

## Bead 2601

Date : Mon Oct 17 13:53:30 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

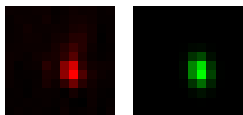
Coordinates : 83.3  $\mu\text{m}$  (x), -39.2  $\mu\text{m}$  (y), 49.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

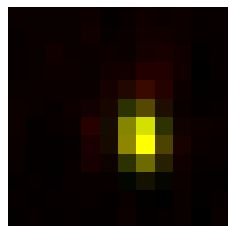
FWHM	Non corrected	Corrected	Theoretical
min	364 nm	379 nm	270 nm
max	523 nm	545 nm	270 nm
z	2.13 $\mu\text{m}$	2.14 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.695		
Theta	-82.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 650.242 (brightness)

B = 123.170 (background)

a = 1.004 px

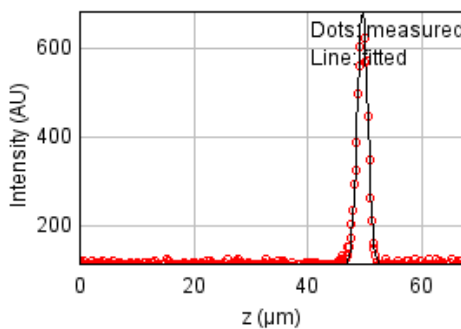
b = -0.068 px

c = 0.499 px

$x_c = 6.799$  px

$y_c = 6.603$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 26709.4673

Standard deviation: 9.32746

$R^2$ : 0.98831

Parameters:

a = 112.96875

b = 683.01691

c = 49.63665

d = 0.90525

## Bead 2602 (Rejected)

Date : Mon Oct 17 13:53:30 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 4.36  $\mu\text{m}$  (x), -71.9  $\mu\text{m}$  (y), 41.7  $\mu\text{m}$  (z)

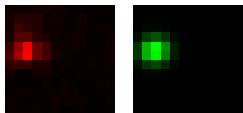
Corresponding bead : Not found

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

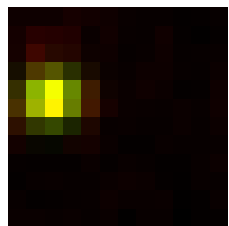
FWHM	Non corrected	Corrected	Theoretical
min	480 nm	500 nm	270 nm
max	527 nm	548 nm	270 nm
z	2.89 $\mu\text{m}$	2.9 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.911		
Theta	11.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.927$



Parameters:

A = 424.227 (brightness)

B = 120.715 (background)

a = 0.488 px

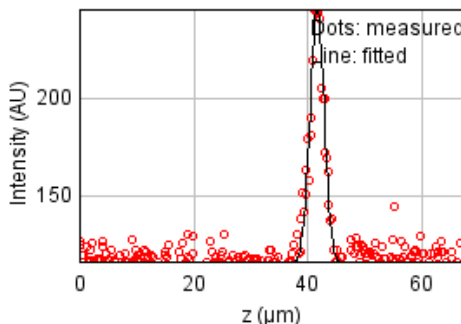
b = 0.020 px

c = 0.579 px

xc = 1.840 px

yc = 4.461 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16111.0271

Standard deviation: 7.24423

$R^2$ : 0.90686

Parameters:

a = 115.84705

b = 246.08950

c = 41.68665

d = 1.22653

## Bead 2603 (Rejected)

Date : Mon Oct 17 13:53:30 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -2.64  $\mu\text{m}$  (x), -83.7  $\mu\text{m}$  (y), 48.3  $\mu\text{m}$  (z)

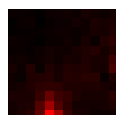
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	6.03 $\mu\text{m}$	6.06 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

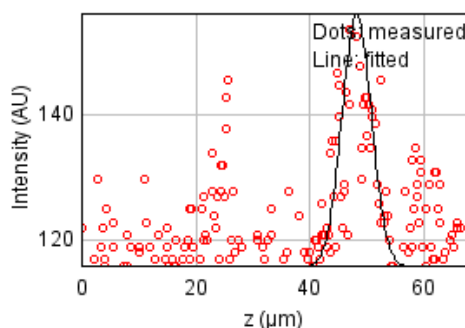
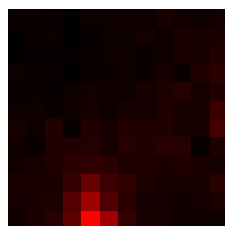
### XY profile & fitting parameters :

(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: 25410.0460

Standard deviation: 9.09774

R<sup>2</sup>: 0.53792

Parameters:

a = 115.73546

b = 156.41630

c = 48.27612

d = 2.56194

## Bead 2604

Date : Mon Oct 17 13:53:30 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

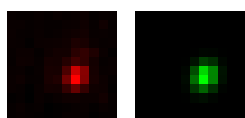
Coordinates : 73.5  $\mu\text{m}$  (x), -83.9  $\mu\text{m}$  (y), 49.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

