

## Bead 601 (Rejected)

Date : Mon Oct 17 13:28:25 PDT 2022

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

Frame size : 10 pixels

Coordinates : 53.2  $\mu\text{m}$  (x), 95.5  $\mu\text{m}$  (y), 12.6  $\mu\text{m}$  (z)

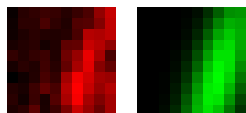
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

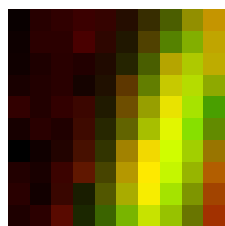
FWHM	Non corrected	Corrected	Theoretical
min	827 nm	855 nm	223 nm
max	3.3 $\mu\text{m}$	3.41 $\mu\text{m}$	223 nm
z	1.07 $\mu\text{m}$	1.07 $\mu\text{m}$	885 nm
Asymmetry	0.251		
Theta	73.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 78.397 (brightness)

B = 115.818 (background)

a = 0.181 px

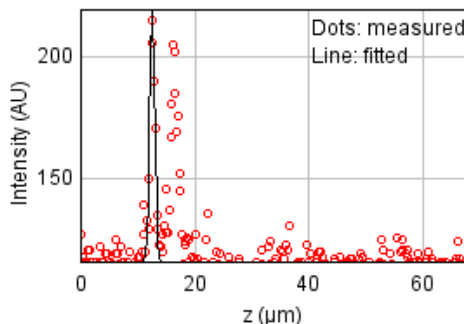
b = 0.051 px

c = 0.028 px

xc = 6.907 px

yc = 6.112 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 53716.1287

Standard deviation: 13.22766

$R^2$ : 0.42608

Parameters:

a = 115.36094

b = 221.19208

c = 12.63185

d = 0.45267

## Bead 602 (Rejected)

Date : Mon Oct 17 13:28:25 PDT 2022

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

Frame size : 10 pixels

Coordinates : 139  $\mu\text{m}$  (x), 88.1  $\mu\text{m}$  (y), 13.8  $\mu\text{m}$  (z)

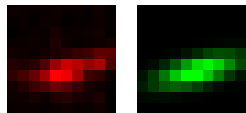
Corresponding bead : Not found

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

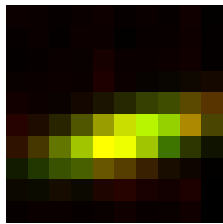
FWHM	Non corrected	Corrected	Theoretical
min	403 nm	417 nm	223 nm
max	1.27 $\mu\text{m}$	1.31 $\mu\text{m}$	223 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	885 nm
Asymmetry	0.319		
Theta	14.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.936$



Parameters:

A = 325.258 (brightness)

B = 116.569 (background)

a = 0.129 px

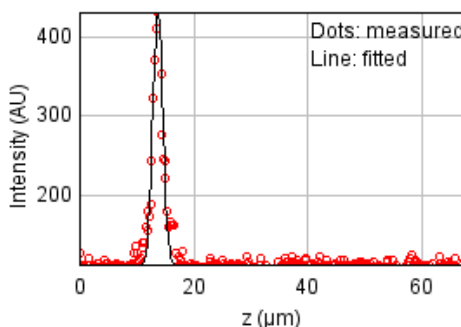
b = 0.177 px

c = 0.781 px

xc = 5.092 px

yc = 5.564 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37590.9696

Standard deviation: 11.06554

$R^2$ : 0.94737

Parameters:

a = 112.66242

b = 430.99873

c = 13.78068

d = 0.86819

## Bead 603

Date : Mon Oct 17 13:28:26 PDT 2022

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

Frame size : 10 pixels

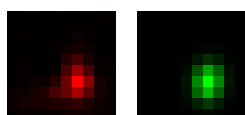
Coordinates : -42.0  $\mu\text{m}$  (x), 82.9  $\mu\text{m}$  (y), 14.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

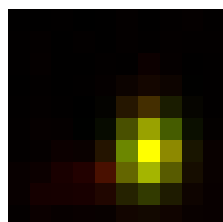
FWHM	Non corrected	Corrected	Theoretical
min	459 nm	474 nm	223 nm
max	581 nm	601 nm	223 nm
z	1.33 $\mu\text{m}$	1.34 $\mu\text{m}$	885 nm
Asymmetry	0.789		
Theta	82.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.946$



Parameters:

$A = 828.642$  (brightness)

$B = 127.281$  (background)

$a = 0.634$  px

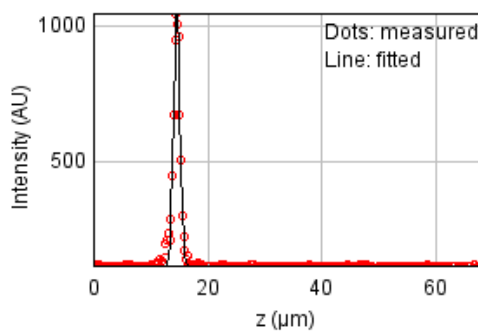
$b = 0.031$  px

$c = 0.401$  px

$x_c = 6.001$  px

$y_c = 6.068$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 47362.9129

Standard deviation: 12.42081

$R^2: 0.98822$

Parameters:

$a = 115.55348$

$b = 1063.18229$

$c = 14.63609$

$d = 0.56594$

## Bead 604 (Rejected)

Date : Mon Oct 17 13:28:26 PDT 2022

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

Frame size : 10 pixels

Coordinates : -82.4  $\mu\text{m}$  (x), 26.7  $\mu\text{m}$  (y), 10.4  $\mu\text{m}$  (z)

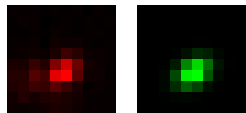
Corresponding bead : Not found

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

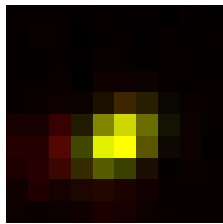
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	398 nm	223 nm
max	551 nm	570 nm	223 nm
z	3.5 $\mu\text{m}$	3.51 $\mu\text{m}$	885 nm
Asymmetry	0.697		
Theta	32.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.930$



Parameters:

A = 671.403 (brightness)

B = 131.847 (background)

a = 0.574 px

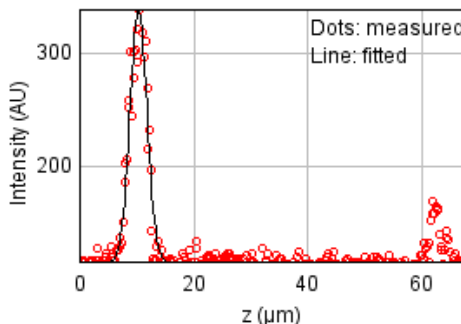
b = 0.210 px

c = 0.774 px

xc = 4.660 px

yc = 5.702 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 47402.2685

Standard deviation: 12.42597

$R^2$ : 0.92051

Parameters:

a = 115.96712

b = 338.94482

c = 10.39533

d = 1.48595

## Bead 605

Date : Mon Oct 17 13:28:26 PDT 2022

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

Frame size : 10 pixels

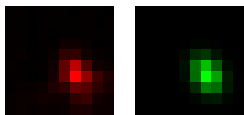
Coordinates : 18.3  $\mu\text{m}$  (x), -8.54  $\mu\text{m}$  (y), 14.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

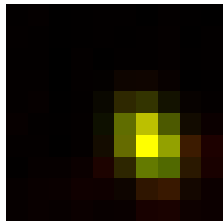
FWHM	Non corrected	Corrected	Theoretical
min	420 nm	434 nm	223 nm
max	567 nm	586 nm	223 nm
z	1.89 $\mu\text{m}$	1.9 $\mu\text{m}$	885 nm
Asymmetry	0.741		
Theta	-58.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1200.183$  (brightness)

$B = 135.532$  (background)

$a = 0.667$  px

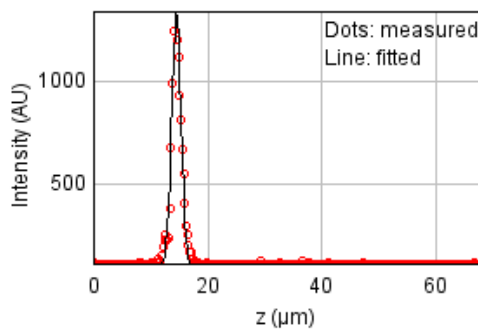
$b = -0.153$  px

$c = 0.510$  px

$x_c = 6.112$  px

$y_c = 5.813$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 188677.021

Standard deviation: 24.79079

$R^2: 0.98030$

Parameters:

$a = 113.94245$

$b = 1345.06330$

$c = 14.57668$

$d = 0.80271$

## Bead 606

Date : Mon Oct 17 13:28:26 PDT 2022

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

Frame size : 10 pixels

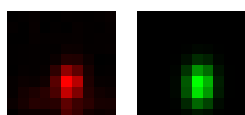
Coordinates : -20.4  $\mu\text{m}$  (x), -27.6  $\mu\text{m}$  (y), 14.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

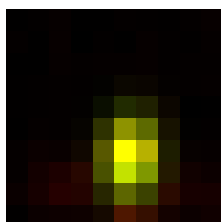
FWHM	Non corrected	Corrected	Theoretical
min	434 nm	448 nm	223 nm
max	632 nm	653 nm	223 nm
z	1.97 $\mu\text{m}$	1.98 $\mu\text{m}$	885 nm
Asymmetry	0.686		
Theta	87.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 671.638 (brightness)

B = 127.243 (background)

a = 0.713 px

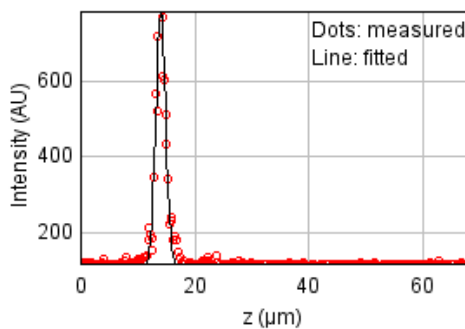
b = 0.017 px

c = 0.337 px

xc = 5.237 px

yc = 6.306 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 93137.5978

Standard deviation: 17.41780

$R^2$ : 0.96889

Parameters:

a = 115.96933

b = 786.39612

c = 14.12171

d = 0.83777

## Bead 607

Date : Mon Oct 17 13:28:26 PDT 2022

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

Frame size : 10 pixels

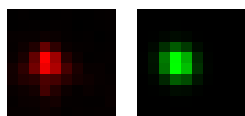
Coordinates : -13.6  $\mu\text{m}$  (x), -45.0  $\mu\text{m}$  (y), 35.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

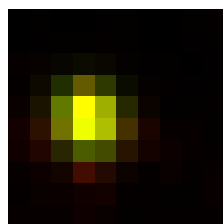
FWHM	Non corrected	Corrected	Theoretical
min	483 nm	499 nm	223 nm
max	523 nm	541 nm	223 nm
z	1.33 $\mu\text{m}$	1.34 $\mu\text{m}$	885 nm
Asymmetry	0.923		
Theta	-57.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1157.619 (brightness)

B = 131.646 (background)

a = 0.551 px

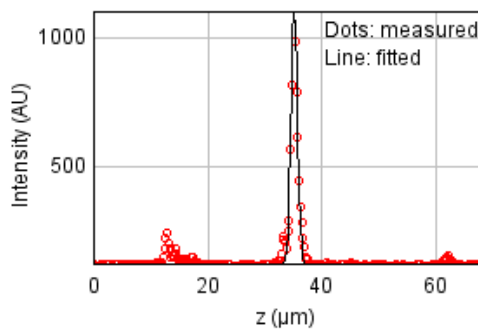
b = -0.038 px

c = 0.514 px

xc = 3.204 px

yc = 4.526 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 174928.967

Standard deviation: 23.87051

$R^2$ : 0.96054

Parameters:

a = 121.19066

b = 1102.91754

c = 35.21891

d = 0.56504

## Bead 608 (Rejected)

Date : Mon Oct 17 13:28:26 PDT 2022

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

Frame size : 10 pixels

Coordinates : -40.6  $\mu\text{m}$  (x), -46.0  $\mu\text{m}$  (y), 14.0  $\mu\text{m}$  (z)

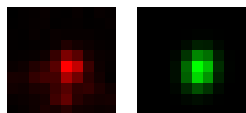
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

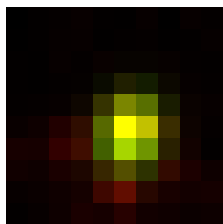
FWHM	Non corrected	Corrected	Theoretical
min	474 nm	490 nm	223 nm
max	580 nm	599 nm	223 nm
z	1.68 $\mu\text{m}$	1.69 $\mu\text{m}$	885 nm
Asymmetry	0.818		
Theta	77.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.866$



Parameters:

A = 698.014 (brightness)

B = 139.629 (background)

a = 0.586 px

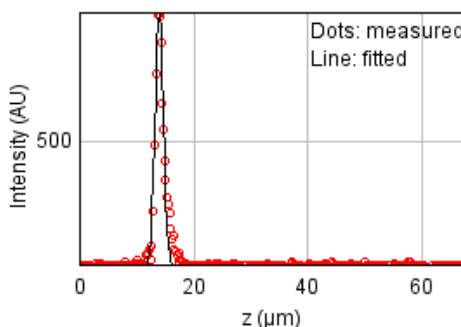
b = 0.043 px

c = 0.409 px

xc = 5.241 px

yc = 5.259 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 164850.035

Standard deviation: 23.17263

$R^2$ : 0.95365

Parameters:

a = 115.75907

b = 898.63038

c = 14.02232

d = 0.71360



## Bead 609

Date : Mon Oct 17 13:28:26 PDT 2022

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

Frame size : 10 pixels

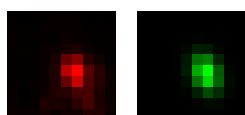
Coordinates : 34.7  $\mu\text{m}$  (x), -46.9  $\mu\text{m}$  (y), 13.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

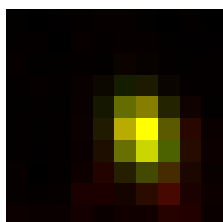
FWHM	Non corrected	Corrected	Theoretical
min	418 nm	432 nm	223 nm
max	584 nm	604 nm	223 nm
z	1.32 $\mu\text{m}$	1.33 $\mu\text{m}$	885 nm
Asymmetry	0.715		
Theta	-68.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.935$



Parameters:

$A = 842.933$  (brightness)

$B = 132.057$  (background)

$a = 0.719$  px

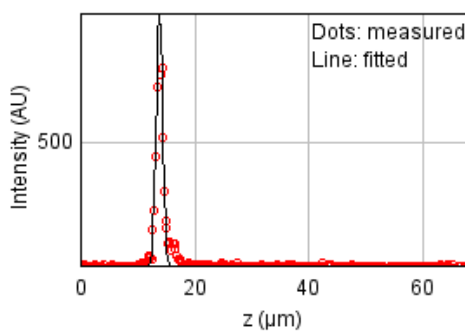
$b = -0.127$  px

$c = 0.442$  px

$x_c = 5.819$  px

$y_c = 5.248$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 85058.9340

Standard deviation: 16.64527

$R^2 = 0.96987$

Parameters:

$a = 115.27754$

$b = 904.75636$

$c = 13.87450$

$d = 0.56169$

## Bead 610

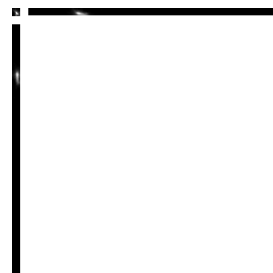
Date : Mon Oct 17 13:28:26 PDT 2022

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

Frame size : 10 pixels

Coordinates : 95.1  $\mu\text{m}$  (x), -51.5  $\mu\text{m}$  (y), 13.7  $\mu\text{m}$  (z)

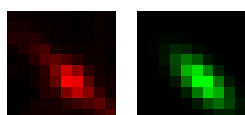
Corresponding bead : Not found



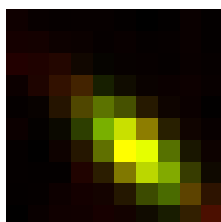
FWHM	Non corrected	Corrected	Theoretical
min	433 nm	448 nm	223 nm
max	1.0 $\mu\text{m}$	1.04 $\mu\text{m}$	223 nm
z	1.54 $\mu\text{m}$	1.55 $\mu\text{m}$	885 nm
Asymmetry	0.431		
Theta	-43.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.935$



Parameters:

$A = 481.843$  (brightness)

$B = 126.721$  (background)

$a = 0.407$  px

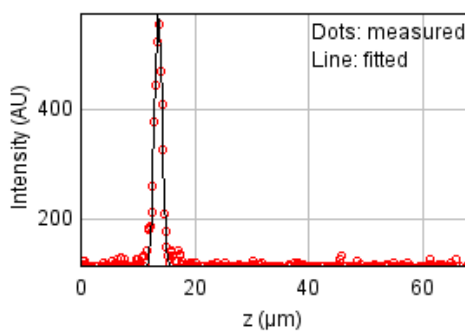
$b = -0.291$  px

$c = 0.441$  px

$x_c = 5.476$  px

$y_c = 5.959$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28260.7083

Standard deviation: 9.59450

$R^2: 0.97480$

Parameters:

$a = 114.12136$

$b = 577.63700$

$c = 13.67460$

$d = 0.65395$

## Bead 611

Date : Mon Oct 17 13:28:26 PDT 2022

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

Frame size : 10 pixels

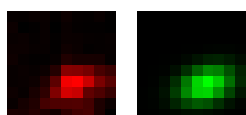
Coordinates : 27.2  $\mu\text{m}$  (x), -59.9  $\mu\text{m}$  (y), 10.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

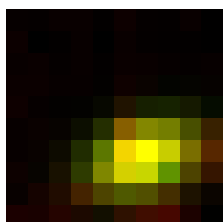
FWHM	Non corrected	Corrected	Theoretical
min	554 nm	572 nm	223 nm
max	873 nm	903 nm	223 nm
z	2.19 $\mu\text{m}$	2.2 $\mu\text{m}$	885 nm
Asymmetry	0.634		
Theta	18.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 367.028$  (brightness)

$B = 119.134$  (background)

$a = 0.202$  px

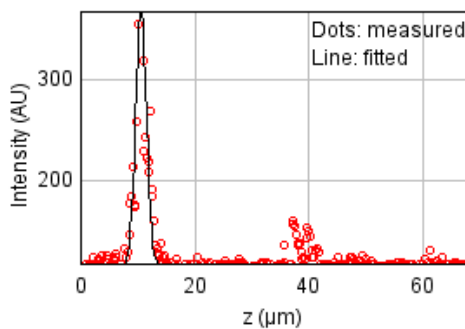
$b = 0.078$  px

$c = 0.412$  px

$xc = 5.833$  px

$yc = 6.314$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 85582.5790

Standard deviation: 16.69643

$R^2: 0.84355$

Parameters:

$a = 115.68532$

$b = 369.87481$

$c = 10.67420$

$d = 0.93189$

## Bead 612

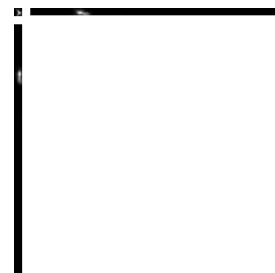
Date : Mon Oct 17 13:28:27 PDT 2022

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

Frame size : 10 pixels

Coordinates : 87.5  $\mu\text{m}$  (x), -67.9  $\mu\text{m}$  (y), 13.4  $\mu\text{m}$  (z)

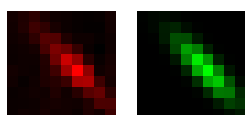
Corresponding bead : Not found



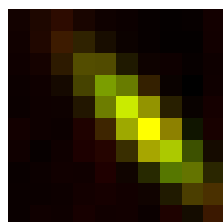
FWHM	Non corrected	Corrected	Theoretical
min	374 nm	387 nm	223 nm
max	1.31 $\mu\text{m}$	1.35 $\mu\text{m}$	223 nm
z	1.93 $\mu\text{m}$	1.94 $\mu\text{m}$	885 nm
Asymmetry	0.286		
Theta	-47.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 315.249$  (brightness)

$B = 121.711$  (background)

