9 um (x), 71.9 um (y), 33.4 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	446 nm	461 nm	223 nm
max	708 nm	732 nm	223 nm
Z	1.1 um	1.1 um	885 nm
Asymmetry	0.629		
Theta	73.4°		

# XY profile & fitting parameters :

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





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



$$xc = 5.630 px$$
  
 $yc = 6.272 px$ 

#### Parameters:

A = 791.305 (brightness)

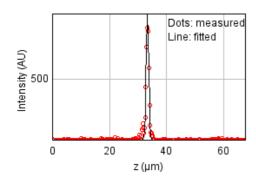
B = 119.175(background)

a = 0.642 px

b = 0.112 px

c = 0.301 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 56203.6410

Standard deviation: 13.53047

R^2: 0.97700 Parameters: a = 115.46885b = 922.78027

c = 33.36973

# Bead 1496 (Rejected)

Date: Mon Oct 17 13:29:07 PDT 2022

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

Frame size: 10 pixels

Coordinates: 67.4 um (x), 67.9 um (y), 33.9 um (z)

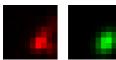
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	511 nm	528 nm	223 nm
max	682 nm	705 nm	223 nm
Z	1.93 um	1.94 um	885 nm
Asymmetry	0.749		
Theta	53.9°		

## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.894$$



Parameters:

A = 661.907 (brightness) B = 124.203 (background)

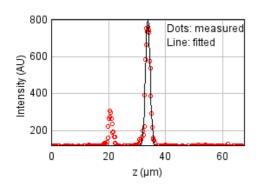
a = 0.436 px

b = 0.107 px

c = 0.366 px

xc = 6.572 pxyc = 6.295 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 238497.852

Standard deviation: 27.87232

R^2: 0.92544 Parameters:

a = 118.58200

b = 803.33757

c = 33.85820

Date: Mon Oct 17 13:29:07 PDT 2022

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

Frame size: 10 pixels

Coordinates: 40.7 um (x), 61.9 um (y), 34.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	474 nm	490 nm	223 nm
max	699 nm	723 nm	223 nm
Z	1.36 um	1.36 um	885 nm
Asymmetry	0.678		
Theta	66.2°		

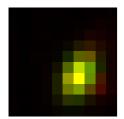
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.928$$



Parameters:

A = 782.085 (brightness)

B = 127.165 (background)

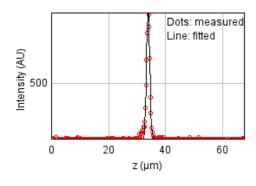
a = 0.544 px

b = 0.119 px

c = 0.327 px

xc = 6.013 pxyc = 5.731 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 39452.9976

Standard deviation: 11.33629

R^2: 0.98908 Parameters:

a = 114.35390

b = 1005.64061

c = 33.97584

Date: Mon Oct 17 13:29:08 PDT 2022

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

Frame size: 10 pixels

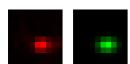
Coordinates: 158 um (x), 33.9 um (y), 33.3 um (z)

Corresponding bead: Not found

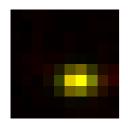
FWHM	Non corrected	Corrected	Theoretical
min	390 nm	403 nm	223 nm
max	546 nm	564 nm	223 nm
Z	1.77 um	1.78 um	885 nm
Asymmetry	0.714		
Theta	1.2°		

### 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 = 545.144 (brightness)

B = 116.003 (background)

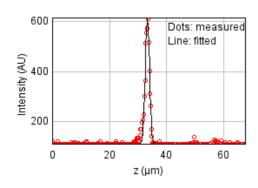
a = 0.451 px

b = 0.009 px

c = 0.883 px

xc = 5.741 pxyc = 6.042 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 34933.7577

Standard deviation: 10.66727

R^2: 0.97723 Parameters: a = 110.53096 b = 618.37822

c = 33.34912

Date: Mon Oct 17 13:29:08 PDT 2022

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

Frame size: 10 pixels

Coordinates: 72.8 um (x), 30.6 um (y), 34.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	452 nm	467 nm	223 nm
max	500 nm	517 nm	223 nm
Z	1.55 um	1.56 um	885 nm
Asymmetry	0.904		
Theta	29.2°		

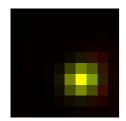
### XY profile & fitting parameters :

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





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



Parameters:

A = 1046.425 (brightness)

B = 131.615 (background)

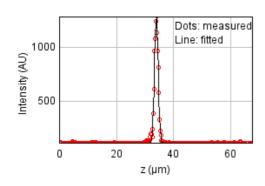
a = 0.566 px

b = 0.051 px

c = 0.628 px

xc = 6.084 pxyc = 6.006 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 56889.7870

Standard deviation: 13.61282

R^2: 0.99197 Parameters:

a = 113.27923

b = 1285.13788

c = 34.04908

# Bead 1500 (Rejected)

Date: Mon Oct 17 13:29:08 PDT 2022

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

Frame size: 10 pixels

Coordinates: 158 um (x), -49.7 um (y), 60.8 um (z)

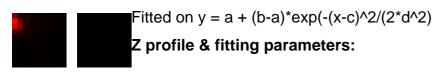
Corresponding bead: Not found

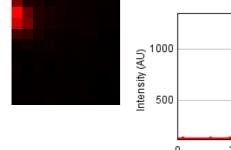
Reason of rejection: R or C parameter off limits.

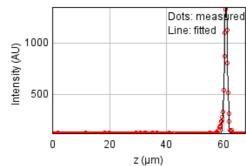
FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
Z	1.25 um	1.26 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

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







Fitted on  $y = a + (b-a)^* \exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 69993.9279

Standard deviation: 15.09945

R^2: 0.98956 Parameters: a = 111.91825 b = 1374.67832 c = 60.82163