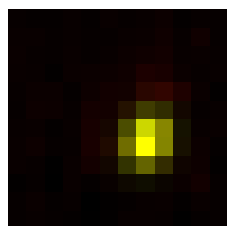
FWHM	Non corrected	Corrected	Theoretical
min	414 nm	431 nm	270 nm
max	508 nm	529 nm	270 nm
z	1.88 $\mu\text{m}$	1.88 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.814		
Theta	69.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 597.952 (brightness)

B = 122.999 (background)

a = 0.753 px

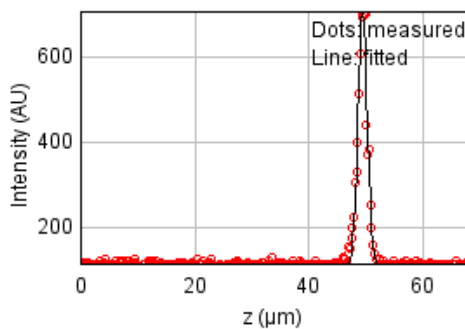
b = 0.086 px

c = 0.552 px

xc = 7.109 px

yc = 6.637 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 44217.5984

Standard deviation: 12.00130

$R^2$ : 0.97991

Parameters:

a = 113.31904

b = 705.36924

c = 49.48443

d = 0.79677

## Bead 2605 (Rejected)

Date : Mon Oct 17 13:53:30 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -37.6  $\mu\text{m}$  (x), -84.3  $\mu\text{m}$  (y), 49.9  $\mu\text{m}$  (z)

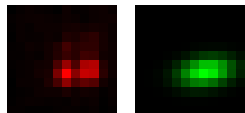
Corresponding bead : Not found

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

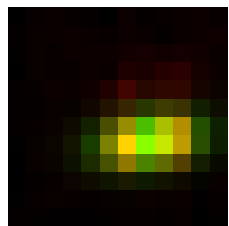
FWHM	Non corrected	Corrected	Theoretical
min	522 nm	544 nm	270 nm
max	983 nm	1.02 $\mu\text{m}$	270 nm
z	2.19 $\mu\text{m}$	2.2 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.531		
Theta	8.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.820$



Parameters:

A = 582.647 (brightness)

B = 131.028 (background)

a = 0.147 px

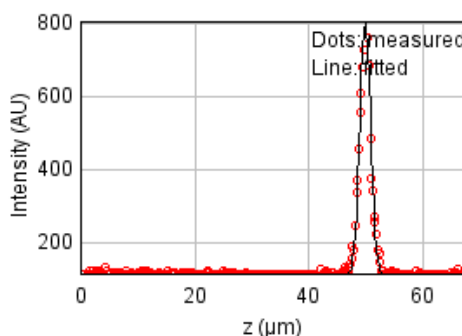
b = 0.054 px

c = 0.484 px

xc = 7.235 px

yc = 6.779 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 61441.1292

Standard deviation: 14.14687

$R^2$ : 0.98232

Parameters:

a = 114.80480

b = 806.25563

c = 49.94069

d = 0.93157

## Bead 2606 (Rejected)

Date : Mon Oct 17 13:53:30 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -58.6  $\mu\text{m}$  (x), 83.0  $\mu\text{m}$  (y), 45.8  $\mu\text{m}$  (z)

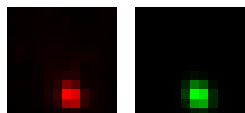
Corresponding bead : Not found

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

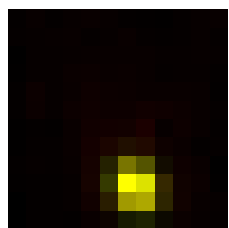
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	413 nm	270 nm
max	476 nm	495 nm	270 nm
z	3.57 $\mu\text{m}$	3.58 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.834		
Theta	-63.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 991.279 (brightness)

B = 129.887 (background)

a = 0.801 px

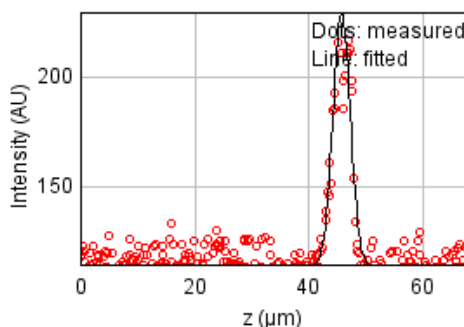
b = -0.103 px

c = 0.644 px

xc = 6.446 px

yc = 9.180 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23298.8814

Standard deviation: 8.71161

$R^2$ : 0.86550

Parameters:

a = 113.85429

b = 229.34777

c = 45.80844

d = 1.51521

## Bead 2607

Date : Mon Oct 17 13:53:30 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

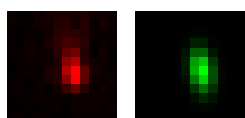
Coordinates : 155 um (x), 52.5 um (y), 50.0 um (z)