$a = 0.549$  px

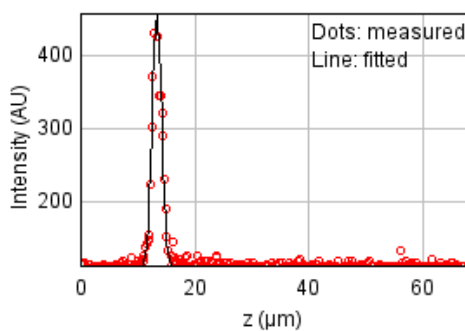
$b = -0.439$  px

$c = 0.487$  px

$x_c = 5.728$  px

$y_c = 4.815$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23669.6935

Standard deviation: 8.78066

$R^2 = 0.96934$

Parameters:

$a = 112.32951$

$b = 456.65363$

$c = 13.43842$

$d = 0.81861$

## Bead 613 (Rejected)

Date : Mon Oct 17 13:28:27 PDT 2022

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

Frame size : 10 pixels

Coordinates : -6.72  $\mu\text{m}$  (x), -78.3  $\mu\text{m}$  (y), 14.0  $\mu\text{m}$  (z)

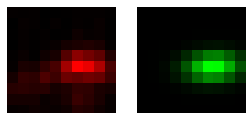
Corresponding bead : Not found

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

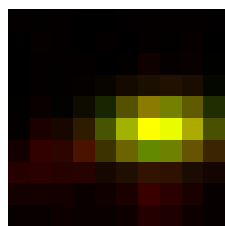
FWHM	Non corrected	Corrected	Theoretical
min	445 nm	460 nm	223 nm
max	851 nm	880 nm	223 nm
z	2.55 $\mu\text{m}$	2.56 $\mu\text{m}$	885 nm
Asymmetry	0.522		
Theta	2.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 470.469 (brightness)

B = 135.195 (background)

a = 0.186 px

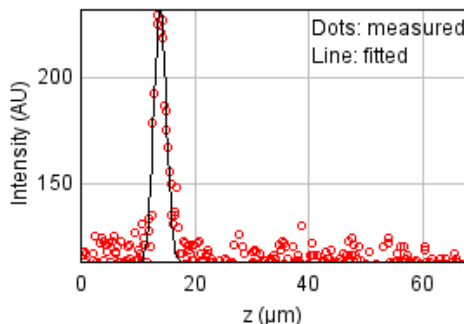
b = 0.023 px

c = 0.678 px

xc = 6.465 px

yc = 5.022 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17150.7996

Standard deviation: 7.47434

$R^2$ : 0.87083

Parameters:

a = 113.56720

b = 232.10672

c = 14.00167

d = 1.08270

## Bead 614 (Rejected)

Date : Mon Oct 17 13:28:27 PDT 2022

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

Frame size : 10 pixels

Coordinates : 40.0 um (x), -81.7 um (y), 6.79 um (z)

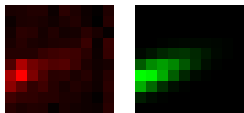
Corresponding bead : Not found

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

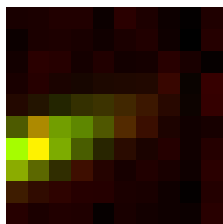
FWHM	Non corrected	Corrected	Theoretical
min	413 nm	426 nm	223 nm
max	1.51 um	1.56 um	223 nm
z	1.39 um	1.4 um	885 nm
Asymmetry	0.274		
Theta	20.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.834$



Parameters:

A = 92.974 (brightness)

B = 118.064 (background)

a = 0.146 px

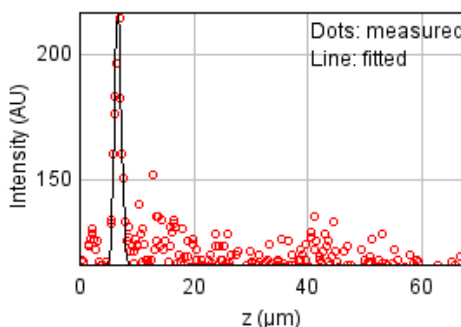
b = 0.236 px

c = 0.702 px

xc = -0.070 px

yc = 6.255 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20428.1324

Standard deviation: 8.15728

$R^2$ : 0.69663

Parameters:

a = 116.24769

b = 217.10550

c = 6.79422

d = 0.59062

## Bead 615

Date : Mon Oct 17 13:28:27 PDT 2022

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

Frame size : 10 pixels

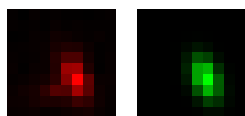
Coordinates : -57.7  $\mu\text{m}$  (x), 91.5  $\mu\text{m}$  (y), 14.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

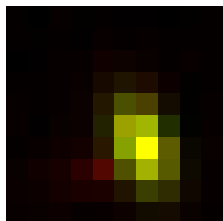
FWHM	Non corrected	Corrected	Theoretical
min	408 nm	422 nm	223 nm
max	685 nm	708 nm	223 nm
z	1.33 $\mu\text{m}$	1.33 $\mu\text{m}$	885 nm
Asymmetry	0.596		
Theta	-69.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.943$



Parameters:

$A = 771.736$  (brightness)

$B = 132.792$  (background)

$a = 0.743$  px

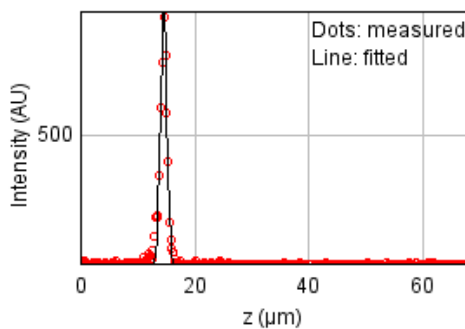
$b = -0.171$  px

$c = 0.350$  px

$x_c = 5.781$  px

$y_c = 5.878$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 51254.7597

Standard deviation: 12.92105

$R^2: 0.98038$

Parameters:

$a = 115.09095$

$b = 877.62492$

$c = 14.62026$

$d = 0.56341$

## Bead 616 (Rejected)

Date : Mon Oct 17 13:28:27 PDT 2022

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

Frame size : 10 pixels

Coordinates : 60.8  $\mu\text{m}$  (x), 64.3  $\mu\text{m}$  (y), 12.3  $\mu\text{m}$  (z)

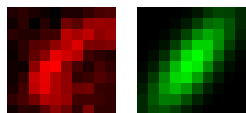
Corresponding bead : Not found

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

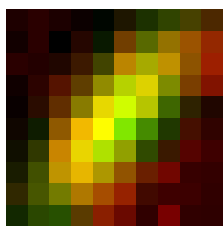
FWHM	Non corrected	Corrected	Theoretical
min	671 nm	694 nm	223 nm
max	1.8 $\mu\text{m}$	1.86 $\mu\text{m}$	223 nm
z	1.38 $\mu\text{m}$	1.39 $\mu\text{m}$	885 nm
Asymmetry	0.372		
Theta	52.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.651$



Parameters:

A = 84.164 (brightness)

B = 126.743 (background)

a = 0.201 px

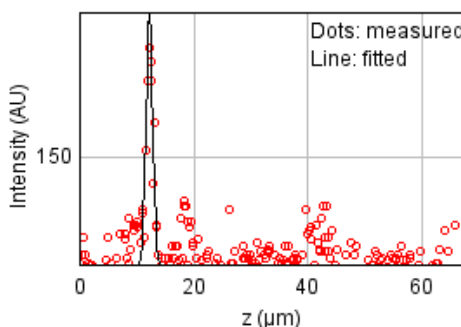
b = 0.124 px

c = 0.138 px

xc = 4.501 px

yc = 4.619 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17171.8032

Standard deviation: 7.47892

$R^2$ : 0.65252

Parameters:

a = 114.24793

b = 198.16243

c = 12.30176

d = 0.58638



## Bead 617 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : 158  $\mu\text{m}$  (x), 37.6  $\mu\text{m}$  (y), 12.8  $\mu\text{m}$  (z)

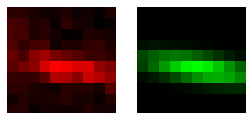
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

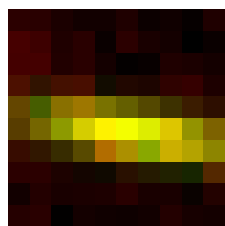
FWHM	Non corrected	Corrected	Theoretical
min	413 nm	427 nm	223 nm
max	1.8 $\mu\text{m}$	1.86 $\mu\text{m}$	223 nm
z	1.83 $\mu\text{m}$	1.84 $\mu\text{m}$	885 nm
Asymmetry	0.229		
Theta	-8.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 110.953 (brightness)

B = 114.821 (background)

a = 0.058 px

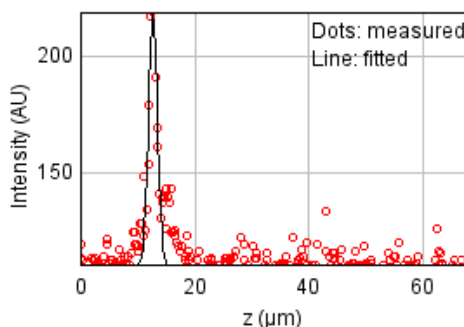
b = -0.110 px

c = 0.770 px

xc = 5.264 px

yc = 5.170 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18672.3750

Standard deviation: 7.79885

$R^2$ : 0.79032

Parameters:

a = 110.64983

b = 218.95955

c = 12.75054

d = 0.77618

## Bead 618

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

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

Frame size : 10 pixels

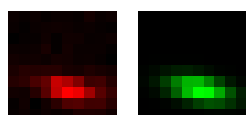
Coordinates : 108  $\mu\text{m}$  (x), 21.6  $\mu\text{m}$  (y), 13.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

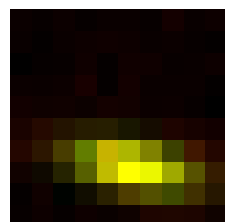
FWHM	Non corrected	Corrected	Theoretical
min	383 nm	396 nm	223 nm
max	969 nm	1.0 $\mu\text{m}$	223 nm
z	2.46 $\mu\text{m}$	2.47 $\mu\text{m}$	885 nm
Asymmetry	0.395		
Theta	-11.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 345.173$  (brightness)

$B = 118.130$  (background)

$a = 0.174$  px

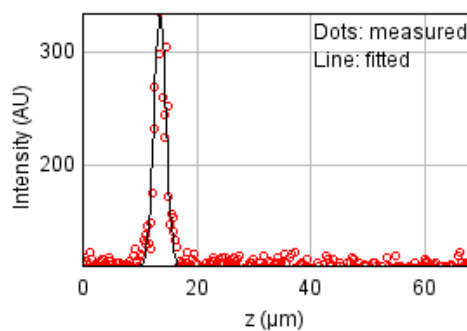
$b = -0.152$  px

$c = 0.885$  px

$x_c = 5.164$  px

$y_c = 6.720$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 40491.7261

Standard deviation: 11.48455

$R^2: 0.90635$

Parameters:

$a = 111.74006$

$b = 333.56819$

$c = 13.63392$

$d = 1.04574$

## Bead 619

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

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

Frame size : 10 pixels

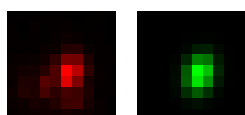
Coordinates : -56.7  $\mu\text{m}$  (x), 18.6  $\mu\text{m}$  (y), 14.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

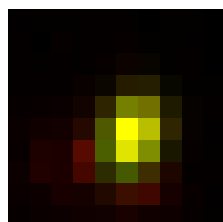
FWHM	Non corrected	Corrected	Theoretical
min	438 nm	452 nm	223 nm
max	594 nm	614 nm	223 nm
z	1.55 $\mu\text{m}$	1.56 $\mu\text{m}$	885 nm
Asymmetry	0.737		
Theta	73.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.905$



Parameters:

A = 878.542 (brightness)

B = 141.742 (background)

a = 0.674 px

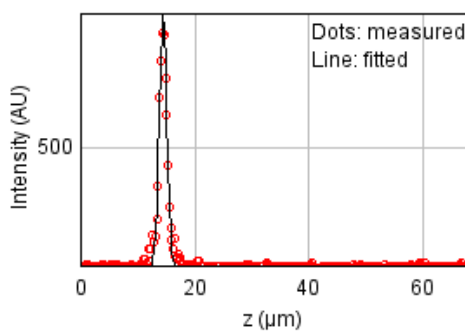
b = 0.088 px

c = 0.408 px

xc = 5.242 px

yc = 5.300 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 69929.2132

Standard deviation: 15.09246

$R^2$ : 0.97996

Parameters:

a = 115.54943

b = 932.74481

c = 14.51776

d = 0.65834

## Bead 620

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

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

Frame size : 10 pixels

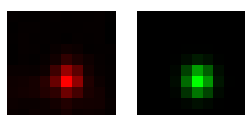
Coordinates : -36.5  $\mu\text{m}$  (x), -2.83  $\mu\text{m}$  (y), 14.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

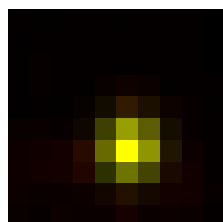
FWHM	Non corrected	Corrected	Theoretical
min	435 nm	449 nm	223 nm
max	461 nm	476 nm	223 nm
z	1.68 $\mu\text{m}$	1.68 $\mu\text{m}$	885 nm
Asymmetry	0.943		
Theta	84.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 990.700 (brightness)

B = 128.589 (background)

a = 0.710 px

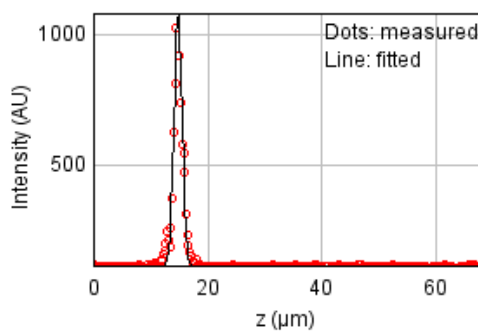
b = 0.007 px

c = 0.633 px

$x_c = 5.120$  px

$y_c = 5.881$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 123712.817

Standard deviation: 20.07420

$R^2$ : 0.97689

Parameters:

a = 114.68486

b = 1087.48891

c = 14.87350

d = 0.71257

## Bead 621

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

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

Frame size : 10 pixels

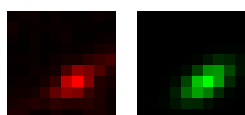
Coordinates : -143  $\mu\text{m}$  (x), -26.0  $\mu\text{m}$  (y), 13.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

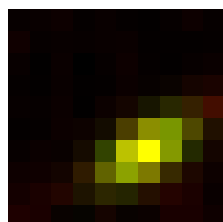
FWHM	Non corrected	Corrected	Theoretical
min	399 nm	413 nm	223 nm
max	787 nm	813 nm	223 nm
z	1.5 $\mu\text{m}$	1.51 $\mu\text{m}$	885 nm
Asymmetry	0.508		
Theta	32.2°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 341.867$  (brightness)

$B = 118.195$  (background)

$a = 0.394$  px

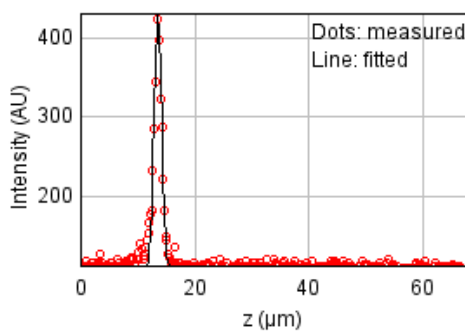
$b = 0.282$  px

$c = 0.664$  px

$x_c = 5.844$  px

$y_c = 6.005$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22903.0130

Standard deviation: 8.63728

$R^2: 0.95649$

Parameters:

$a = 111.96632$

$b = 430.52060$

$c = 13.61135$

$d = 0.63710$

## Bead 622

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

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

Frame size : 10 pixels

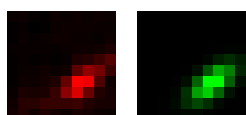
Coordinates : -145  $\mu\text{m}$  (x), -32.2  $\mu\text{m}$  (y), 13.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

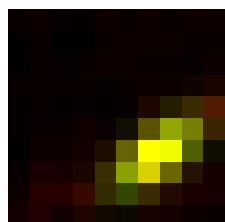
FWHM	Non corrected	Corrected	Theoretical
min	378 nm	391 nm	223 nm
max	798 nm	825 nm	223 nm
z	1.7 $\mu\text{m}$	1.71 $\mu\text{m}$	885 nm
Asymmetry	0.474		
Theta	37.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 340.510 (brightness)

B = 114.604 (background)

a = 0.484 px

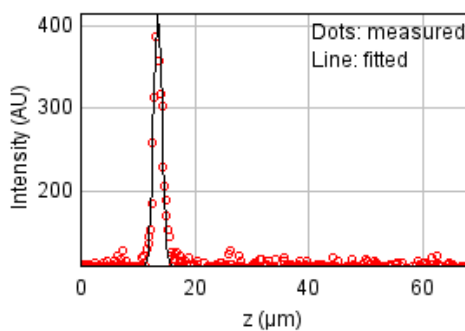
b = 0.352 px

c = 0.664 px

xc = 6.391 px

yc = 6.137 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22999.7742

Standard deviation: 8.65551

$R^2$ : 0.95764

Parameters:

a = 110.01534

b = 414.66723

c = 13.59667

d = 0.72261

## Bead 623

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

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

Frame size : 10 pixels

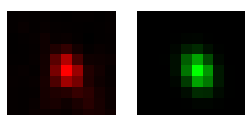
Coordinates : 60.5  $\mu\text{m}$  (x), -50.2  $\mu\text{m}$  (y), 14.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

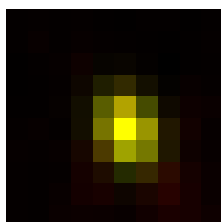
FWHM	Non corrected	Corrected	Theoretical
min	433 nm	447 nm	223 nm
max	580 nm	599 nm	223 nm
z	1.28 $\mu\text{m}$	1.29 $\mu\text{m}$	885 nm
Asymmetry	0.746		
Theta	-66.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1199.188$  (brightness)

$B = 136.990$  (background)

$a = 0.665$  px

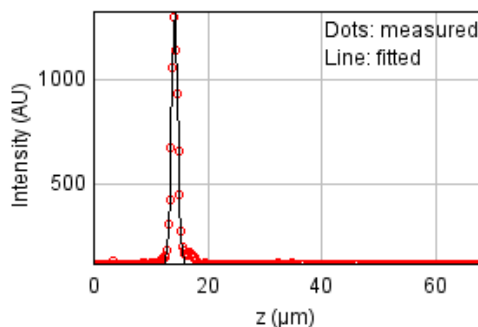
$b = -0.117$  px

$c = 0.451$  px

$x_c = 5.100$  px

$y_c = 5.026$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 55315.1834

Standard deviation: 13.42311

$R^2: 0.99121$

Parameters:

$a = 113.68069$

$b = 1322.62080$

$c = 14.27358$

$d = 0.54524$

## Bead 624 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : 147  $\mu\text{m}$  (x), -53.1  $\mu\text{m}$  (y), 60.9  $\mu\text{m}$  (z)

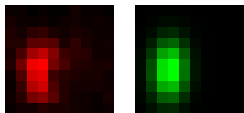
Corresponding bead : Not found

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

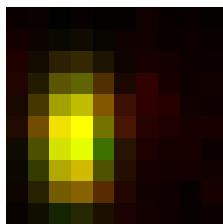
FWHM	Non corrected	Corrected	Theoretical
min	539 nm	557 nm	223 nm
max	930 nm	961 nm	223 nm
z	1.16 $\mu\text{m}$	1.16 $\mu\text{m}$	885 nm
Asymmetry	0.579		
Theta	88.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 370.464 (brightness)

B = 127.748 (background)

a = 0.462 px

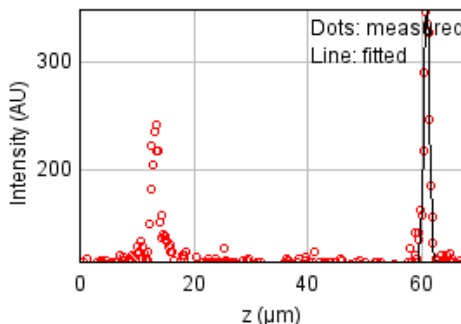
b = 0.009 px

c = 0.155 px

xc = 2.635 px

yc = 5.507 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 104057.702

Standard deviation: 18.41060

$R^2$ : 0.66969

Parameters:

a = 115.29575

b = 349.24959

c = 60.87558

d = 0.49103



## Bead 625

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

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

Frame size : 10 pixels

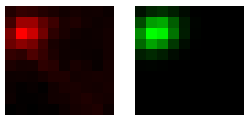
Coordinates : 55.5  $\mu\text{m}$  (x), -70.2  $\mu\text{m}$  (y), 14.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

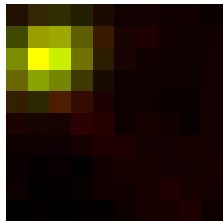
FWHM	Non corrected	Corrected	Theoretical
min	520 nm	538 nm	223 nm
max	665 nm	688 nm	223 nm
z	2.15 $\mu\text{m}$	2.15 $\mu\text{m}$	885 nm
Asymmetry	0.783		
Theta	23.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 564.797$  (brightness)

$B = 152.723$  (background)

$a = 0.333$  px

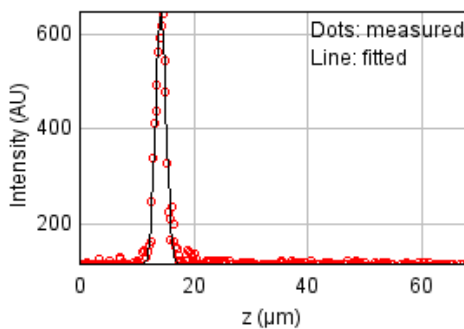
$b = 0.069$  px

$c = 0.466$  px

$x_c = 1.405$  px

$y_c = 1.958$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 55214.9529

Standard deviation: 13.41094

$R^2: 0.97307$

Parameters:

$a = 113.97243$

$b = 648.19024$

$c = 14.30701$

$d = 0.91108$

## Bead 626 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : 121  $\mu\text{m}$  (x), -89.3  $\mu\text{m}$  (y), 60.9  $\mu\text{m}$  (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°		

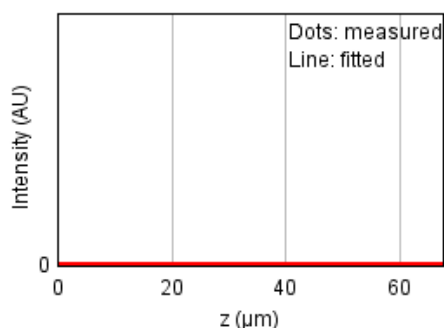
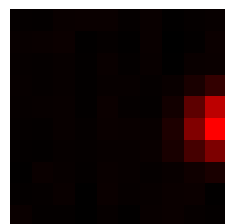
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 0.00000E0

Standard deviation: 0.00000E0

R<sup>2</sup>: 0.00000

Parameters:

a = 0.00000E0

b = 0.00000E0

c = -0.11115

d = 0.11151

## Bead 627 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : 53.2  $\mu\text{m}$  (x), 95.5  $\mu\text{m}$  (y), 12.6  $\mu\text{m}$  (z)

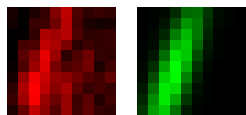
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

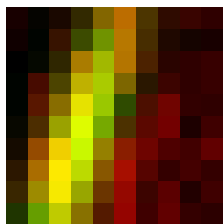
FWHM	Non corrected	Corrected	Theoretical
min	534 nm	552 nm	223 nm
max	2.57 $\mu\text{m}$	2.65 $\mu\text{m}$	223 nm
z	1.07 $\mu\text{m}$	1.07 $\mu\text{m}$	885 nm
Asymmetry	0.208		
Theta	71.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.684$



Parameters:

A = 68.043 (brightness)

B = 134.414 (background)

a = 0.427 px

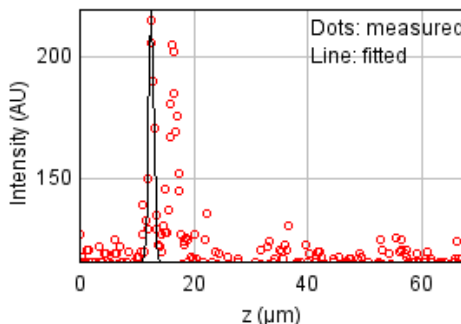
b = 0.133 px

c = 0.064 px

xc = 2.758 px

yc = 5.894 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 53716.1287

Standard deviation: 13.22766

$R^2$ : 0.42608

Parameters:

a = 115.36094

b = 221.19208

c = 12.63185

d = 0.45267

## Bead 628

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

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

Frame size : 10 pixels

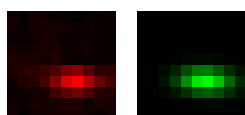
Coordinates : 119  $\mu\text{m}$  (x), 45.6  $\mu\text{m}$  (y), 14.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

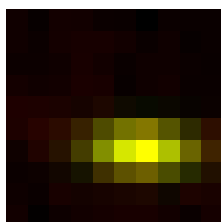
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	404 nm	223 nm
max	844 nm	872 nm	223 nm
z	2.15 $\mu\text{m}$	2.16 $\mu\text{m}$	885 nm
Asymmetry	0.464		
Theta	-2.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 308.926$  (brightness)

$B = 119.301$  (background)

$a = 0.190$  px

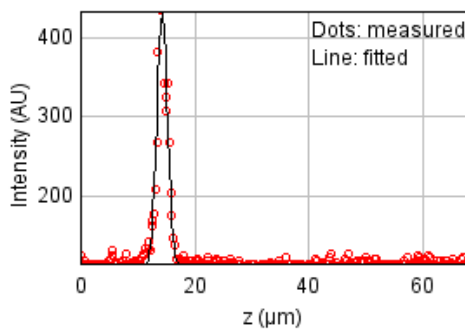
$b = -0.029$  px

$c = 0.876$  px

$x_c = 5.750$  px

$y_c = 5.928$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 34513.0712

Standard deviation: 10.60285

$R^2: 0.95480$

Parameters:

$a = 112.51348$

$b = 435.25085$

$c = 14.37349$

$d = 0.91234$

## Bead 629 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : -56.5  $\mu\text{m}$  (x), 18.4  $\mu\text{m}$  (y), 16.0  $\mu\text{m}$  (z)

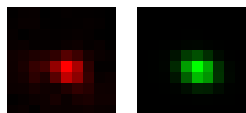
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

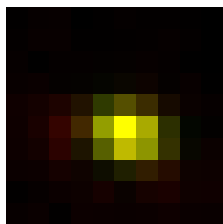
FWHM	Non corrected	Corrected	Theoretical
min	416 nm	430 nm	223 nm
max	565 nm	584 nm	223 nm
z	1.6 $\mu\text{m}$	1.61 $\mu\text{m}$	885 nm
Asymmetry	0.737		
Theta	-15.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 533.201 (brightness)

B = 124.413 (background)

a = 0.446 px

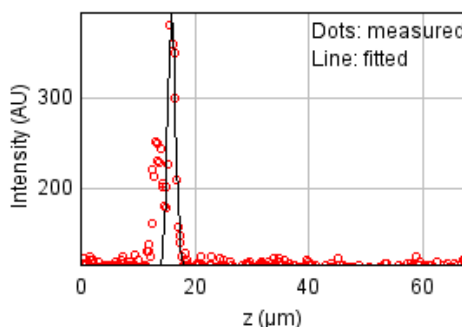
b = -0.092 px

c = 0.748 px

xc = 5.106 px

yc = 5.301 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 141720.319

Standard deviation: 21.48557

$R^2$ : 0.74155

Parameters:

a = 116.70904

b = 393.85745

c = 16.03418

d = 0.68137

## Bead 630

Date : Mon Oct 17 13:28:30 PDT 2022

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

Frame size : 10 pixels

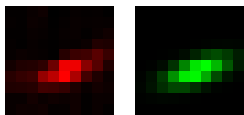
Coordinates : -158  $\mu\text{m}$  (x), 3.63  $\mu\text{m}$  (y), 14.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

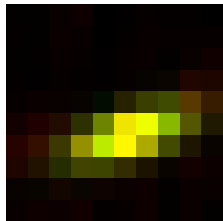
FWHM	Non corrected	Corrected	Theoretical
min	368 nm	381 nm	223 nm
max	983 nm	1.02 $\mu\text{m}$	223 nm
z	2.38 $\mu\text{m}$	2.39 $\mu\text{m}$	885 nm
Asymmetry	0.375		
Theta	17.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 475.183 (brightness)

B = 117.894 (background)

a = 0.219 px

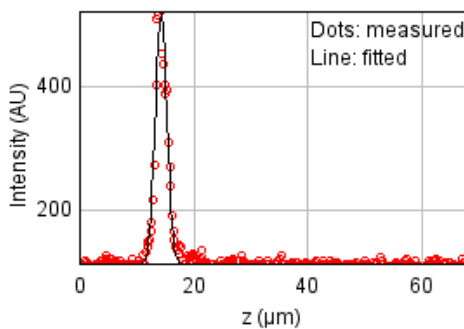
b = 0.249 px

c = 0.910 px

xc = 5.200 px

yc = 5.490 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 52236.7827

Standard deviation: 13.04425

$R^2$ : 0.96095

Parameters:

a = 112.32589

b = 520.52465

c = 14.35743

d = 1.01090

## Bead 631

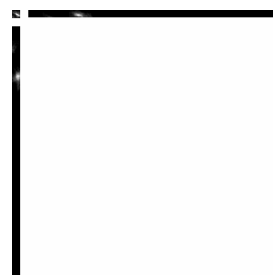
Date : Mon Oct 17 13:28:30 PDT 2022

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

Frame size : 10 pixels

Coordinates : 142  $\mu\text{m}$  (x), -24.5  $\mu\text{m}$  (y), 13.5  $\mu\text{m}$  (z)

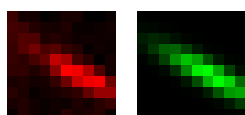
Corresponding bead : Not found



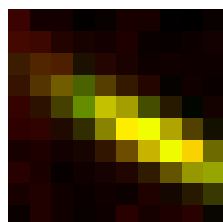
FWHM	Non corrected	Corrected	Theoretical
min	372 nm	385 nm	223 nm
max	1.71 $\mu\text{m}$	1.77 $\mu\text{m}$	223 nm
z	1.82 $\mu\text{m}$	1.83 $\mu\text{m}$	885 nm
Asymmetry	0.218		
Theta	-28.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.933$



Parameters:

A = 154.448 (brightness)

B = 119.319 (background)

a = 0.255 px

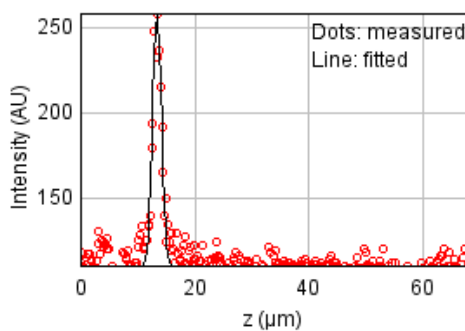
b = -0.386 px

c = 0.761 px

xc = 6.213 px

yc = 5.378 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17676.4535

Standard deviation: 7.58802

$R^2$ : 0.88075

Parameters:

a = 110.80716

b = 258.44507

c = 13.45737

d = 0.77484

## Bead 632 (Rejected)

Date : Mon Oct 17 13:28:30 PDT 2022

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

Frame size : 10 pixels

Coordinates : 147  $\mu\text{m}$  (x), -53.1  $\mu\text{m}$  (y), 60.9  $\mu\text{m}$  (z)

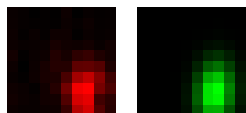
Corresponding bead : Not found

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

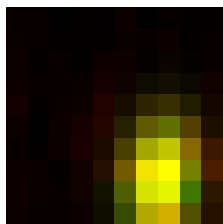
FWHM	Non corrected	Corrected	Theoretical
min	576 nm	595 nm	223 nm
max	954 nm	987 nm	223 nm
z	1.16 $\mu\text{m}$	1.16 $\mu\text{m}$	885 nm
Asymmetry	0.603		
Theta	84.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 375.196 (brightness)

B = 113.823 (background)

a = 0.403 px

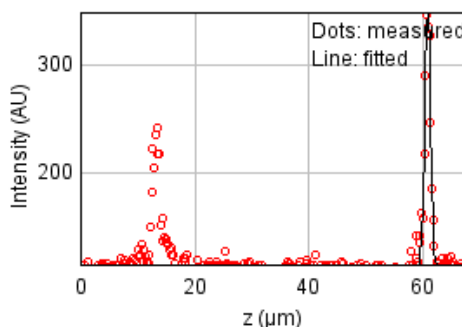
b = 0.023 px

c = 0.150 px

xc = 6.623 px

yc = 7.421 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 104057.702

Standard deviation: 18.41060

$R^2$ : 0.66969

Parameters:

a = 115.29575

b = 349.24959

c = 60.87558

d = 0.49103



## Bead 633 (Rejected)

Date : Mon Oct 17 13:28:30 PDT 2022

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

Frame size : 10 pixels

Coordinates : -29.5  $\mu\text{m}$  (x), -55.5  $\mu\text{m}$  (y), 14.3  $\mu\text{m}$  (z)

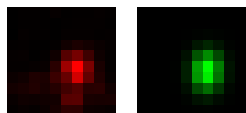
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

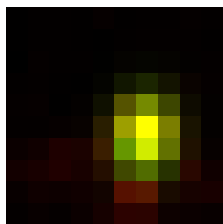
FWHM	Non corrected	Corrected	Theoretical
min	476 nm	492 nm	223 nm
max	621 nm	642 nm	223 nm
z	1.37 $\mu\text{m}$	1.37 $\mu\text{m}$	885 nm
Asymmetry	0.766		
Theta	86.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.896$



Parameters:

A = 847.263 (brightness)

B = 139.395 (background)

a = 0.592 px

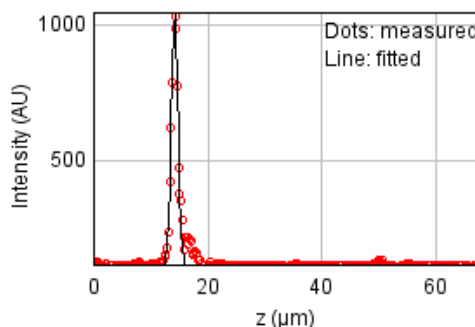
b = 0.015 px

c = 0.349 px

xc = 5.893 px

yc = 5.389 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 125344.137

Standard deviation: 20.20612

$R^2$ : 0.96888

Parameters:

a = 117.79254

b = 1045.21318

c = 14.27678

d = 0.58087

## Bead 634 (Rejected)

Date : Mon Oct 17 13:28:31 PDT 2022

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

Frame size : 10 pixels

Coordinates : 81.6  $\mu\text{m}$  (x), -79.0  $\mu\text{m}$  (y), 50.8  $\mu\text{m}$  (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	1.07 $\mu\text{m}$	1.08 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

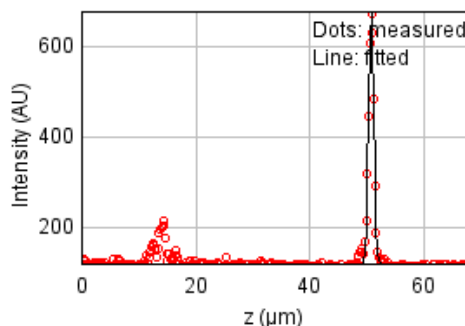
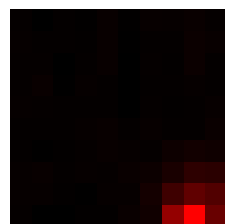
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 75537.2869

Standard deviation: 15.68597

R<sup>2</sup>: 0.93690

Parameters:

a = 117.24867

b = 676.68633

c = 50.82211

d = 0.45566

## Bead 635

Date : Mon Oct 17 13:28:31 PDT 2022

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

Frame size : 10 pixels

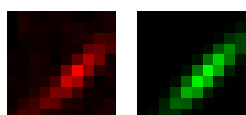
Coordinates : -161  $\mu\text{m}$  (x), -85.9  $\mu\text{m}$  (y), 13.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

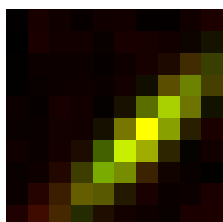
FWHM	Non corrected	Corrected	Theoretical
min	340 nm	351 nm	223 nm
max	1.42 $\mu\text{m}$	1.47 $\mu\text{m}$	223 nm
z	1.42 $\mu\text{m}$	1.42 $\mu\text{m}$	885 nm
Asymmetry	0.239		
Theta	44.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 199.577$  (brightness)

$B = 113.963$  (background)

$a = 0.612$  px

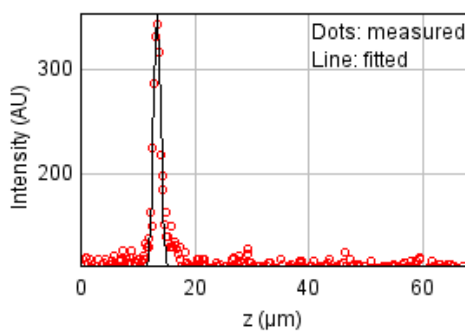
$b = 0.547$  px

$c = 0.615$  px

$xc = 5.827$  px

$yc = 5.336$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24212.2324

Standard deviation: 8.88072

$R^2: 0.92018$

Parameters:

$a = 112.03245$

$b = 355.65332$

$c = 13.48724$

$d = 0.60272$

## Bead 636

Date : Mon Oct 17 13:28:31 PDT 2022

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

Frame size : 10 pixels

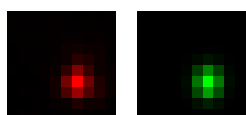
Coordinates : -67.1  $\mu\text{m}$  (x), -93.5  $\mu\text{m}$  (y), 60.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

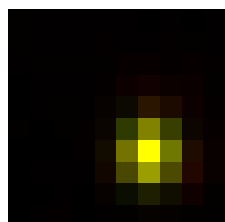
FWHM	Non corrected	Corrected	Theoretical
min	415 nm	429 nm	223 nm
max	482 nm	498 nm	223 nm
z	1.28 $\mu\text{m}$	1.29 $\mu\text{m}$	885 nm
Asymmetry	0.862		
Theta	87.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1578.204 (brightness)

B = 128.439 (background)

a = 0.778 px

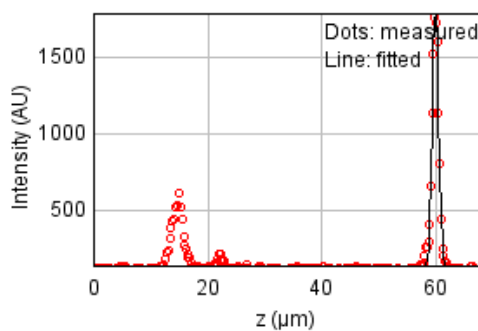
b = 0.009 px

c = 0.579 px

xc = 6.011 px

yc = 6.083 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 1805398.11

Standard deviation: 76.68622

$R^2$ : 0.86845

Parameters:

a = 137.04132

b = 1808.05475

c = 59.96667

d = 0.54536

## Bead 637 (Rejected)

Date : Mon Oct 17 13:28:31 PDT 2022

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

Frame size : 10 pixels

Coordinates : 94.4  $\mu\text{m}$  (x), -95.9  $\mu\text{m}$  (y), 54.9  $\mu\text{m}$  (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	1.18 $\mu\text{m}$	1.19 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

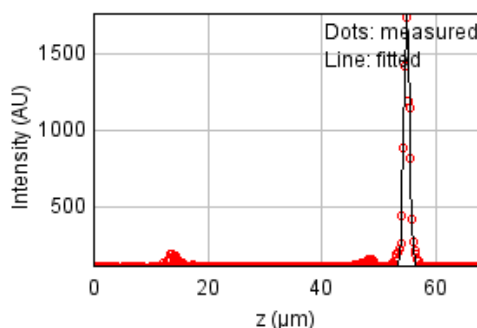
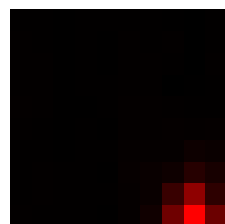
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 287282.069