Corresponding bead : Not found

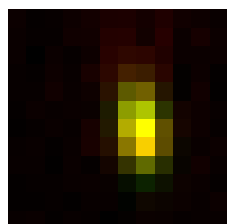
FWHM	Non corrected	Corrected	Theoretical
min	412 nm	429 nm	270 nm
max	779 nm	811 nm	270 nm
z	2.19 um	2.19 um	1.3 um
Asymmetry	0.529		
Theta	-81.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 400.582 (brightness)

B = 117.184 (background)

a = 0.777 px

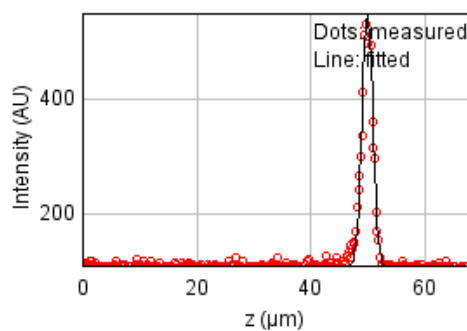
b = -0.082 px

c = 0.233 px

xc = 6.748 px

yc = 5.966 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30603.2707

Standard deviation: 9.98423

$R^2$ : 0.97811

Parameters:

a = 110.26839

b = 548.67779

c = 49.98170

d = 0.92817

## Bead 2608

Date : Mon Oct 17 13:53:30 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

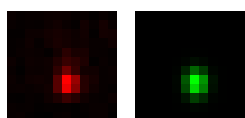
Coordinates : -126  $\mu\text{m}$  (x), 44.0  $\mu\text{m}$  (y), 49.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

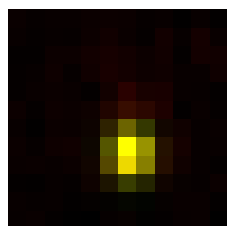
FWHM	Non corrected	Corrected	Theoretical
min	404 nm	421 nm	270 nm
max	493 nm	513 nm	270 nm
z	2.03 $\mu\text{m}$	2.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.82		
Theta	-88.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 522.810$  (brightness)

$B = 122.362$  (background)

$a = 0.822$  px

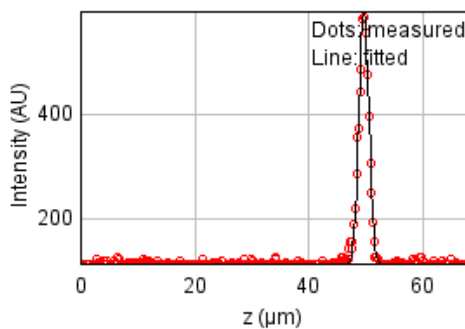
$b = -0.007$  px

$c = 0.553$  px

$x_c = 6.166$  px

$y_c = 7.355$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30020.2454

Standard deviation: 9.88867

$R^2: 0.98108$

Parameters:

$a = 111.92923$

$b = 596.02029$

$c = 49.72107$

$d = 0.86333$



## Bead 2609 (Rejected)

Date : Mon Oct 17 13:53:30 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 12.6  $\mu\text{m}$  (x), 43.2  $\mu\text{m}$  (y), 49.6  $\mu\text{m}$  (z)

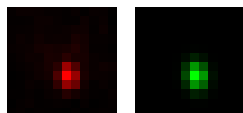
Corresponding bead : Not found

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

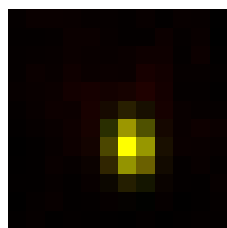
FWHM	Non corrected	Corrected	Theoretical
min	384 nm	400 nm	270 nm
max	503 nm	524 nm	270 nm
z	3.22 $\mu\text{m}$	3.23 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.762		
Theta	-82.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 801.568 (brightness)

B = 128.240 (background)

a = 0.906 px

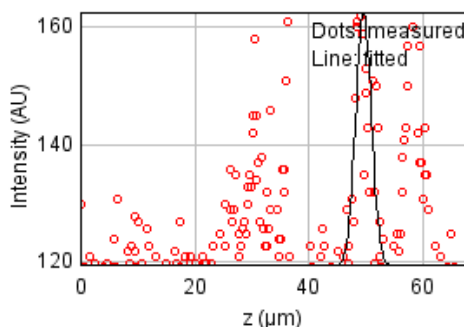
b = -0.049 px

c = 0.536 px

xc = 6.209 px

yc = 7.011 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 53823.9168

Standard deviation: 13.24093

$R^2$ : 0.25870

Parameters:

a = 119.51260

b = 162.39411

c = 49.64575

d = 1.36542

## Bead 2610 (Rejected)

Date : Mon Oct 17 13:53:31 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -122  $\mu\text{m}$  (x), 26.2  $\mu\text{m}$  (y), 46.0  $\mu\text{m}$  (z)