Standard deviation: 30.59039

R<sup>2</sup>: 0.97393

Parameters:

a = 120.64855

b = 1770.16841

c = 54.93556

d = 0.50283

## Bead 638

Date : Mon Oct 17 13:28:31 PDT 2022

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

Frame size : 10 pixels

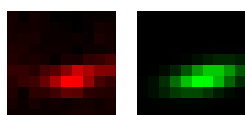
Coordinates : 143  $\mu\text{m}$  (x), 88.1  $\mu\text{m}$  (y), 14.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

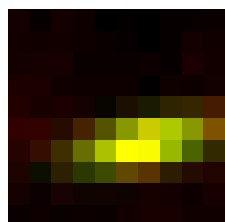
FWHM	Non corrected	Corrected	Theoretical
min	382 nm	395 nm	223 nm
max	1.08 $\mu\text{m}$	1.11 $\mu\text{m}$	223 nm
z	1.98 $\mu\text{m}$	1.98 $\mu\text{m}$	885 nm
Asymmetry	0.355		
Theta	11.2°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 266.925$  (brightness)

$B = 117.574$  (background)

$a = 0.147$  px

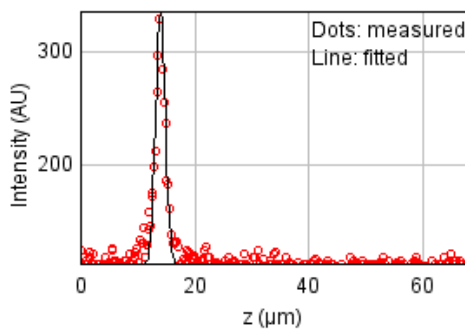
$b = 0.154$  px

$c = 0.890$  px

$x_c = 5.804$  px

$y_c = 5.653$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21922.8690

Standard deviation: 8.45044

$R^2: 0.93577$

Parameters:

$a = 112.49062$

$b = 334.73078$

$c = 14.07603$

$d = 0.83956$

## Bead 639 (Rejected)

Date : Mon Oct 17 13:28:31 PDT 2022

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

Frame size : 10 pixels

Coordinates : 158  $\mu\text{m}$  (x), 37.5  $\mu\text{m}$  (y), 13.0  $\mu\text{m}$  (z)

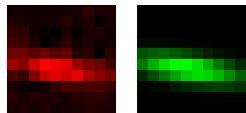
Corresponding bead : Not found

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

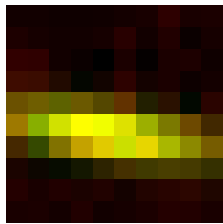
FWHM	Non corrected	Corrected	Theoretical
min	417 nm	431 nm	223 nm
max	1.71 $\mu\text{m}$	1.77 $\mu\text{m}$	223 nm
z	1.71 $\mu\text{m}$	1.72 $\mu\text{m}$	885 nm
Asymmetry	0.244		
Theta	-8.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.946$



Parameters:

A = 133.933 (brightness)

B = 111.215 (background)

a = 0.063 px

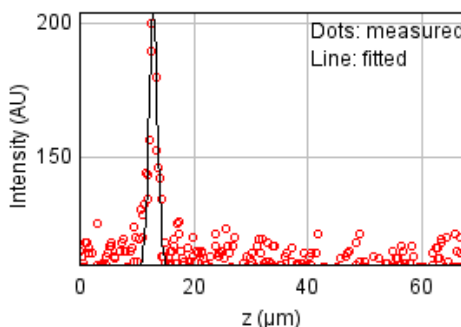
b = -0.110 px

c = 0.756 px

xc = 4.140 px

yc = 5.366 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15397.2238

Standard deviation: 7.08194

$R^2$ : 0.76147

Parameters:

a = 110.26626

b = 203.74498

c = 12.96476

d = 0.72576

## Bead 640

Date : Mon Oct 17 13:28:31 PDT 2022

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

Frame size : 10 pixels

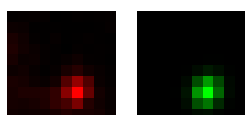
Coordinates : -54.6  $\mu\text{m}$  (x), -1.74  $\mu\text{m}$  (y), 15.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

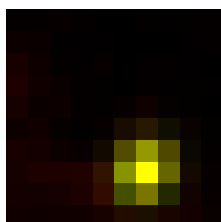
FWHM	Non corrected	Corrected	Theoretical
min	415 nm	429 nm	223 nm
max	473 nm	488 nm	223 nm
z	1.7 $\mu\text{m}$	1.71 $\mu\text{m}$	885 nm
Asymmetry	0.879		
Theta	59.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 909.081 (brightness)

B = 141.521 (background)

a = 0.732 px

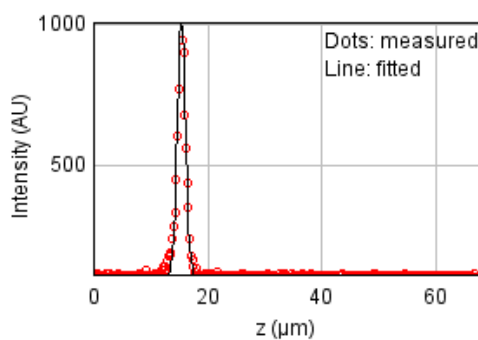
b = 0.078 px

c = 0.648 px

xc = 5.886 px

yc = 6.909 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 62021.6365

Standard deviation: 14.21355

$R^2$ : 0.98636

Parameters:

a = 114.32977

b = 1008.21184

c = 15.45965

d = 0.72387



## Bead 641 (Rejected)

Date : Mon Oct 17 13:28:31 PDT 2022

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

Frame size : 10 pixels

Coordinates : -23.1  $\mu\text{m}$  (x), -7.04  $\mu\text{m}$  (y), 36.7  $\mu\text{m}$  (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	1.13 $\mu\text{m}$	1.14 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

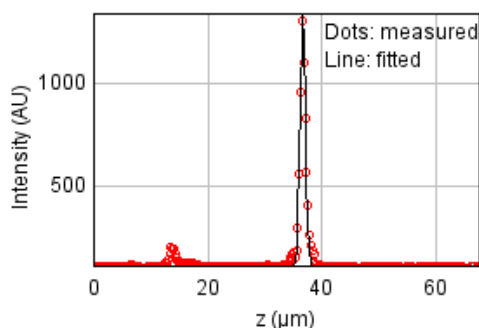
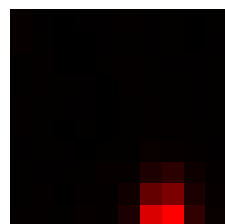
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 138301.390

Standard deviation: 21.22482

$R^2$ : 0.97589

Parameters:

a = 118.08023

b = 1335.65281

c = 36.72091

d = 0.48075

## Bead 642

Date : Mon Oct 17 13:28:32 PDT 2022

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

Frame size : 10 pixels

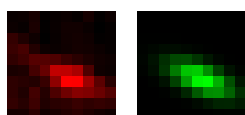
Coordinates : 127  $\mu\text{m}$  (x), -7.43  $\mu\text{m}$  (y), 14.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

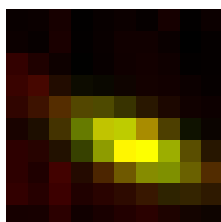
FWHM	Non corrected	Corrected	Theoretical
min	440 nm	455 nm	223 nm
max	1.05 $\mu\text{m}$	1.09 $\mu\text{m}$	223 nm
z	1.86 $\mu\text{m}$	1.87 $\mu\text{m}$	885 nm
Asymmetry	0.417		
Theta	-23.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.903$



Parameters:

A = 266.163 (brightness)

B = 126.094 (background)

a = 0.211 px

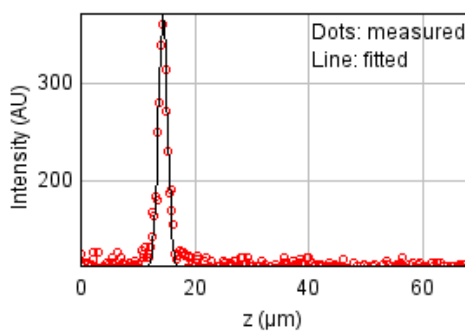
b = -0.209 px

c = 0.602 px

xc = 5.371 px

yc = 5.781 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20138.0738

Standard deviation: 8.09916

$R^2$ : 0.95365

Parameters:

a = 111.84902

b = 372.24758

c = 14.50479

d = 0.79123

## Bead 643

Date : Mon Oct 17 13:28:32 PDT 2022

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

Frame size : 10 pixels

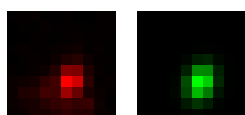
Coordinates : -56.2  $\mu\text{m}$  (x), -27.3  $\mu\text{m}$  (y), 14.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

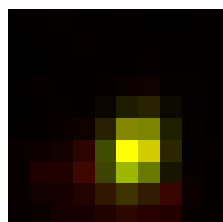
FWHM	Non corrected	Corrected	Theoretical
min	421 nm	435 nm	223 nm
max	551 nm	569 nm	223 nm
z	1.68 $\mu\text{m}$	1.68 $\mu\text{m}$	885 nm
Asymmetry	0.764		
Theta	70.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.914$



Parameters:

A = 679.420 (brightness)

B = 131.489 (background)

a = 0.721 px

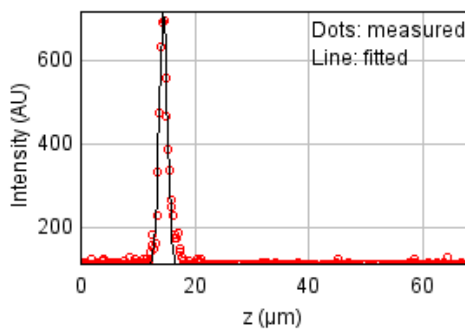
b = 0.100 px

c = 0.478 px

xc = 5.334 px

yc = 6.088 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 73099.4986

Standard deviation: 15.43078

$R^2$ : 0.96497

Parameters:

a = 114.52241

b = 718.42040

c = 14.56143

d = 0.71186

## Bead 644

Date : Mon Oct 17 13:28:32 PDT 2022

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

Frame size : 10 pixels

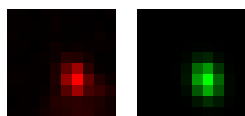
Coordinates : 32.7  $\mu\text{m}$  (x), -32.1  $\mu\text{m}$  (y), 14.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

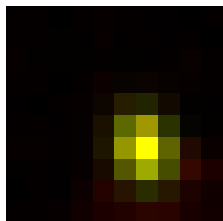
FWHM	Non corrected	Corrected	Theoretical
min	422 nm	436 nm	223 nm
max	547 nm	566 nm	223 nm
z	1.46 $\mu\text{m}$	1.47 $\mu\text{m}$	885 nm
Asymmetry	0.771		
Theta	-75.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 726.949$  (brightness)

$B = 128.353$  (background)

$a = 0.735$  px

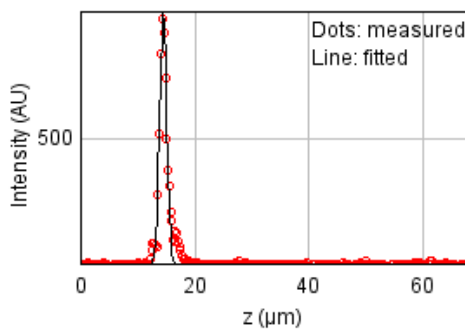
$b = -0.072$  px

$c = 0.466$  px

$x_c = 5.862$  px

$y_c = 6.037$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 110221.144

Standard deviation: 18.94800

$R^2: 0.96364$

Parameters:

$a = 116.12051$

$b = 893.02079$

$c = 14.53826$

$d = 0.62088$

## Bead 645

Date : Mon Oct 17 13:28:32 PDT 2022

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

Frame size : 10 pixels

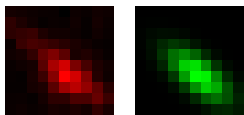
Coordinates : 106  $\mu\text{m}$  (x), -48.1  $\mu\text{m}$  (y), 14.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

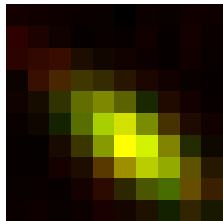
FWHM	Non corrected	Corrected	Theoretical
min	506 nm	523 nm	223 nm
max	1.15 $\mu\text{m}$	1.18 $\mu\text{m}$	223 nm
z	2.56 $\mu\text{m}$	2.57 $\mu\text{m}$	885 nm
Asymmetry	0.442		
Theta	-39.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 282.017$  (brightness)

$B = 117.542$  (background)

$a = 0.274$  px

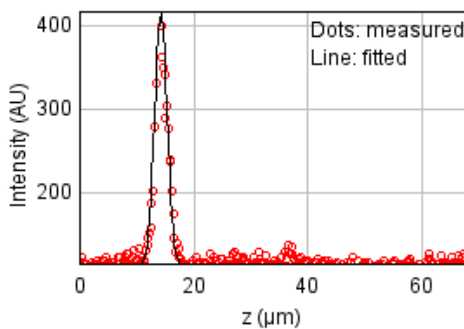
$b = -0.207$  px

$c = 0.352$  px

$x_c = 5.290$  px

$y_c = 5.850$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 49096.6960

Standard deviation: 12.64611

$R^2: 0.93991$

Parameters:

$a = 112.89160$

$b = 417.68889$

$c = 14.32056$

$d = 1.08800$

## Bead 646

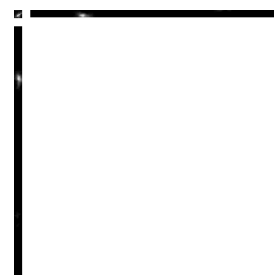
Date : Mon Oct 17 13:28:32 PDT 2022

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

Frame size : 10 pixels

Coordinates : -160  $\mu\text{m}$  (x), -52.5  $\mu\text{m}$  (y), 14.0  $\mu\text{m}$  (z)

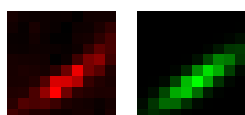
Corresponding bead : Not found



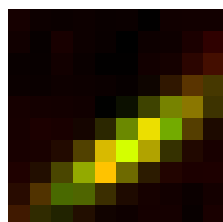
FWHM	Non corrected	Corrected	Theoretical
min	356 nm	368 nm	223 nm
max	1.46 $\mu\text{m}$	1.51 $\mu\text{m}$	223 nm
z	2.07 $\mu\text{m}$	2.07 $\mu\text{m}$	885 nm
Asymmetry	0.244		
Theta	34.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 202.049$  (brightness)

$B = 116.997$  (background)

$a = 0.376$  px

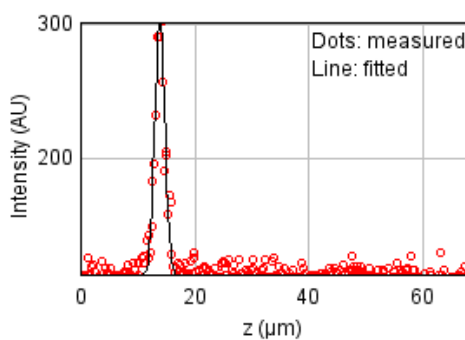
$b = 0.462$  px

$c = 0.747$  px

$x_c = 5.089$  px

$y_c = 5.860$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20264.5859

Standard deviation: 8.12456

$R^2: 0.92425$

Parameters:

$a = 111.56926$

$b = 303.06945$

$c = 13.96119$

$d = 0.87706$

## Bead 647

Date : Mon Oct 17 13:28:32 PDT 2022

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

Frame size : 10 pixels

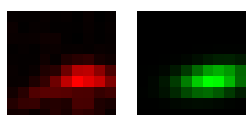
Coordinates : 5.17  $\mu\text{m}$  (x), -74.3  $\mu\text{m}$  (y), 15.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

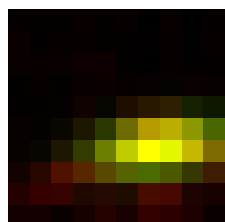
FWHM	Non corrected	Corrected	Theoretical
min	438 nm	453 nm	223 nm
max	1.06 $\mu\text{m}$	1.09 $\mu\text{m}$	223 nm
z	2.36 $\mu\text{m}$	2.37 $\mu\text{m}$	885 nm
Asymmetry	0.414		
Theta	7.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.914$



Parameters:

$A = 479.361$  (brightness)

$B = 131.020$  (background)

$a = 0.130$  px

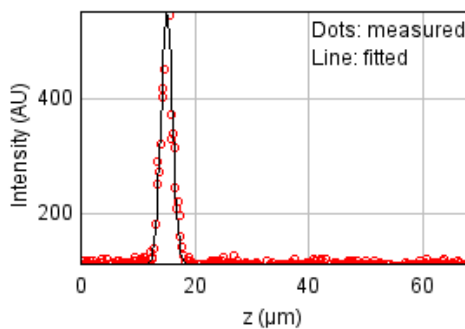
$b = 0.078$  px

$c = 0.688$  px

$x_c = 6.477$  px

$y_c = 5.811$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 56085.5094

Standard deviation: 13.51625

$R^2: 0.96313$

Parameters:

$a = 113.34744$

$b = 550.51646$

$c = 15.17914$

$d = 1.00421$

## Bead 648

Date : Mon Oct 17 13:28:32 PDT 2022

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

Frame size : 10 pixels

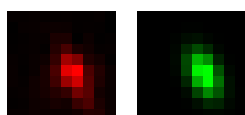
Coordinates : 50.1  $\mu\text{m}$  (x), -74.2  $\mu\text{m}$  (y), 14.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

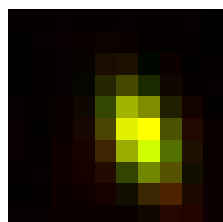
FWHM	Non corrected	Corrected	Theoretical
min	447 nm	462 nm	223 nm
max	752 nm	777 nm	223 nm
z	1.31 $\mu\text{m}$	1.32 $\mu\text{m}$	885 nm
Asymmetry	0.595		
Theta	-65.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 694.758 (brightness)

B = 128.009 (background)

a = 0.599 px

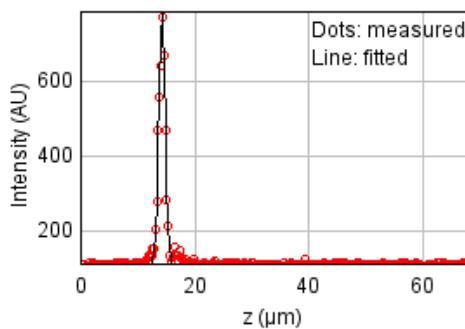
b = -0.162 px

c = 0.310 px

xc = 5.628 px

yc = 5.290 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33292.3409

Standard deviation: 10.41365

$R^2$ : 0.98358

Parameters:

a = 112.70595

b = 789.24755

c = 14.34054

d = 0.55687



## Bead 649 (Rejected)

Date : Mon Oct 17 13:28:33 PDT 2022

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

Frame size : 10 pixels

Coordinates : -43.1  $\mu\text{m}$  (x), -80.3  $\mu\text{m}$  (y), 21.3  $\mu\text{m}$  (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	1.24 $\mu\text{m}$	1.24 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

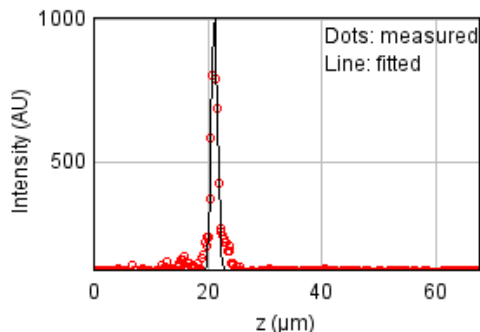
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 138489.621

Standard deviation: 21.23926

R<sup>2</sup>: 0.96021

Parameters:

a = 117.23279

b = 1017.49499

c = 21.25768

d = 0.52638

## Bead 650 (Rejected)

Date : Mon Oct 17 13:28:33 PDT 2022

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

Frame size : 10 pixels

Coordinates : -160  $\mu\text{m}$  (x), -86.8  $\mu\text{m}$  (y), 13.7  $\mu\text{m}$  (z)

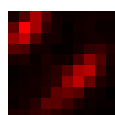
Corresponding bead : Not found

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	2.01 $\mu\text{m}$	2.02 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

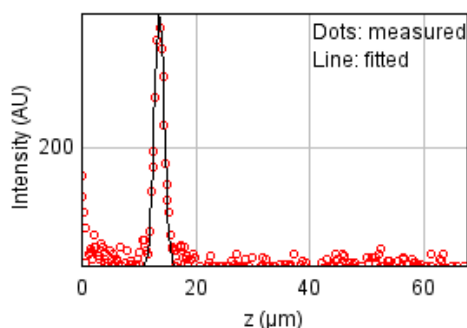
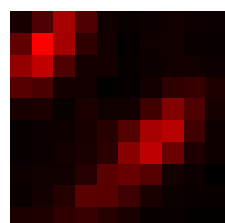
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 26684.6415

Standard deviation: 9.32312

R<sup>2</sup>: 0.89469

Parameters:

a = 112.79254

b = 298.61265

c = 13.68022

d = 0.85297

## Bead 651 (Rejected)

Date : Mon Oct 17 13:28:33 PDT 2022

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

Frame size : 10 pixels

Coordinates : -15.0  $\mu\text{m}$  (x), -89.6  $\mu\text{m}$  (y), 12.9  $\mu\text{m}$  (z)

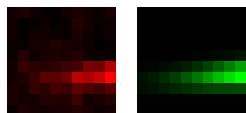
Corresponding bead : Not found

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

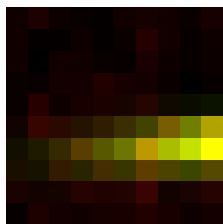
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	408 nm	223 nm
max	2.74 $\mu\text{m}$	2.84 $\mu\text{m}$	223 nm
z	2.23 $\mu\text{m}$	2.24 $\mu\text{m}$	885 nm
Asymmetry	0.144		
Theta	4.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 199.163 (brightness)

B = 115.649 (background)

a = 0.022 px

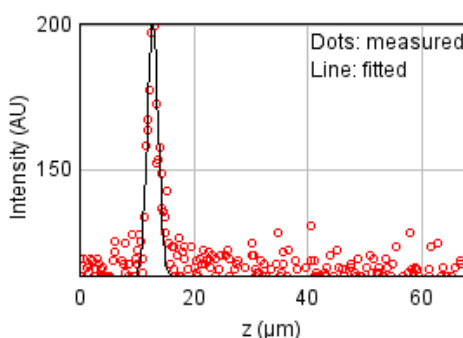
b = 0.061 px

c = 0.857 px

xc = 12.677 px

yc = 5.500 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14281.3039

Standard deviation: 6.82048

$R^2$ : 0.79505

Parameters:

a = 113.50734

b = 200.94547

c = 12.89424

d = 0.94629

## Bead 652

Date : Mon Oct 17 13:28:33 PDT 2022

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

Frame size : 10 pixels

Coordinates : 149 um (x), 87.0 um (y), 14.3 um (z)

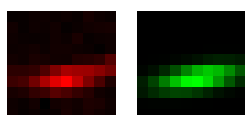
Corresponding bead : Not found



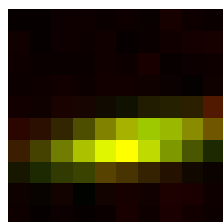
FWHM	Non corrected	Corrected	Theoretical
min	367 nm	379 nm	223 nm
max	1.31 um	1.35 um	223 nm
z	2.16 um	2.17 um	885 nm
Asymmetry	0.28		
Theta	8.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 243.170 (brightness)

B = 116.131 (background)

a = 0.099 px

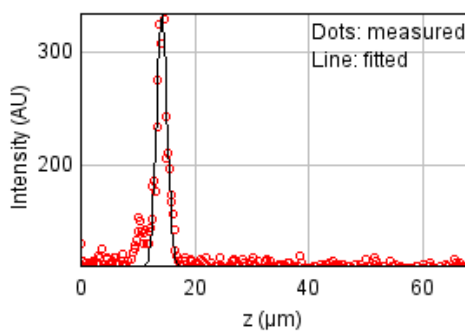
b = 0.138 px

c = 0.976 px

xc = 5.170 px

yc = 5.660 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30542.2586

Standard deviation: 9.97428

$R^2$ : 0.91936

Parameters:

a = 110.96980

b = 333.40741

c = 14.30783

d = 0.91749

## Bead 653 (Rejected)

Date : Mon Oct 17 13:28:33 PDT 2022

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

Frame size : 10 pixels

Coordinates : -91.0  $\mu\text{m}$  (x), 72.7  $\mu\text{m}$  (y), 15.4  $\mu\text{m}$  (z)

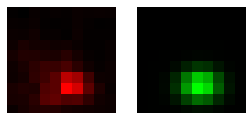
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

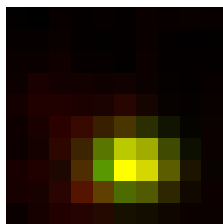
FWHM	Non corrected	Corrected	Theoretical
min	493 nm	509 nm	223 nm
max	625 nm	646 nm	223 nm
z	1.64 $\mu\text{m}$	1.65 $\mu\text{m}$	885 nm
Asymmetry	0.788		
Theta	0.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.888$



Parameters:

A = 384.283 (brightness)

B = 127.469 (background)

a = 0.343 px

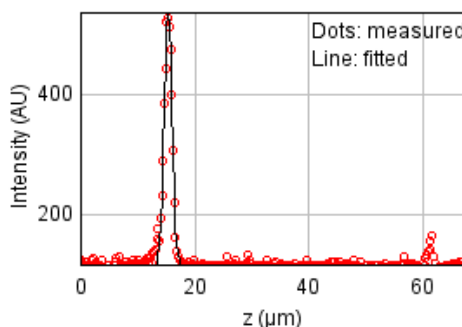
b = 0.003 px

c = 0.553 px

xc = 5.259 px

yc = 6.711 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 26051.0472

Standard deviation: 9.21178

$R^2$ : 0.97362

Parameters:

a = 115.19170

b = 536.42907

c = 15.40300

d = 0.69819

## Bead 654

Date : Mon Oct 17 13:28:33 PDT 2022

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

Frame size : 10 pixels

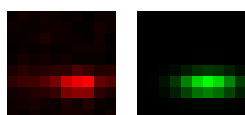
Coordinates : -160  $\mu\text{m}$  (x), 46.6  $\mu\text{m}$  (y), 14.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	349 nm	361 nm	223 nm
max	901 nm	932 nm	223 nm
z	2.37 $\mu\text{m}$	2.38 $\mu\text{m}$	885 nm
Asymmetry	0.388		
Theta	0.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.931$



Parameters:

$A = 213.319$  (brightness)

$B = 114.731$  (background)

$a = 0.165$  px

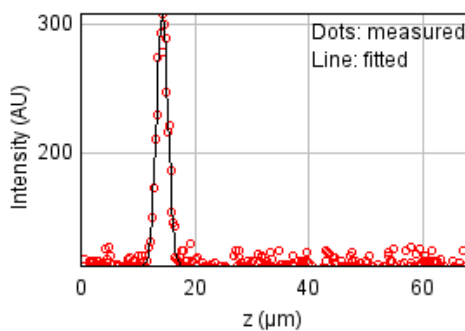
$b = 0.006$  px

$c = 1.099$  px

$x_c = 6.008$  px

$y_c = 6.192$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15324.2543

Standard deviation: 7.06514

$R^2: 0.95143$

Parameters:

$a = 111.74926$

$b = 309.50077$

$c = 14.38453$

$d = 1.00581$

## Bead 655

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

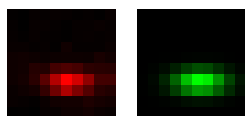
Coordinates : 110  $\mu\text{m}$  (x), 45.3  $\mu\text{m}$  (y), 14.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

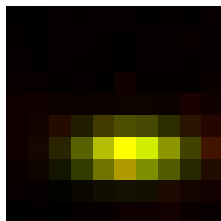
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	413 nm	223 nm
max	852 nm	881 nm	223 nm
z	1.67 $\mu\text{m}$	1.68 $\mu\text{m}$	885 nm
Asymmetry	0.469		
Theta	0.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 422.157$  (brightness)

$B = 118.746$  (background)

$a = 0.185$  px

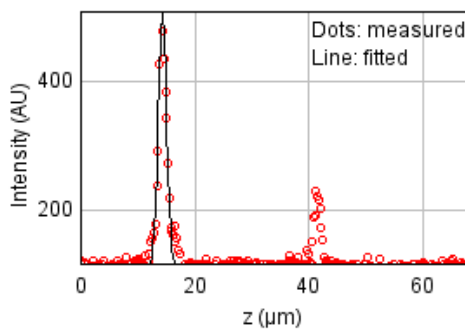
$b = -0.000$  px

$c = 0.840$  px

$x_c = 5.283$  px

$y_c = 6.201$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 100138.808

Standard deviation: 18.06059

$R^2: 0.89683$

Parameters:

$a = 115.50064$

$b = 513.30556$

$c = 14.40951$

$d = 0.70906$

## Bead 656

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

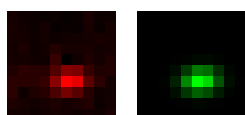
Coordinates : -145  $\mu\text{m}$  (x), 43.1  $\mu\text{m}$  (y), 14.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

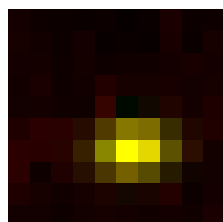
FWHM	Non corrected	Corrected	Theoretical
min	392 nm	405 nm	223 nm
max	580 nm	600 nm	223 nm
z	1.94 $\mu\text{m}$	1.95 $\mu\text{m}$	885 nm
Asymmetry	0.675		
Theta	4.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 255.284 (brightness)

B = 118.633 (background)

a = 0.401 px

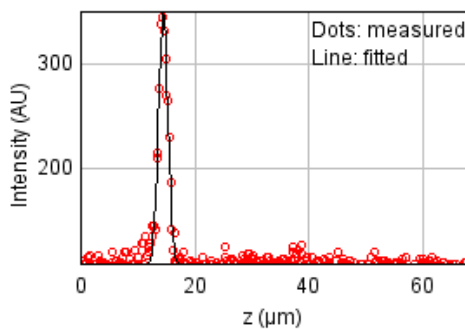
b = 0.037 px

c = 0.871 px

xc = 5.295 px

yc = 5.925 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17424.4310

Standard deviation: 7.53373

$R^2$ : 0.95411

Parameters:

a = 110.33637

b = 348.92595

c = 14.55129

d = 0.82562



## Bead 657

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

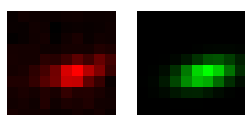
Coordinates : -151  $\mu\text{m}$  (x), 14.5  $\mu\text{m}$  (y), 14.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

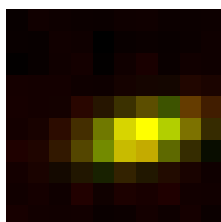
FWHM	Non corrected	Corrected	Theoretical
min	404 nm	417 nm	223 nm
max	903 nm	933 nm	223 nm
z	1.85 $\mu\text{m}$	1.85 $\mu\text{m}$	885 nm
Asymmetry	0.447		
Theta	12.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 298.717 (brightness)

B = 117.608 (background)

a = 0.194 px

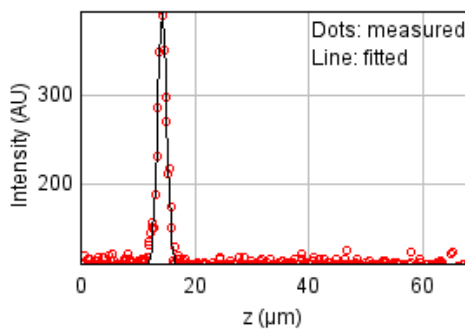
b = 0.136 px

c = 0.795 px

xc = 5.761 px

yc = 5.287 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16341.3478

Standard deviation: 7.29583

$R^2$ : 0.96764

Parameters:

a = 110.52459

b = 394.52306

c = 14.36023

d = 0.78417

## Bead 658

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

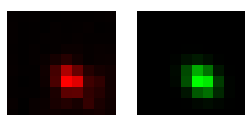
Coordinates : 50.0  $\mu\text{m}$  (x), -14.3  $\mu\text{m}$  (y), 15.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

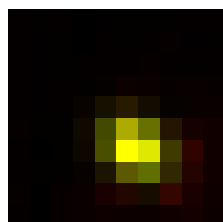
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	411 nm	223 nm
max	512 nm	529 nm	223 nm
z	1.85 $\mu\text{m}$	1.85 $\mu\text{m}$	885 nm
Asymmetry	0.777		
Theta	-36.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1008.273$  (brightness)

$B = 127.610$  (background)

$a = 0.632$  px

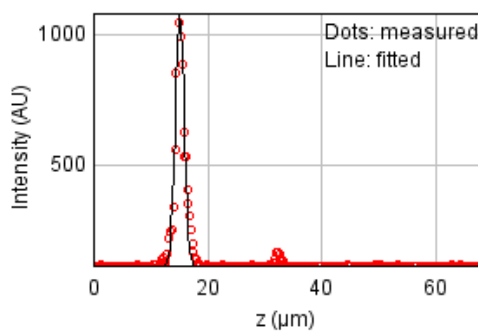
$b = -0.161$  px

$c = 0.729$  px

$x_c = 5.387$  px

$y_c = 5.860$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 219573.254

Standard deviation: 26.74364

$R^2: 0.96260$

Parameters:

$a = 116.30622$

$b = 1081.88576$

$c = 15.15449$

$d = 0.78449$

## Bead 659

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

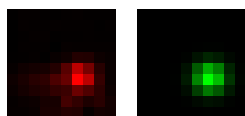
Coordinates : -55.0  $\mu\text{m}$  (x), -45.5  $\mu\text{m}$  (y), 15.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

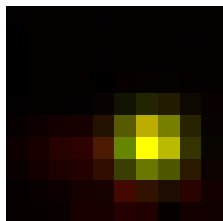
FWHM	Non corrected	Corrected	Theoretical
min	482 nm	499 nm	223 nm
max	526 nm	544 nm	223 nm
z	2.08 $\mu\text{m}$	2.08 $\mu\text{m}$	885 nm
Asymmetry	0.916		
Theta	1.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.904$



Parameters:

A = 755.896 (brightness)

B = 136.692 (background)

a = 0.485 px

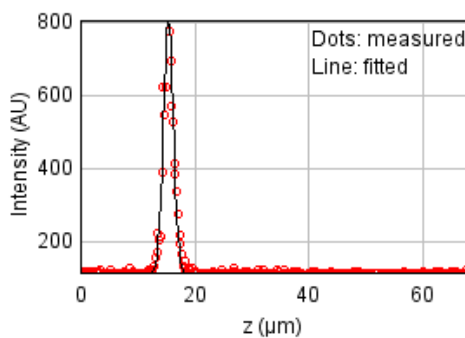
b = 0.002 px

c = 0.577 px

xc = 6.177 px

yc = 5.834 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 98380.0170

Standard deviation: 17.90129

$R^2$ : 0.97075

Parameters:

a = 113.32332

b = 807.51631

c = 15.45049

d = 0.88153

## Bead 660 (Rejected)

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

Coordinates : 147  $\mu\text{m}$  (x), -53.1  $\mu\text{m}$  (y), 60.9  $\mu\text{m}$  (z)

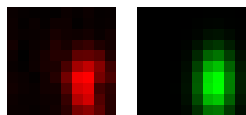
Corresponding bead : Not found

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

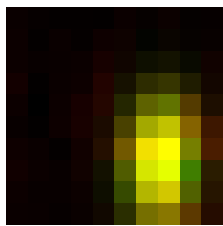
FWHM	Non corrected	Corrected	Theoretical
min	575 nm	595 nm	223 nm
max	1.02 $\mu\text{m}$	1.05 $\mu\text{m}$	223 nm
z	1.16 $\mu\text{m}$	1.16 $\mu\text{m}$	885 nm
Asymmetry	0.565		
Theta	88.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 369.120 (brightness)

B = 114.830 (background)

a = 0.405 px

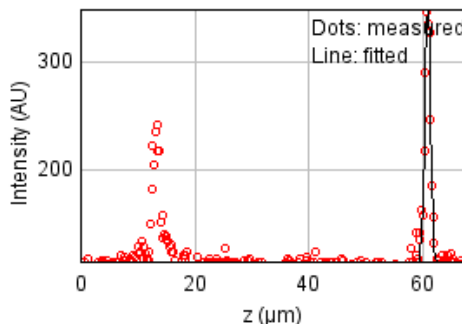
b = 0.008 px

c = 0.129 px

xc = 6.639 px

yc = 6.554 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 104057.702

Standard deviation: 18.41060

$R^2$ : 0.66969

Parameters:

a = 115.29575

b = 349.24959

c = 60.87558

d = 0.49103

## Bead 661 (Rejected)

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

Coordinates : -12.5  $\mu\text{m}$  (x), -88.3  $\mu\text{m}$  (y), 14.5  $\mu\text{m}$  (z)

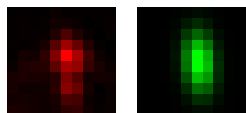
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

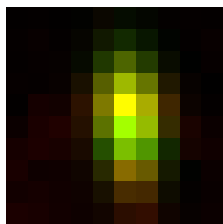
FWHM	Non corrected	Corrected	Theoretical
min	487 nm	503 nm	223 nm
max	959 nm	991 nm	223 nm
z	1.42 $\mu\text{m}$	1.43 $\mu\text{m}$	885 nm
Asymmetry	0.508		
Theta	-85.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.880$



Parameters:

A = 467.035 (brightness)

B = 130.945 (background)

a = 0.563 px

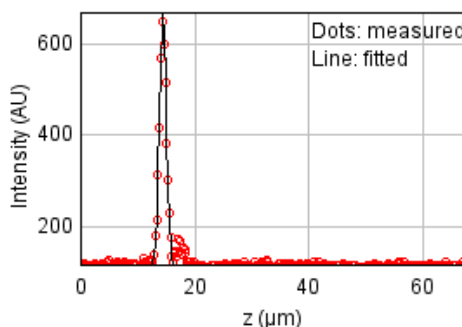
b = -0.036 px

c = 0.149 px

xc = 5.195 px

yc = 4.585 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28176.0229

Standard deviation: 9.58011

$R^2$ : 0.98080

Parameters:

a = 114.60256

b = 667.62396

c = 14.49003

d = 0.60314

## Bead 662 (Rejected)

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

Coordinates : -32.6  $\mu\text{m}$  (x), 93.0  $\mu\text{m}$  (y), 14.6  $\mu\text{m}$  (z)

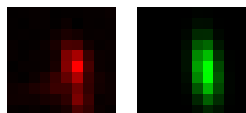
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

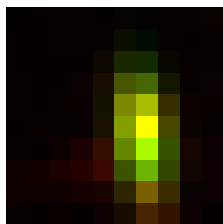
FWHM	Non corrected	Corrected	Theoretical
min	392 nm	405 nm	223 nm
max	950 nm	982 nm	223 nm
z	1.14 $\mu\text{m}$	1.14 $\mu\text{m}$	885 nm
Asymmetry	0.412		
Theta	-84.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.899$



Parameters:

A = 568.789 (brightness)

B = 126.683 (background)

a = 0.867 px

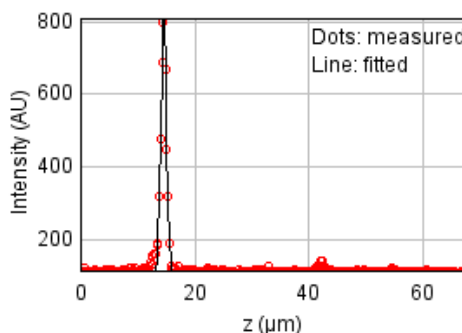
b = -0.076 px

c = 0.157 px

xc = 5.805 px

yc = 5.359 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23962.7085

Standard deviation: 8.83484

$R^2$ : 0.98753

Parameters:

a = 114.53946

b = 821.92906

c = 14.61899

d = 0.48275

## Bead 663 (Rejected)

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

Coordinates : -87.2  $\mu\text{m}$  (x), 91.2  $\mu\text{m}$  (y), 15.4  $\mu\text{m}$  (z)

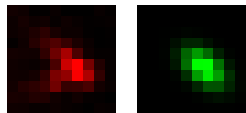
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