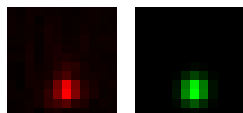
Corresponding bead : Not found

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

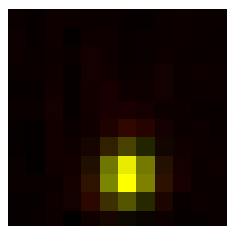
FWHM	Non corrected	Corrected	Theoretical
min	445 nm	463 nm	270 nm
max	478 nm	498 nm	270 nm
z	3.22 $\mu\text{m}$	3.23 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.93		
Theta	75.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 620.746 (brightness)

B = 122.754 (background)

a = 0.673 px

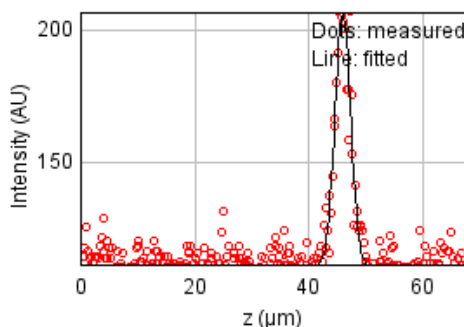
b = 0.022 px

c = 0.593 px

xc = 5.992 px

yc = 8.568 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13945.9537

Standard deviation: 6.73992

$R^2$ : 0.87006

Parameters:

a = 111.18676

b = 206.79631

c = 46.01013

d = 1.36547

## Bead 2611

Date : Mon Oct 17 13:53:31 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

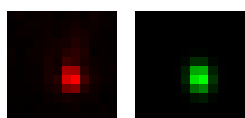
Coordinates : 60.0  $\mu\text{m}$  (x), 1.25  $\mu\text{m}$  (y), 50.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

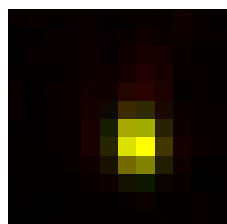
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	413 nm	270 nm
max	506 nm	527 nm	270 nm
z	2.03 $\mu\text{m}$	2.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.784		
Theta	-82.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 893.384 (brightness)

B = 129.530 (background)

a = 0.848 px

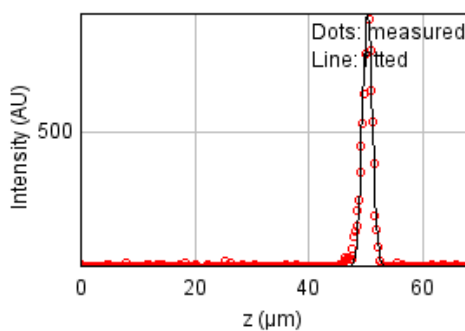
b = -0.041 px

c = 0.530 px

xc = 6.567 px

yc = 6.834 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 51710.3811

Standard deviation: 12.97836

$R^2$ : 0.98563

Parameters:

a = 113.97207

b = 844.79575

c = 50.32121

d = 0.86307

## Bead 2612

Date : Mon Oct 17 13:53:31 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

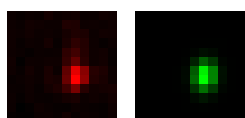
Coordinates : -131  $\mu\text{m}$  (x), -454 nm (y), 49.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

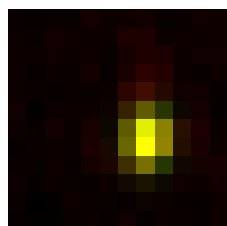
FWHM	Non corrected	Corrected	Theoretical
min	411 nm	429 nm	270 nm
max	547 nm	570 nm	270 nm
z	2.13 $\mu\text{m}$	2.14 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.752		
Theta	85.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 436.804$  (brightness)

$B = 121.412$  (background)

$a = 0.790$  px

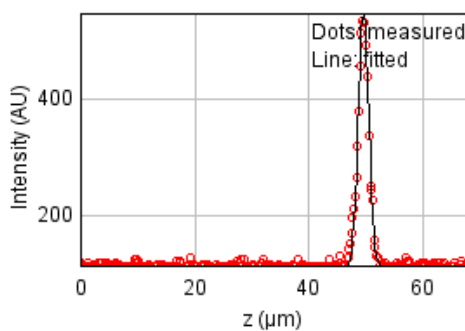
$b = 0.030$  px

$c = 0.450$  px

$x_c = 7.092$  px

$y_c = 6.566$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23771.2850

Standard deviation: 8.79948

$R^2: 0.98221$

Parameters:

$a = 112.33352$

$b = 547.43167$

$c = 49.65076$

$d = 0.90335$

## Bead 2613

Date : Mon Oct 17 13:53:31 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

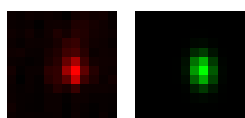
Coordinates : 124  $\mu\text{m}$  (x), -19.5  $\mu\text{m}$  (y), 49.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

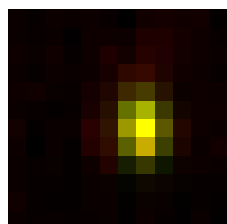
FWHM	Non corrected	Corrected	Theoretical
min	411 nm	428 nm	270 nm
max	602 nm	627 nm	270 nm
z	1.98 $\mu\text{m}$	1.98 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.682		
Theta	-85.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 403.128 (brightness)

B = 121.179 (background)

a = 0.793 px

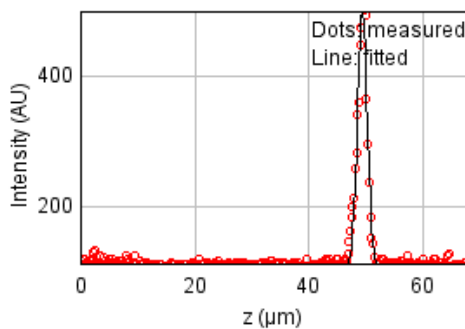
b = -0.033 px

c = 0.373 px

xc = 6.823 px

yc = 5.966 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27579.5452

Standard deviation: 9.47817

$R^2$ : 0.97246

Parameters:

a = 111.96965

b = 500.11499

c = 49.43337

d = 0.83921

## Bead 2614

Date : Mon Oct 17 13:53:31 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

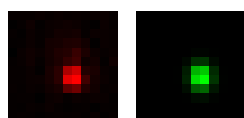
Coordinates : -52.2  $\mu\text{m}$  (x), -23.8  $\mu\text{m}$  (y), 50.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

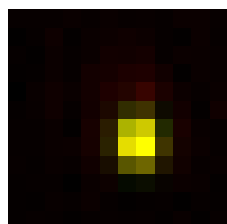
FWHM	Non corrected	Corrected	Theoretical
min	394 nm	411 nm	270 nm
max	481 nm	501 nm	270 nm
z	2.02 $\mu\text{m}$	2.03 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.82		
Theta	-87.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 656.486 (brightness)

B = 123.239 (background)

a = 0.863 px

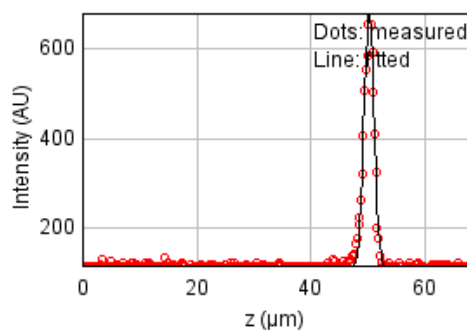
b = -0.012 px

c = 0.581 px

xc = 6.579 px

yc = 6.697 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28429.6028

Standard deviation: 9.62313

$R^2$ : 0.98693

Parameters:

a = 114.13201

b = 683.93077

c = 50.26594

d = 0.85924

## Bead 2615 (Rejected)

Date : Mon Oct 17 13:53:31 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 134  $\mu\text{m}$  (x), -24.4  $\mu\text{m}$  (y), 49.0  $\mu\text{m}$  (z)

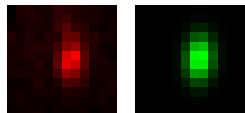
Corresponding bead : Not found

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

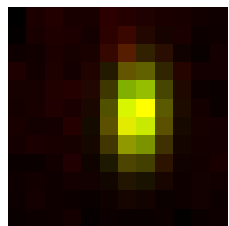
FWHM	Non corrected	Corrected	Theoretical
min	500 nm	521 nm	270 nm
max	841 nm	876 nm	270 nm
z	2.34 $\mu\text{m}$	2.35 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.595		
Theta	86.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 275.534 (brightness)