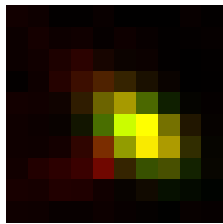
FWHM	Non corrected	Corrected	Theoretical
min	453 nm	468 nm	223 nm
max	737 nm	762 nm	223 nm
z	2.11 $\mu\text{m}$	2.12 $\mu\text{m}$	885 nm
Asymmetry	0.614		
Theta	-39.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.862$



Parameters:

A = 369.589 (brightness)

B = 129.902 (background)

a = 0.411 px

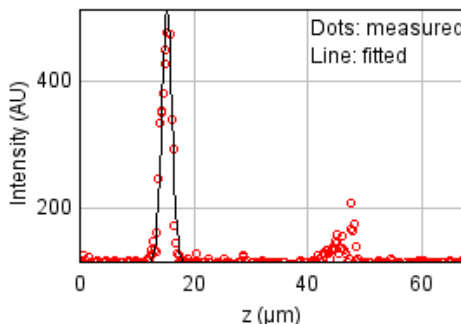
b = -0.200 px

c = 0.489 px

xc = 5.641 px

yc = 5.266 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 83251.2849

Standard deviation: 16.46745

$R^2$ : 0.92830

Parameters:

a = 115.65790

b = 511.64746

c = 15.36942

d = 0.89507

## Bead 664 (Rejected)

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

Coordinates : 132  $\mu\text{m}$  (x), 91.1  $\mu\text{m}$  (y), 37.4  $\mu\text{m}$  (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°		

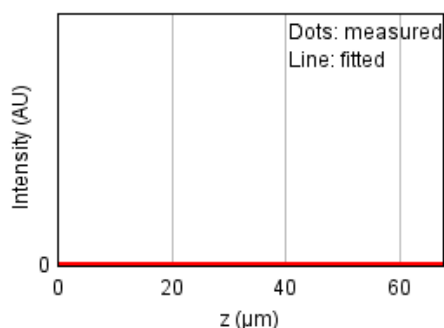
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 0.00000E0

Standard deviation: 0.00000E0

R<sup>2</sup>: 0.00000

Parameters:

a = 0.00000E0

b = 0.00000E0

c = -0.11115

d = 0.11151



## Bead 665

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

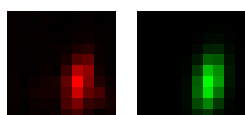
Coordinates : 11.5  $\mu\text{m}$  (x), 83.1  $\mu\text{m}$  (y), 15.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

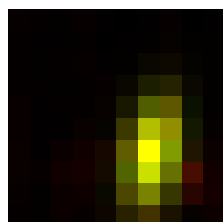
FWHM	Non corrected	Corrected	Theoretical
min	417 nm	432 nm	223 nm
max	838 nm	866 nm	223 nm
z	1.29 $\mu\text{m}$	1.29 $\mu\text{m}$	885 nm
Asymmetry	0.498		
Theta	80.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 693.776 (brightness)

B = 120.361 (background)

a = 0.752 px

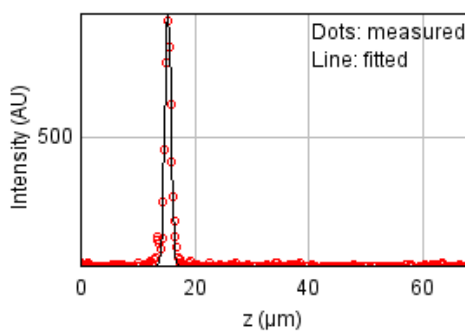
b = 0.099 px

c = 0.209 px

xc = 6.157 px

yc = 6.122 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 52366.3050

Standard deviation: 13.06041

$R^2$ : 0.97895

Parameters:

a = 115.43604

b = 869.21703

c = 15.36225

d = 0.54768

## Bead 666

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

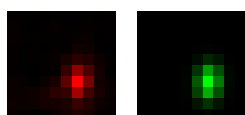
Coordinates : -27.3  $\mu\text{m}$  (x), 54.5  $\mu\text{m}$  (y), 15.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

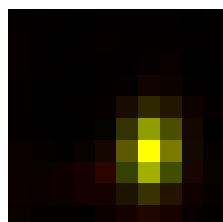
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	398 nm	223 nm
max	557 nm	576 nm	223 nm
z	1.43 $\mu\text{m}$	1.44 $\mu\text{m}$	885 nm
Asymmetry	0.691		
Theta	85.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 780.436 (brightness)

B = 129.510 (background)

a = 0.903 px

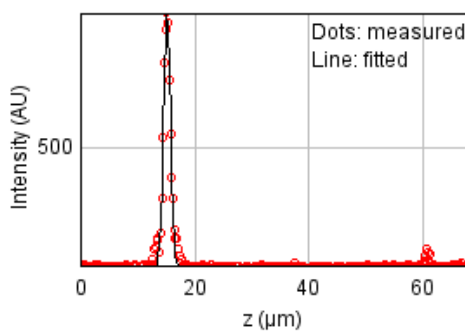
b = 0.036 px

c = 0.435 px

xc = 6.082 px

yc = 6.056 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 72796.3453

Standard deviation: 15.39875

$R^2$ : 0.97763

Parameters:

a = 115.59540

b = 934.97296

c = 15.19986

d = 0.60741

## Bead 667

Date : Mon Oct 17 13:28:34 PDT 2022

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

Frame size : 10 pixels

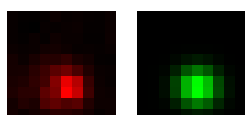
Coordinates : -84.5  $\mu\text{m}$  (x), 50.3  $\mu\text{m}$  (y), 15.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

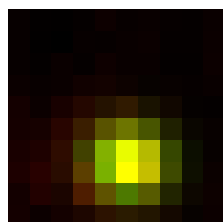
FWHM	Non corrected	Corrected	Theoretical
min	595 nm	615 nm	223 nm
max	639 nm	661 nm	223 nm
z	1.97 $\mu\text{m}$	1.98 $\mu\text{m}$	885 nm
Asymmetry	0.93		
Theta	-7.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 458.297 (brightness)

B = 124.905 (background)

a = 0.329 px

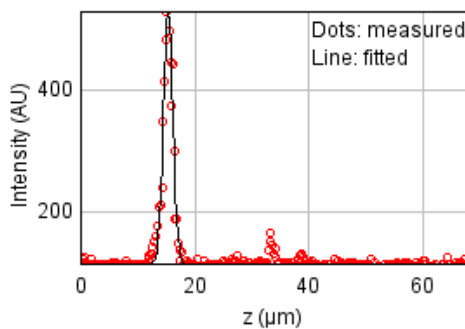
b = -0.006 px

c = 0.379 px

xc = 5.045 px

yc = 6.517 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 42228.9828

Standard deviation: 11.72833

$R^2$ : 0.96340

Parameters:

a = 114.38216

b = 529.22660

c = 15.40355

d = 0.83850

## Bead 668 (Rejected)

Date : Mon Oct 17 13:28:35 PDT 2022

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

Frame size : 10 pixels

Coordinates : 129  $\mu\text{m}$  (x), 14.6  $\mu\text{m}$  (y), 12.7  $\mu\text{m}$  (z)

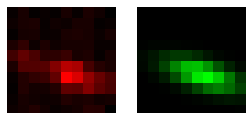
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

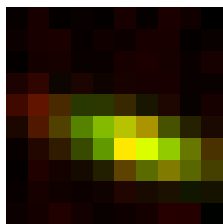
FWHM	Non corrected	Corrected	Theoretical
min	420 nm	434 nm	223 nm
max	1.14 $\mu\text{m}$	1.18 $\mu\text{m}$	223 nm
z	2.95 $\mu\text{m}$	2.96 $\mu\text{m}$	885 nm
Asymmetry	0.367		
Theta	-17.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.875$



Parameters:

A = 153.881 (brightness)

B = 115.773 (background)

a = 0.159 px

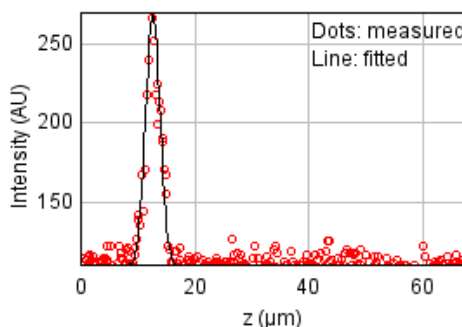
b = -0.184 px

c = 0.705 px

xc = 5.515 px

yc = 5.758 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25766.5168

Standard deviation: 9.16133

$R^2$ : 0.90153

Parameters:

a = 111.00010

b = 269.17104

c = 12.73282

d = 1.25237

## Bead 669 (Rejected)

Date : Mon Oct 17 13:28:35 PDT 2022

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

Frame size : 10 pixels

Coordinates : 130  $\mu\text{m}$  (x), 10.9  $\mu\text{m}$  (y), 14.8  $\mu\text{m}$  (z)

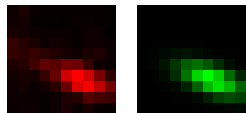
Corresponding bead : Not found

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

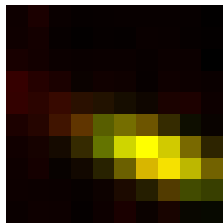
FWHM	Non corrected	Corrected	Theoretical
min	407 nm	421 nm	223 nm
max	1.03 $\mu\text{m}$	1.07 $\mu\text{m}$	223 nm
z	3.03 $\mu\text{m}$	3.04 $\mu\text{m}$	885 nm
Asymmetry	0.394		
Theta	-20.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 345.498 (brightness)

B = 120.125 (background)

a = 0.210 px

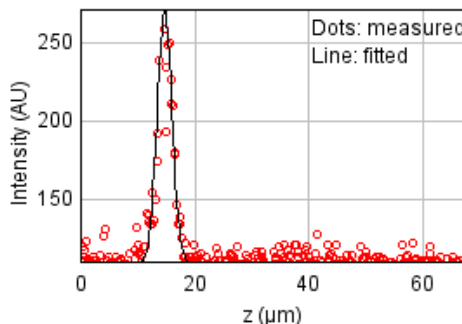
b = -0.225 px

c = 0.726 px

xc = 6.336 px

yc = 6.369 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 32754.2052

Standard deviation: 10.32914

$R^2$ : 0.88456

Parameters:

a = 110.57579

b = 271.70878

c = 14.79739

d = 1.28637

## Bead 670

Date : Mon Oct 17 13:28:35 PDT 2022

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

Frame size : 10 pixels

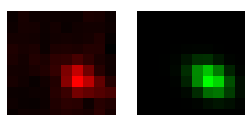
Coordinates : 112  $\mu\text{m}$  (x), 3.79  $\mu\text{m}$  (y), 15.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

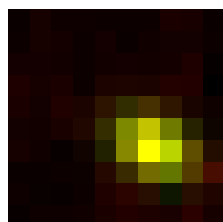
FWHM	Non corrected	Corrected	Theoretical
min	452 nm	468 nm	223 nm
max	645 nm	666 nm	223 nm
z	2.19 $\mu\text{m}$	2.2 $\mu\text{m}$	885 nm
Asymmetry	0.702		
Theta	-29.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 247.251$  (brightness)

$B = 120.267$  (background)

$a = 0.405$  px

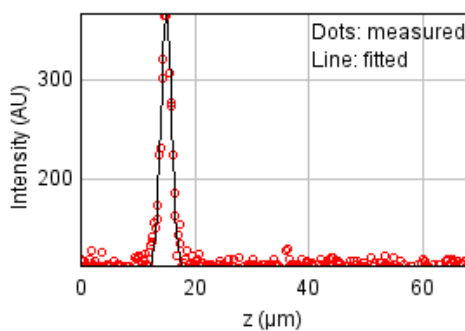
$b = -0.143$  px

$c = 0.574$  px

$x_c = 6.197$  px

$y_c = 5.786$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16826.3358

Standard deviation: 7.40330

$R^2: 0.96564$

Parameters:

$a = 111.64636$

$b = 369.00575$

$c = 15.07320$

$d = 0.93167$

## Bead 671

Date : Mon Oct 17 13:28:35 PDT 2022

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

Frame size : 10 pixels

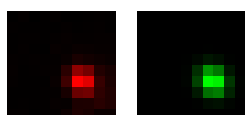
Coordinates : 71.6  $\mu\text{m}$  (x), -6.59  $\mu\text{m}$  (y), 15.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	412 nm	426 nm	223 nm
max	469 nm	485 nm	223 nm
z	1.48 $\mu\text{m}$	1.48 $\mu\text{m}$	885 nm
Asymmetry	0.878		
Theta	-48.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1204.727$  (brightness)

$B = 124.925$  (background)

$a = 0.712$  px

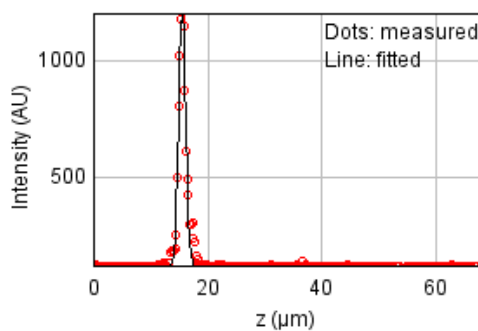
$b = -0.090$  px

$c = 0.688$  px

$x_c = 6.450$  px

$y_c = 5.953$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 153388.893

Standard deviation: 22.35259

$R^2: 0.97417$

Parameters:

$a = 115.96366$

$b = 1203.83927$

$c = 15.59688$

$d = 0.62720$

## Bead 672

Date : Mon Oct 17 13:28:35 PDT 2022

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

Frame size : 10 pixels

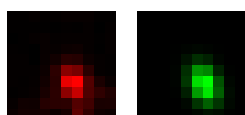
Coordinates : 10.3  $\mu\text{m}$  (x), -21.0  $\mu\text{m}$  (y), 11.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

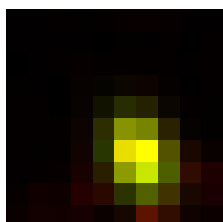
FWHM	Non corrected	Corrected	Theoretical
min	443 nm	457 nm	223 nm
max	635 nm	657 nm	223 nm
z	1.96 $\mu\text{m}$	1.97 $\mu\text{m}$	885 nm
Asymmetry	0.697		
Theta	-67.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 732.551 (brightness)

B = 125.330 (background)

a = 0.635 px

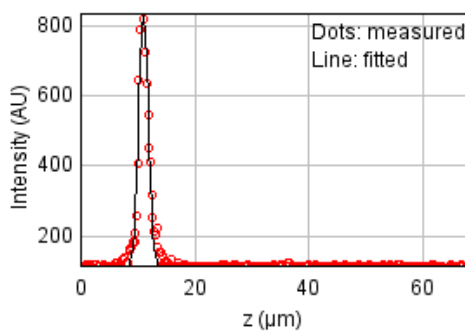
b = -0.123 px

c = 0.383 px

xc = 5.660 px

yc = 6.253 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 91533.3645

Standard deviation: 17.26714

$R^2$ : 0.97338

Parameters:

a = 115.59667

b = 838.32153

c = 11.10729

d = 0.83152



## Bead 673

Date : Mon Oct 17 13:28:35 PDT 2022

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

Frame size : 10 pixels

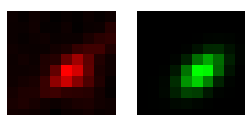
Coordinates : -135  $\mu\text{m}$  (x), -40.3  $\mu\text{m}$  (y), 14.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

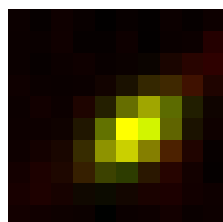
FWHM	Non corrected	Corrected	Theoretical
min	436 nm	451 nm	223 nm
max	746 nm	771 nm	223 nm
z	1.84 $\mu\text{m}$	1.85 $\mu\text{m}$	885 nm
Asymmetry	0.585		
Theta	38.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 472.271$  (brightness)

$B = 125.050$  (background)

$a = 0.424$  px

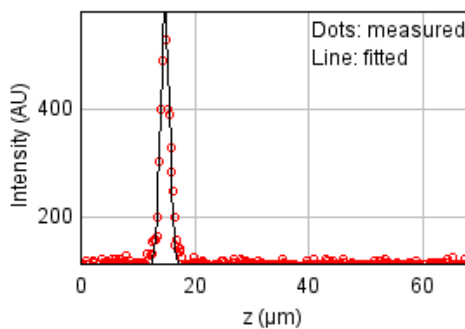
$b = 0.227$  px

$c = 0.523$  px

$x_c = 5.373$  px

$y_c = 5.145$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36083.7633

Standard deviation: 10.84143

$R^2: 0.97428$

Parameters:

$a = 111.23144$

$b = 586.61507$

$c = 14.85420$

$d = 0.78275$

## Bead 674

Date : Mon Oct 17 13:28:35 PDT 2022

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

Frame size : 10 pixels

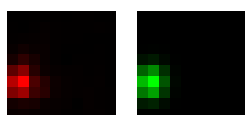
Coordinates : 33.8  $\mu\text{m}$  (x), -79.7  $\mu\text{m}$  (y), 49.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

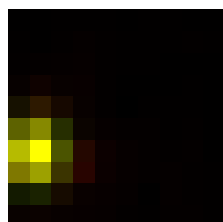
FWHM	Non corrected	Corrected	Theoretical
min	434 nm	449 nm	223 nm
max	496 nm	512 nm	223 nm
z	1.12 $\mu\text{m}$	1.12 $\mu\text{m}$	885 nm
Asymmetry	0.876		
Theta	87.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1548.626 (brightness)

B = 127.220 (background)

a = 0.711 px

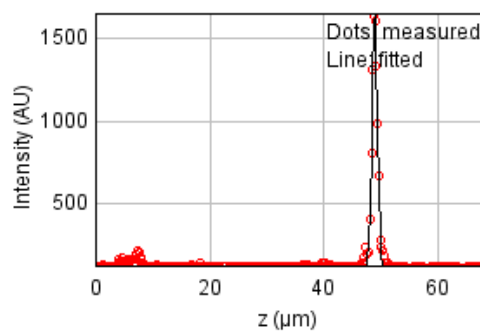
b = 0.009 px

c = 0.547 px

xc = 0.718 px

yc = 6.078 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 148550.408

Standard deviation: 21.99722

$R^2$ : 0.98360

Parameters:

a = 122.01028

b = 1668.81831

c = 48.98873

d = 0.47383

## Bead 675 (Rejected)

Date : Mon Oct 17 13:28:35 PDT 2022

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

Frame size : 10 pixels

Coordinates : -87.9  $\mu\text{m}$  (x), 95.0  $\mu\text{m}$  (y), 15.7  $\mu\text{m}$  (z)

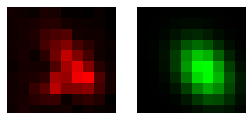
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

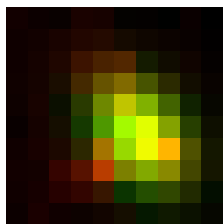
FWHM	Non corrected	Corrected	Theoretical
min	689 nm	713 nm	223 nm
max	955 nm	987 nm	223 nm
z	2.14 $\mu\text{m}$	2.15 $\mu\text{m}$	885 nm
Asymmetry	0.722		
Theta	-55.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.806$



Parameters:

A = 302.069 (brightness)

B = 127.297 (background)

a = 0.239 px

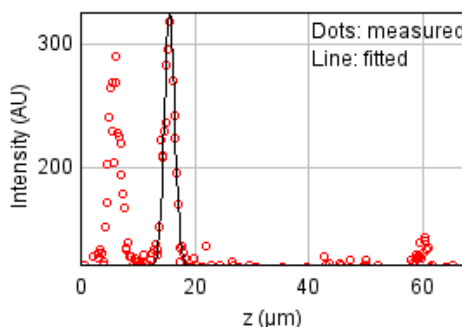
b = -0.063 px

c = 0.191 px

xc = 5.632 px

yc = 5.336 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 220516.652

Standard deviation: 26.80103

$R^2$ : 0.57156

Parameters:

a = 120.88844

b = 326.21911

c = 15.67081

d = 0.90933

## Bead 676 (Rejected)

Date : Mon Oct 17 13:28:35 PDT 2022

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

Frame size : 10 pixels

Coordinates : -68.9  $\mu\text{m}$  (x), 91.5  $\mu\text{m}$  (y), 15.3  $\mu\text{m}$  (z)