B = 118.768 (background)

a = 0.535 px

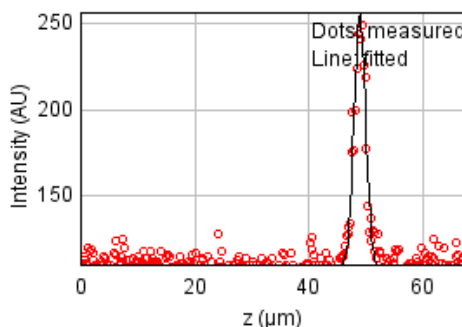
b = 0.020 px

c = 0.191 px

xc = 6.523 px

yc = 5.323 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14759.9886

Standard deviation: 6.93384

$R^2$ : 0.91645

Parameters:

a = 110.21219

b = 256.18159

c = 48.99585

d = 0.99489

## Bead 2616

Date : Mon Oct 17 13:53:31 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

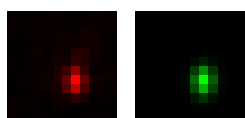
Coordinates : 58.5  $\mu\text{m}$  (x), -27.2  $\mu\text{m}$  (y), 50.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

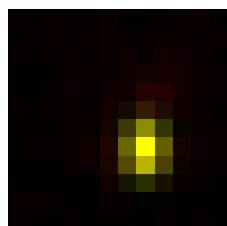
FWHM	Non corrected	Corrected	Theoretical
min	377 nm	393 nm	270 nm
max	527 nm	549 nm	270 nm
z	1.83 $\mu\text{m}$	1.83 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.716		
Theta	88.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 784.739 (brightness)

B = 126.261 (background)

a = 0.942 px

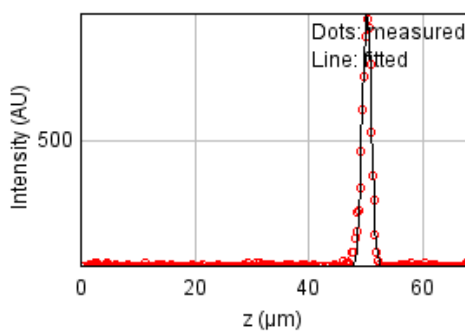
b = 0.011 px

c = 0.483 px

xc = 6.974 px

yc = 7.125 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 39247.5394

Standard deviation: 11.30673

$R^2$ : 0.98920

Parameters:

a = 114.38479

b = 888.83682

c = 50.22204

d = 0.77567



## Bead 2617

Date : Mon Oct 17 13:53:31 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

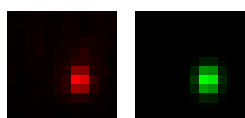
Coordinates : -20.8  $\mu\text{m}$  (x), -33.6  $\mu\text{m}$  (y), 50.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

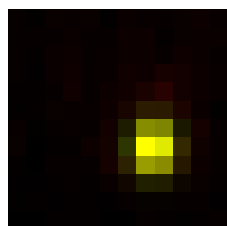
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	418 nm	270 nm
max	499 nm	519 nm	270 nm
z	2.25 $\mu\text{m}$	2.26 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.804		
Theta	87.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 922.570 (brightness)

B = 128.528 (background)

a = 0.833 px

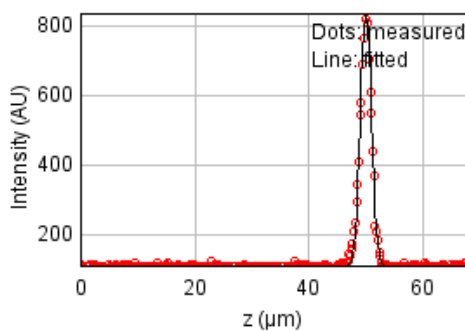
b = 0.014 px

c = 0.540 px

$x_c = 7.446$  px

$y_c = 7.035$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37175.3688

Standard deviation: 11.00420

$R^2$ : 0.99044

Parameters:

a = 112.38908

b = 837.93611

c = 50.06405

d = 0.95626

## Bead 2618

Date : Mon Oct 17 13:53:32 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

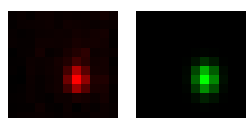
Coordinates : 682 nm (x), -63.0 um (y), 49.8 um (z)

Corresponding bead : Not found

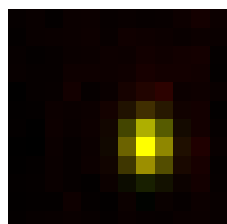
FWHM	Non corrected	Corrected	Theoretical
min	411 nm	428 nm	270 nm
max	531 nm	553 nm	270 nm
z	1.93 um	1.93 um	1.3 um
Asymmetry	0.774		
Theta	-88.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 461.784 (brightness)