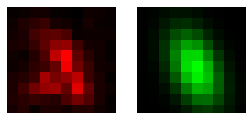
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

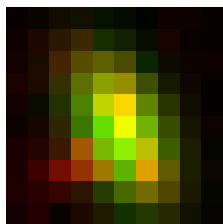
FWHM	Non corrected	Corrected	Theoretical
min	704 nm	728 nm	223 nm
max	1.21 $\mu\text{m}$	1.25 $\mu\text{m}$	223 nm
z	2.34 $\mu\text{m}$	2.35 $\mu\text{m}$	885 nm
Asymmetry	0.581		
Theta	-67.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.750$



Parameters:

A = 244.288 (brightness)

B = 124.888 (background)

a = 0.244 px

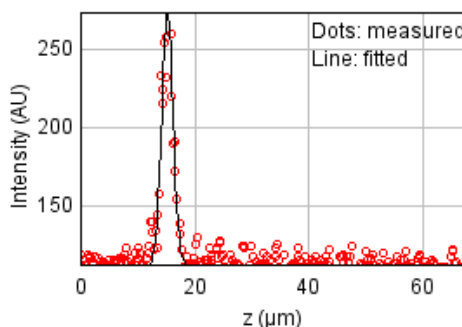
b = -0.064 px

c = 0.118 px

xc = 4.814 px

yc = 5.133 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23371.6594

Standard deviation: 8.72520

$R^2$ : 0.89395

Parameters:

a = 112.42582

b = 273.48485

c = 15.27446

d = 0.99443

## Bead 677

Date : Mon Oct 17 13:28:35 PDT 2022

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

Frame size : 10 pixels

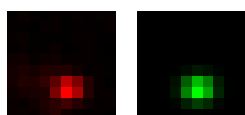
Coordinates : -121  $\mu\text{m}$  (x), 31.5  $\mu\text{m}$  (y), 15.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	391 nm	404 nm	223 nm
max	490 nm	507 nm	223 nm
z	1.74 $\mu\text{m}$	1.75 $\mu\text{m}$	885 nm
Asymmetry	0.798		
Theta	1.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.956$



Parameters:

A = 615.151 (brightness)

B = 123.048 (background)

a = 0.559 px

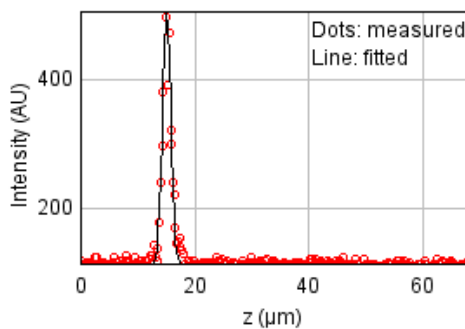
b = 0.007 px

c = 0.877 px

xc = 5.117 px

yc = 6.680 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 35206.9862

Standard deviation: 10.70891

$R^2$ : 0.96166

Parameters:

a = 112.17004

b = 504.95056

c = 15.14238

d = 0.73909

## Bead 678

Date : Mon Oct 17 13:28:36 PDT 2022

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

Frame size : 10 pixels

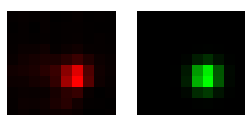
Coordinates : -122  $\mu\text{m}$  (x), 21.9  $\mu\text{m}$  (y), 15.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

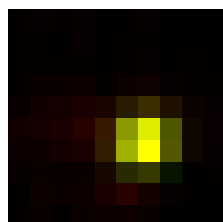
FWHM	Non corrected	Corrected	Theoretical
min	412 nm	426 nm	223 nm
max	435 nm	450 nm	223 nm
z	1.35 $\mu\text{m}$	1.35 $\mu\text{m}$	885 nm
Asymmetry	0.947		
Theta	18.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 786.166 (brightness)

B = 129.968 (background)

a = 0.718 px

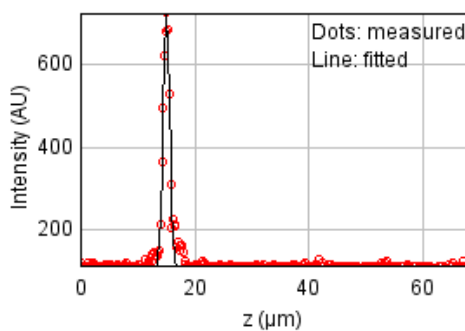
b = 0.025 px

c = 0.782 px

xc = 5.775 px

yc = 5.556 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57318.7173

Standard deviation: 13.66404

$R^2$ : 0.96727

Parameters:

a = 113.55045

b = 729.53218

c = 15.09143

d = 0.57128

## Bead 679

Date : Mon Oct 17 13:28:36 PDT 2022

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

Frame size : 10 pixels

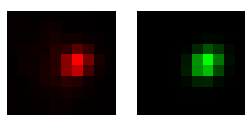
Coordinates : -126  $\mu\text{m}$  (x), 14.9  $\mu\text{m}$  (y), 33.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

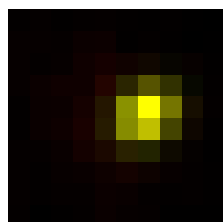
FWHM	Non corrected	Corrected	Theoretical
min	406 nm	420 nm	223 nm
max	487 nm	503 nm	223 nm
z	1.35 $\mu\text{m}$	1.35 $\mu\text{m}$	885 nm
Asymmetry	0.834		
Theta	40.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1134.194 (brightness)

B = 132.444 (background)

a = 0.673 px

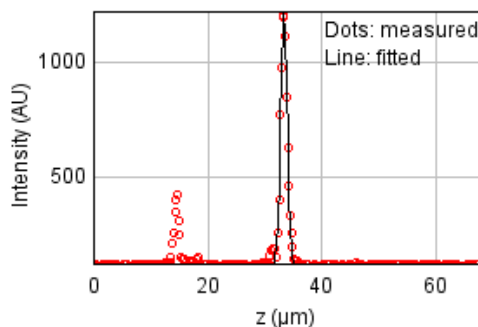
b = 0.123 px

c = 0.708 px

xc = 5.858 px

yc = 4.319 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

d = 0.57279

## Bead 680

Date : Mon Oct 17 13:28:36 PDT 2022

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

Frame size : 10 pixels

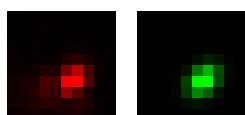
Coordinates : -71.6  $\mu\text{m}$  (x), -14.7  $\mu\text{m}$  (y), 15.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

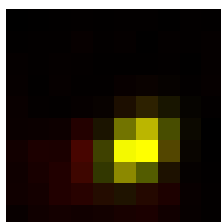
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	404 nm	223 nm
max	542 nm	561 nm	223 nm
z	1.73 $\mu\text{m}$	1.74 $\mu\text{m}$	885 nm
Asymmetry	0.72		
Theta	43.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 966.913 (brightness)

B = 140.856 (background)

a = 0.657 px

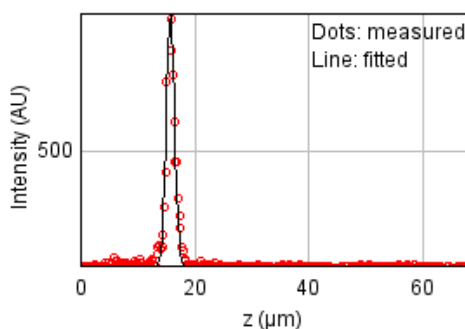
b = 0.211 px

c = 0.679 px

$x_c = 5.555$  px

$y_c = 5.888$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 138148.397

Standard deviation: 21.21308

$R^2$ : 0.96718

Parameters:

a = 115.30814

b = 961.48619

c = 15.81506

d = 0.73395



## Bead 681 (Rejected)

Date : Mon Oct 17 13:28:36 PDT 2022

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

Frame size : 10 pixels

Coordinates : 49.9  $\mu\text{m}$  (x), -14.1  $\mu\text{m}$  (y), 14.4  $\mu\text{m}$  (z)

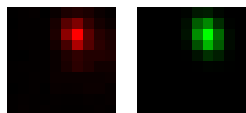
Corresponding bead : Not found

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

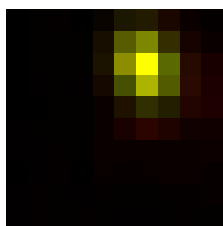
FWHM	Non corrected	Corrected	Theoretical
min	414 nm	428 nm	223 nm
max	543 nm	561 nm	223 nm
z	3.27 $\mu\text{m}$	3.28 $\mu\text{m}$	885 nm
Asymmetry	0.762		
Theta	-69.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1042.120 (brightness)

B = 138.264 (background)

a = 0.744 px

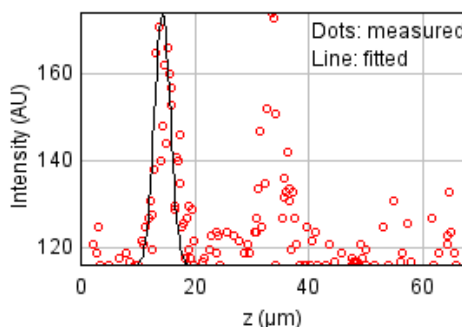
b = -0.107 px

c = 0.495 px

xc = 5.918 px

yc = 2.126 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 66079.6203

Standard deviation: 14.67116

$R^2$ : 0.34606

Parameters:

a = 116.02001

b = 174.11402

c = 14.41895

d = 1.38665

## Bead 682

Date : Mon Oct 17 13:28:36 PDT 2022

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

Frame size : 10 pixels

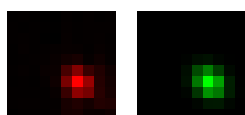
Coordinates : 75.1  $\mu\text{m}$  (x), -19.6  $\mu\text{m}$  (y), 15.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	421 nm	435 nm	223 nm
max	517 nm	535 nm	223 nm
z	1.4 $\mu\text{m}$	1.4 $\mu\text{m}$	885 nm
Asymmetry	0.814		
Theta	-43.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1088.145 (brightness)

B = 123.674 (background)

a = 0.621 px

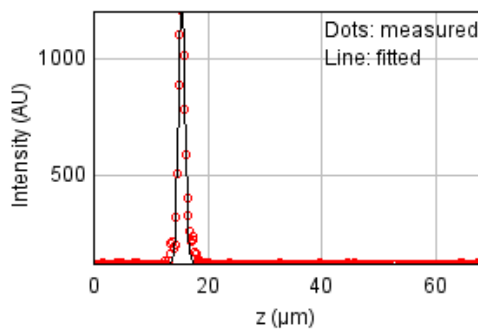
b = -0.127 px

c = 0.638 px

$x_c = 6.143$  px

$y_c = 6.089$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 100860.742

Standard deviation: 18.12558

$R^2$ : 0.98262

Parameters:

a = 115.24738

b = 1224.37104

c = 15.51354

d = 0.59379

## Bead 683

Date : Mon Oct 17 13:28:36 PDT 2022

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

Frame size : 10 pixels

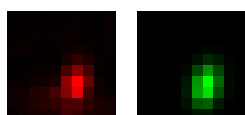
Coordinates : -35.5  $\mu\text{m}$  (x), -24.9  $\mu\text{m}$  (y), 15.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

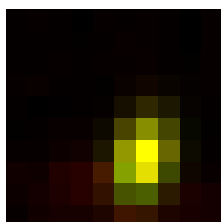
FWHM	Non corrected	Corrected	Theoretical
min	424 nm	438 nm	223 nm
max	633 nm	655 nm	223 nm
z	1.64 $\mu\text{m}$	1.64 $\mu\text{m}$	885 nm
Asymmetry	0.669		
Theta	75.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.935$



Parameters:

A = 757.555 (brightness)

B = 132.090 (background)

a = 0.723 px

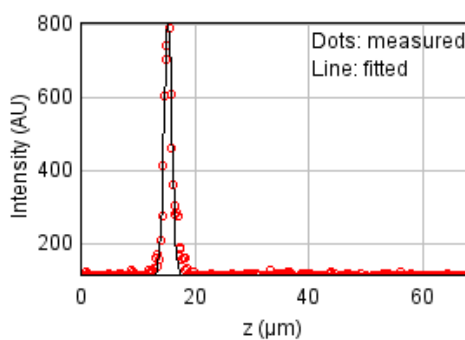
b = 0.098 px

c = 0.359 px

xc = 5.813 px

yc = 6.364 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 96969.9975

Standard deviation: 17.77254

$R^2$ : 0.96374

Parameters:

a = 115.19679

b = 806.32225

c = 15.37160

d = 0.69508

## Bead 684

Date : Mon Oct 17 13:28:36 PDT 2022

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

Frame size : 10 pixels

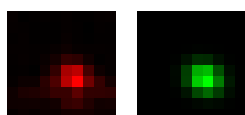
Coordinates : -10.8  $\mu\text{m}$  (x), -26.1  $\mu\text{m}$  (y), 15.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

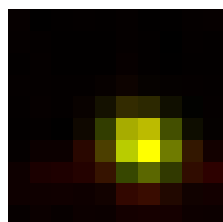
FWHM	Non corrected	Corrected	Theoretical
min	458 nm	474 nm	223 nm
max	548 nm	566 nm	223 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	885 nm
Asymmetry	0.836		
Theta	-22.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.930$



Parameters:

A = 794.362 (brightness)

B = 131.614 (background)

a = 0.476 px

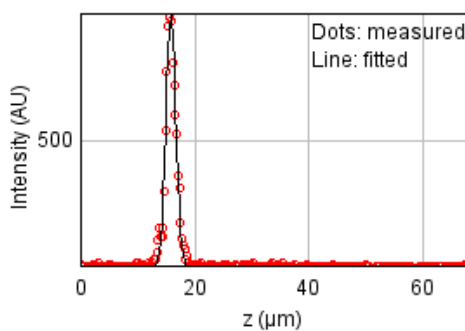
b = -0.069 px

c = 0.610 px

xc = 5.696 px

yc = 5.719 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 67379.5987

Standard deviation: 14.81477

$R^2$ : 0.98343

Parameters:

a = 113.60176

b = 888.96870

c = 15.90028

d = 0.86499

## Bead 685

Date : Mon Oct 17 13:28:37 PDT 2022

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

Frame size : 10 pixels

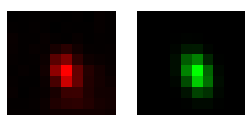
Coordinates : 55.9  $\mu\text{m}$  (x), -34.6  $\mu\text{m}$  (y), 15.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

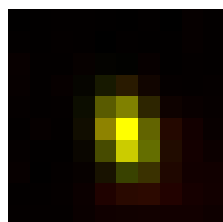
FWHM	Non corrected	Corrected	Theoretical
min	393 nm	407 nm	223 nm
max	585 nm	605 nm	223 nm
z	1.18 $\mu\text{m}$	1.18 $\mu\text{m}$	885 nm
Asymmetry	0.672		
Theta	-68.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.957$



Parameters:

$A = 947.361$  (brightness)

$B = 133.920$  (background)

$a = 0.805$  px

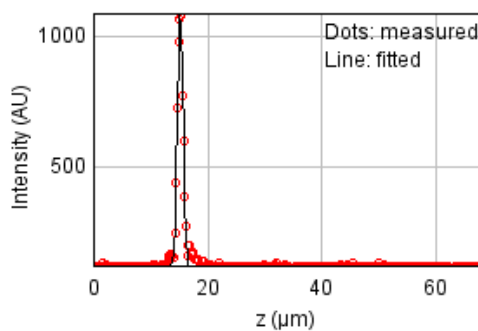
$b = -0.161$  px

$c = 0.455$  px

$x_c = 4.966$  px

$y_c = 5.241$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 54722.2507

Standard deviation: 13.35097

$R^2: 0.98575$

Parameters:

$a = 115.40031$

$b = 1097.01689$

$c = 15.24075$

$d = 0.50085$

## Bead 686

Date : Mon Oct 17 13:28:37 PDT 2022

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

Frame size : 10 pixels

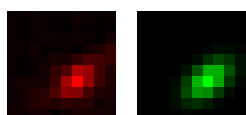
Coordinates : -140  $\mu\text{m}$  (x), -38.7  $\mu\text{m}$  (y), 15.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

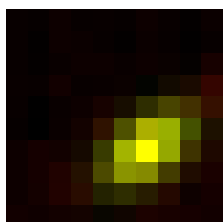
FWHM	Non corrected	Corrected	Theoretical
min	452 nm	467 nm	223 nm
max	775 nm	801 nm	223 nm
z	2.01 $\mu\text{m}$	2.01 $\mu\text{m}$	885 nm
Asymmetry	0.583		
Theta	37.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.956$



Parameters:

A = 401.863 (brightness)

B = 122.271 (background)

a = 0.384 px

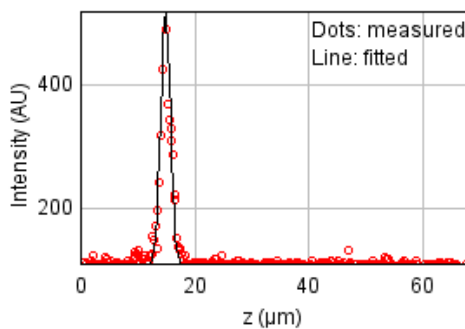
b = 0.210 px

c = 0.497 px

xc = 6.025 px

yc = 5.869 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 53504.2080

Standard deviation: 13.20155

$R^2$ : 0.95256

Parameters:

a = 111.44510

b = 516.25473

c = 14.95252

d = 0.85162

## Bead 687

Date : Mon Oct 17 13:28:37 PDT 2022

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

Frame size : 10 pixels

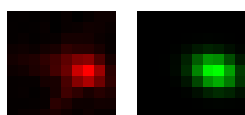
Coordinates : -86.5  $\mu\text{m}$  (x), -77.7  $\mu\text{m}$  (y), 15.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

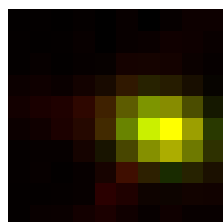
FWHM	Non corrected	Corrected	Theoretical
min	512 nm	529 nm	223 nm
max	727 nm	752 nm	223 nm
z	1.39 $\mu\text{m}$	1.4 $\mu\text{m}$	885 nm
Asymmetry	0.704		
Theta	-14.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.943$



Parameters:

A = 610.484 (brightness)

B = 134.826 (background)

a = 0.269 px

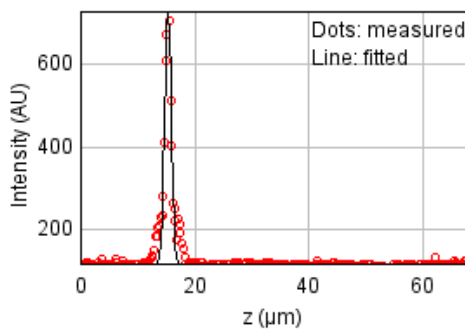
b = -0.061 px

c = 0.497 px

xc = 6.627 px

yc = 5.061 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 94970.0427

Standard deviation: 17.58831

$R^2$ : 0.94770

Parameters:

a = 115.94816

b = 727.02444

c = 15.37620

d = 0.59030

## Bead 688

Date : Mon Oct 17 13:28:37 PDT 2022

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

Frame size : 10 pixels

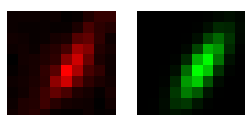
Coordinates : -115  $\mu\text{m}$  (x), -77.8  $\mu\text{m}$  (y), 14.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

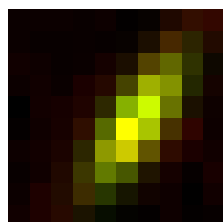
FWHM	Non corrected	Corrected	Theoretical
min	418 nm	432 nm	223 nm
max	1.14 $\mu\text{m}$	1.18 $\mu\text{m}$	223 nm
z	2.11 $\mu\text{m}$	2.11 $\mu\text{m}$	885 nm
Asymmetry	0.365		
Theta	57.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 266.736 (brightness)