B = 117.866 (background)

a = 0.793 px

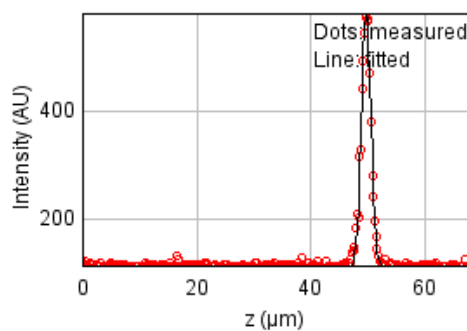
b = -0.010 px

c = 0.476 px

xc = 7.098 px

yc = 6.897 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17723.0975

Standard deviation: 7.59802

$R^2$ : 0.98731

Parameters:

a = 113.09780

b = 580.53644

c = 49.76143

d = 0.81806

## Bead 2619 (Rejected)

Date : Mon Oct 17 13:53:32 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 121  $\mu\text{m}$  (x), 95.9  $\mu\text{m}$  (y), 49.8  $\mu\text{m}$  (z)

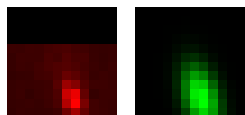
Corresponding bead : Not found

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

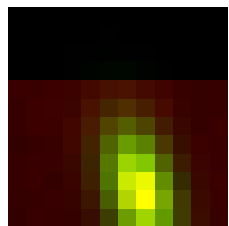
FWHM	Non corrected	Corrected	Theoretical
min	637 nm	663 nm	270 nm
max	1.25 $\mu\text{m}$	1.31 $\mu\text{m}$	270 nm
z	3.64 $\mu\text{m}$	3.65 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.508		
Theta	-74.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.670$



Parameters:

A = 367.643 (brightness)

B = 66.036 (background)

a = 0.314 px

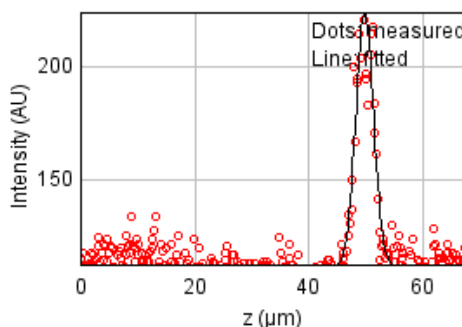
b = -0.062 px

c = 0.102 px

xc = 6.682 px

yc = 9.419 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19572.8554

Standard deviation: 7.98469

$R^2$ : 0.87967

Parameters:

a = 112.16523

b = 223.97169

c = 49.84844

d = 1.54574

## Bead 2620 (Rejected)

Date : Mon Oct 17 13:53:32 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 120  $\mu\text{m}$  (x), 95.4  $\mu\text{m}$  (y), 10.5  $\mu\text{m}$  (z)

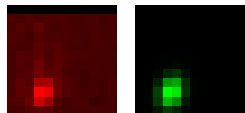
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

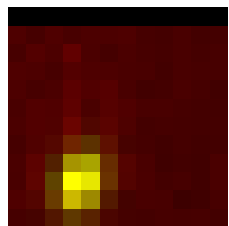
FWHM	Non corrected	Corrected	Theoretical
min	424 nm	441 nm	270 nm
max	577 nm	601 nm	270 nm
z	2.07 $\mu\text{m}$	2.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.734		
Theta	72.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.622$



Parameters:

A = 341.263 (brightness)

B = 111.370 (background)

a = 0.717 px

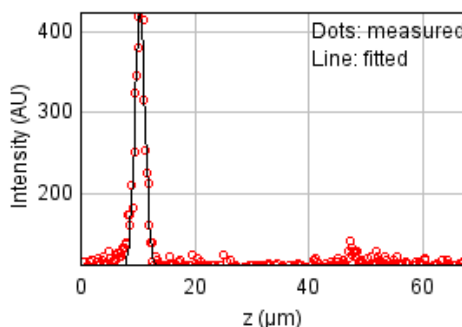
b = 0.098 px

c = 0.434 px

xc = 3.428 px

yc = 9.027 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28039.1774

Standard deviation: 9.55682

$R^2$ : 0.95879

Parameters:

a = 112.52506

b = 423.58195

c = 10.48770

d = 0.87703

## Bead 2621

Date : Mon Oct 17 13:53:32 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

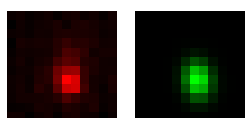
Coordinates : -109  $\mu\text{m}$  (x), 76.4  $\mu\text{m}$  (y), 48.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

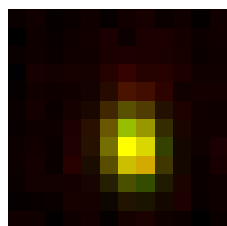
FWHM	Non corrected	Corrected	Theoretical
min	511 nm	532 nm	270 nm
max	685 nm	714 nm	270 nm
z	2.16 $\mu\text{m}$	2.17 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.746		
Theta	-82.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 327.312$  (brightness)

$B = 123.178$  (background)