B = 124.989 (background)

a = 0.572 px

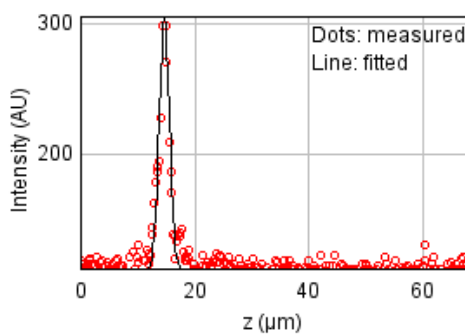
b = 0.305 px

c = 0.300 px

xc = 5.466 px

yc = 4.637 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23095.9571

Standard deviation: 8.67359

$R^2$ : 0.91742

Parameters:

a = 112.30444

b = 305.60832

c = 14.74441

d = 0.89411



## Bead 689 (Rejected)

Date : Mon Oct 17 13:28:37 PDT 2022

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

Frame size : 10 pixels

Coordinates : 9.24  $\mu\text{m}$  (x), -80.3  $\mu\text{m}$  (y), 13.8  $\mu\text{m}$  (z)

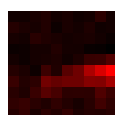
Corresponding bead : Not found

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	3.01 $\mu\text{m}$	3.03 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

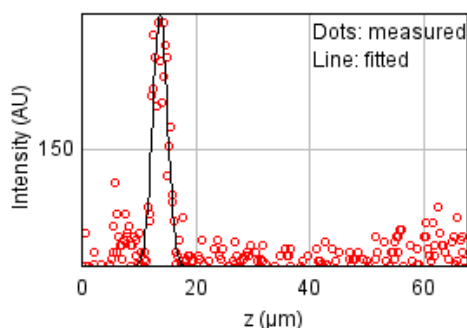
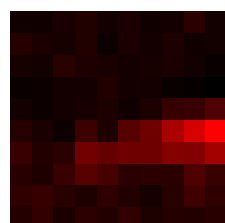
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 16920.8477

Standard deviation: 7.42407

$R^2$ : 0.78108

Parameters:

$a = 113.27827$

$b = 192.48509$

$c = 13.82318$

$d = 1.28016$

## Bead 690

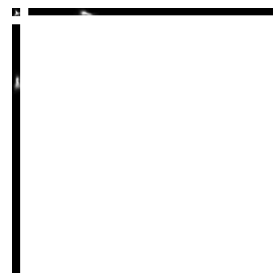
Date : Mon Oct 17 13:28:37 PDT 2022

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

Frame size : 10 pixels

Coordinates : 61.5  $\mu\text{m}$  (x), -82.2  $\mu\text{m}$  (y), 14.9  $\mu\text{m}$  (z)

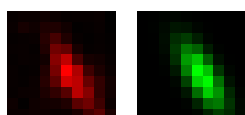
Corresponding bead : Not found



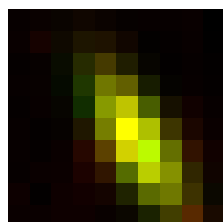
FWHM	Non corrected	Corrected	Theoretical
min	461 nm	477 nm	223 nm
max	1.18 $\mu\text{m}$	1.22 $\mu\text{m}$	223 nm
z	1.46 $\mu\text{m}$	1.47 $\mu\text{m}$	885 nm
Asymmetry	0.389		
Theta	-59.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.957$



Parameters:

$A = 534.893$  (brightness)

$B = 122.550$  (background)

$a = 0.495$  px

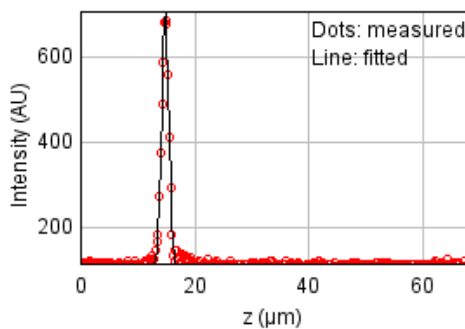
$b = -0.233$  px

$c = 0.231$  px

$x_c = 5.462$  px

$y_c = 5.534$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20891.7594

Standard deviation: 8.24932

$R^2: 0.98800$

Parameters:

$a = 113.41989$

$b = 709.24464$

$c = 14.89517$

$d = 0.62172$

## Bead 691 (Rejected)

Date : Mon Oct 17 13:28:37 PDT 2022

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

Frame size : 10 pixels

Coordinates : -152  $\mu\text{m}$  (x), -88.0  $\mu\text{m}$  (y), 12.3  $\mu\text{m}$  (z)

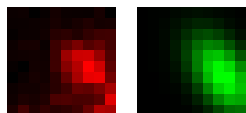
Corresponding bead : Not found

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

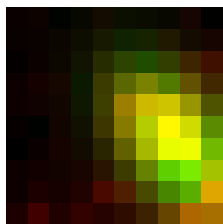
FWHM	Non corrected	Corrected	Theoretical
min	804 nm	831 nm	223 nm
max	1.42 $\mu\text{m}$	1.47 $\mu\text{m}$	223 nm
z	4.24 $\mu\text{m}$	4.25 $\mu\text{m}$	885 nm
Asymmetry	0.565		
Theta	-55.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.842$



Parameters:

A = 171.342 (brightness)

B = 117.294 (background)

a = 0.161 px

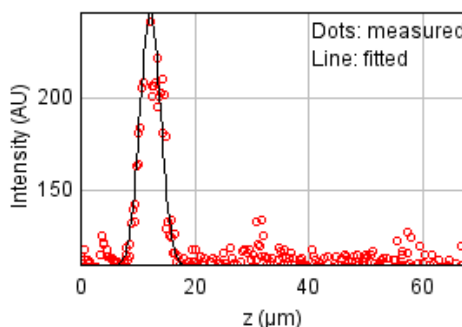
b = -0.066 px

c = 0.113 px

xc = 7.435 px

yc = 5.837 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23891.9759

Standard deviation: 8.82179

$R^2$ : 0.91010

Parameters:

a = 109.97333

b = 245.68678

c = 12.29543

d = 1.79929

## Bead 692

Date : Mon Oct 17 13:28:38 PDT 2022

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

Frame size : 10 pixels

Coordinates : -31.2  $\mu\text{m}$  (x), 47.0  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	365 nm	377 nm	223 nm
max	497 nm	514 nm	223 nm
z	1.19 $\mu\text{m}$	1.19 $\mu\text{m}$	885 nm
Asymmetry	0.734		
Theta	-87.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1794.485$  (brightness)

$B = 123.580$  (background)

$a = 1.007$  px

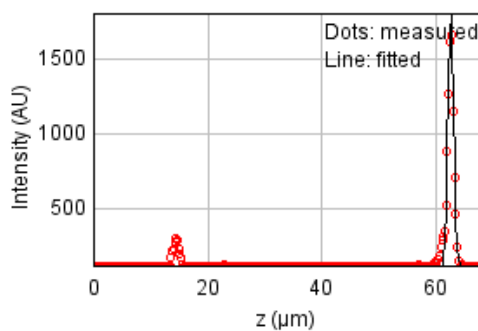
$b = -0.018$  px

$c = 0.543$  px

$x_c = 6.133$  px

$y_c = 1.149$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 284251.997

Standard deviation: 30.42864

$R^2: 0.97519$

Parameters:

$a = 121.10620$

$b = 1801.42555$

$c = 62.66924$

$d = 0.50453$

## Bead 693

Date : Mon Oct 17 13:28:38 PDT 2022

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

Frame size : 10 pixels

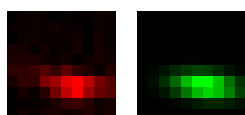
Coordinates : 122  $\mu\text{m}$  (x), 34.9  $\mu\text{m}$  (y), 15.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

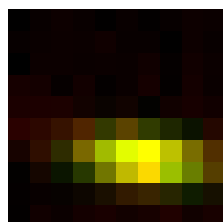
FWHM	Non corrected	Corrected	Theoretical
min	403 nm	416 nm	223 nm
max	994 nm	1.03 $\mu\text{m}$	223 nm
z	2.37 $\mu\text{m}$	2.38 $\mu\text{m}$	885 nm
Asymmetry	0.405		
Theta	-6.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.943$



Parameters:

$A = 255.859$  (brightness)

$B = 113.918$  (background)

$a = 0.144$  px

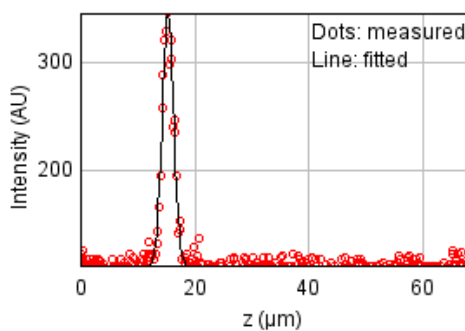
$b = -0.075$  px

$c = 0.819$  px

$x_c = 5.733$  px

$y_c = 6.378$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19759.4275

Standard deviation: 8.02265

$R^2: 0.95552$

Parameters:

$a = 110.31078$

$b = 345.34217$

$c = 15.38061$

$d = 1.00687$

## Bead 694

Date : Mon Oct 17 13:28:38 PDT 2022

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

Frame size : 10 pixels

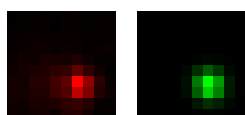
Coordinates : -91.9  $\mu\text{m}$  (x), 29.6  $\mu\text{m}$  (y), 15.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

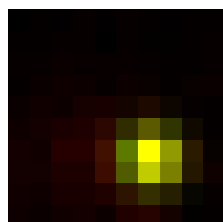
FWHM	Non corrected	Corrected	Theoretical
min	453 nm	468 nm	223 nm
max	469 nm	485 nm	223 nm
z	1.9 $\mu\text{m}$	1.91 $\mu\text{m}$	885 nm
Asymmetry	0.965		
Theta	-39.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.916$



Parameters:

$A = 638.458$  (brightness)

$B = 134.812$  (background)

$a = 0.627$  px

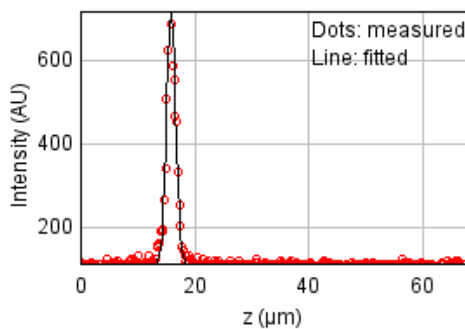
$b = -0.022$  px

$c = 0.636$  px

$x_c = 6.109$  px

$y_c = 6.326$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 50345.7379

Standard deviation: 12.80596

$R^2: 0.97875$

Parameters:

$a = 112.53863$

$b = 722.47855$

$c = 15.94122$

$d = 0.80770$

## Bead 695 (Rejected)

Date : Mon Oct 17 13:28:38 PDT 2022

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

Frame size : 10 pixels

Coordinates : -43.9  $\mu\text{m}$  (x), 10.4  $\mu\text{m}$  (y), 15.7  $\mu\text{m}$  (z)

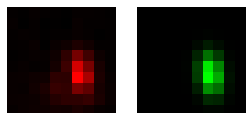
Corresponding bead : Not found

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

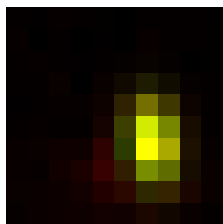
FWHM	Non corrected	Corrected	Theoretical
min	377 nm	390 nm	223 nm
max	642 nm	663 nm	223 nm
z	3.4 $\mu\text{m}$	3.41 $\mu\text{m}$	885 nm
Asymmetry	0.588		
Theta	-83.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 754.397 (brightness)

B = 131.690 (background)

a = 0.936 px

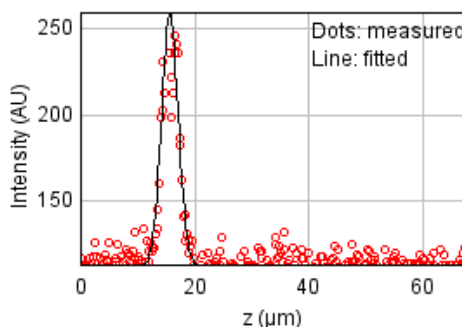
b = -0.071 px

c = 0.334 px

xc = 6.256 px

yc = 5.678 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29822.9357

Standard deviation: 9.85612

$R^2$ : 0.88726

Parameters:

a = 112.24512

b = 259.97662

c = 15.72381

d = 1.44396

## Bead 696

Date : Mon Oct 17 13:28:38 PDT 2022

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

Frame size : 10 pixels

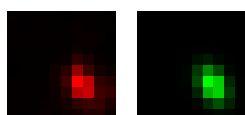
Coordinates : 33.3  $\mu\text{m}$  (x), 8.73  $\mu\text{m}$  (y), 16.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

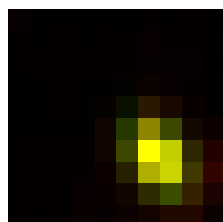
FWHM	Non corrected	Corrected	Theoretical
min	394 nm	408 nm	223 nm
max	581 nm	601 nm	223 nm
z	1.85 $\mu\text{m}$	1.86 $\mu\text{m}$	885 nm
Asymmetry	0.678		
Theta	-60.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 907.637$  (brightness)

$B = 126.881$  (background)

$a = 0.747$  px

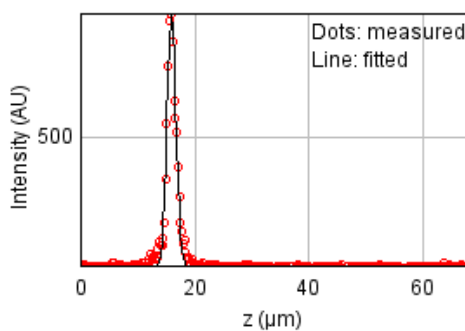
$b = -0.201$  px

$c = 0.513$  px

$x_c = 6.442$  px

$y_c = 6.305$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 84710.0311

Standard deviation: 16.61109

$R^2: 0.97630$

Parameters:

$a = 115.44825$

$b = 872.80380$

$c = 16.00345$

$d = 0.78767$



## Bead 697

Date : Mon Oct 17 13:28:38 PDT 2022

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

Frame size : 10 pixels

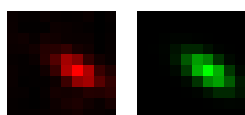
Coordinates : 95.3  $\mu\text{m}$  (x), -15.2  $\mu\text{m}$  (y), 15.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

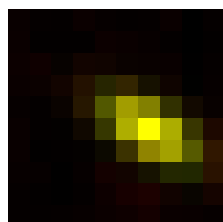
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	409 nm	223 nm
max	808 nm	835 nm	223 nm
z	1.48 $\mu\text{m}$	1.49 $\mu\text{m}$	885 nm
Asymmetry	0.49		
Theta	-32.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 510.886$  (brightness)

$B = 119.969$  (background)

$a = 0.389$  px

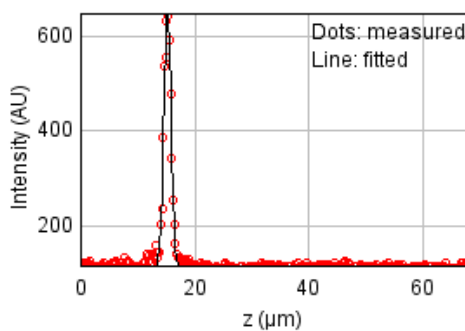
$b = -0.293$  px

$c = 0.676$  px

$x_c = 6.005$  px

$y_c = 5.015$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24692.4831

Standard deviation: 8.96836

$R^2 = 0.98293$

Parameters:

$a = 114.15115$

$b = 652.16203$

$c = 15.27516$

$d = 0.63058$

## Bead 698

Date : Mon Oct 17 13:28:38 PDT 2022

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

Frame size : 10 pixels

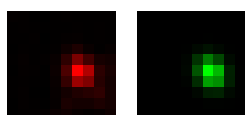
Coordinates : 59.9  $\mu\text{m}$  (x), -24.0  $\mu\text{m}$  (y), 15.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

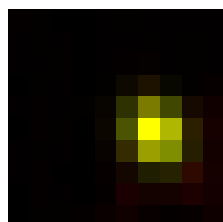
FWHM	Non corrected	Corrected	Theoretical
min	414 nm	428 nm	223 nm
max	499 nm	516 nm	223 nm
z	1.34 $\mu\text{m}$	1.34 $\mu\text{m}$	885 nm
Asymmetry	0.829		
Theta	-60.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1362.544$  (brightness)

$B = 134.077$  (background)

$a = 0.723$  px

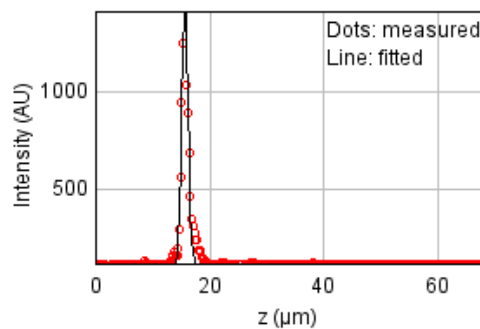
$b = -0.106$  px

$c = 0.600$  px

$x_c = 6.292$  px

$y_c = 5.163$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 203497.992

Standard deviation: 25.74607

$R^2: 0.97423$

Parameters:

$a = 116.28672$

$b = 1433.38997$

$c = 15.73736$

$d = 0.56732$

## Bead 699

Date : Mon Oct 17 13:28:39 PDT 2022

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

Frame size : 10 pixels

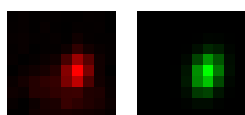
Coordinates : -50.0  $\mu\text{m}$  (x), -52.6  $\mu\text{m}$  (y), 15.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

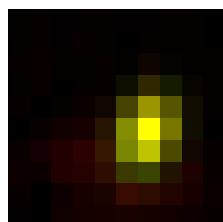
FWHM	Non corrected	Corrected	Theoretical
min	432 nm	446 nm	223 nm
max	605 nm	625 nm	223 nm
z	1.41 $\mu\text{m}$	1.42 $\mu\text{m}$	885 nm
Asymmetry	0.713		
Theta	71.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.930$



Parameters:

A = 541.269 (brightness)

B = 128.467 (background)

a = 0.684 px

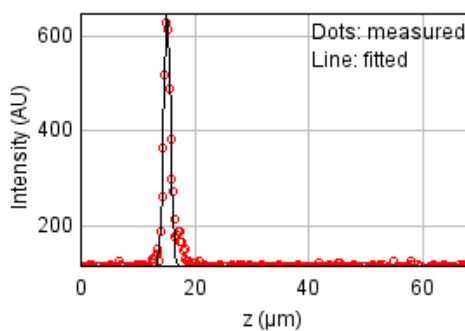
b = 0.108 px

c = 0.403 px

$x_c = 5.903$  px

$y_c = 5.195$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 48150.5866

Standard deviation: 12.52367

$R^2$ : 0.96531

Parameters:

a = 113.88418

b = 648.67337

c = 15.20776

d = 0.60028

## Bead 700

Date : Mon Oct 17 13:28:39 PDT 2022

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

Frame size : 10 pixels

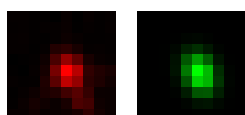
Coordinates : 38.6  $\mu\text{m}$  (x), -69.6  $\mu\text{m}$  (y), 14.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

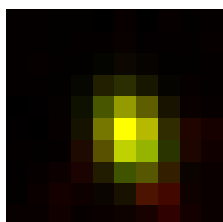
FWHM	Non corrected	Corrected	Theoretical
min	481 nm	497 nm	223 nm
max	651 nm	673 nm	223 nm
z	1.35 $\mu\text{m}$	1.36 $\mu\text{m}$	885 nm
Asymmetry	0.739		
Theta	-68.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 526.685 (brightness)

B = 127.517 (background)

a = 0.545 px

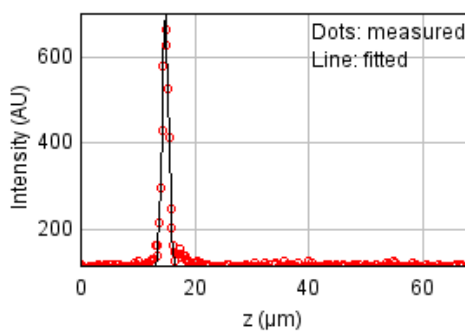
b = -0.090 px

c = 0.352 px

$x_c = 5.245$  px

$y_c = 5.275$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 26548.8766

Standard deviation: 9.29938

$R^2$ : 0.98320

Parameters:

a = 113.84899

b = 702.67135

c = 14.91714

d = 0.57349