$a = 0.509$  px

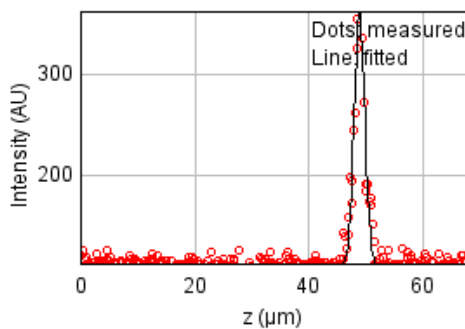
$b = -0.030$  px

$c = 0.290$  px

$x_c = 6.328$  px

$y_c = 7.034$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25750.1194

Standard deviation: 9.15842

$R^2: 0.94454$

Parameters:

$a = 113.27513$

$b = 363.11527$

$c = 48.93875$

$d = 0.91591$

## Bead 2622

Date : Mon Oct 17 13:53:32 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

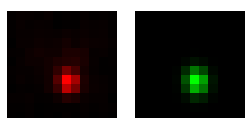
Coordinates : 18.7 um (x), 76.8 um (y), 50.4 um (z)

Corresponding bead : Not found

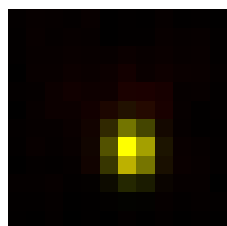
FWHM	Non corrected	Corrected	Theoretical
min	409 nm	426 nm	270 nm
max	484 nm	504 nm	270 nm
z	1.91 um	1.92 um	1.3 um
Asymmetry	0.845		
Theta	-83.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 910.912 (brightness)

B = 129.688 (background)

a = 0.799 px

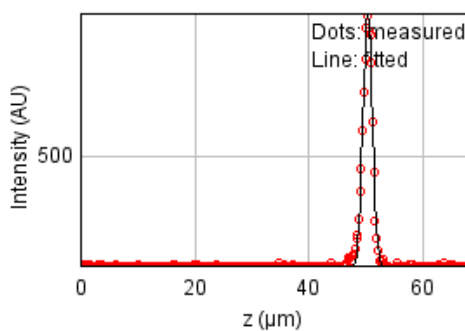
b = -0.026 px

c = 0.576 px

xc = 6.213 px

yc = 7.190 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 45409.7912

Standard deviation: 12.16202

$R^2$ : 0.99073

Parameters:

a = 114.25644

b = 995.37953

c = 50.38532

d = 0.81012

## Bead 2623

Date : Mon Oct 17 13:53:32 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

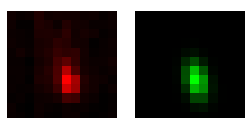
Coordinates : 120  $\mu\text{m}$  (x), 67.4  $\mu\text{m}$  (y), 49.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

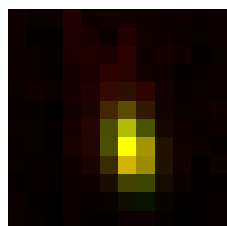
FWHM	Non corrected	Corrected	Theoretical
min	388 nm	404 nm	270 nm
max	679 nm	707 nm	270 nm
z	2.05 $\mu\text{m}$	2.06 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.571		
Theta	-76.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.923$



Parameters:

$A = 453.957$  (brightness)

$B = 123.881$  (background)

$a = 0.862$  px

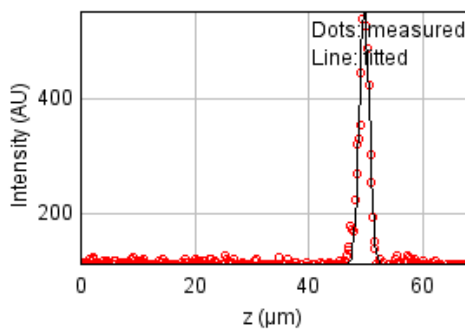
$b = -0.134$  px

$c = 0.323$  px

$x_c = 6.193$  px

$y_c = 7.043$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 34632.4060

Standard deviation: 10.62116

$R^2: 0.97385$

Parameters:

$a = 112.64226$

$b = 551.24436$

$c = 49.79148$

$d = 0.87190$

## Bead 2624 (Rejected)

Date : Mon Oct 17 13:53:32 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -5.67  $\mu\text{m}$  (x), 58.4  $\mu\text{m}$  (y), 49.7  $\mu\text{m}$  (z)

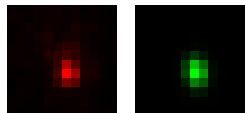
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

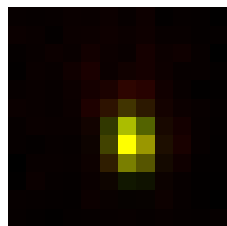
FWHM	Non corrected	Corrected	Theoretical
min	378 nm	393 nm	270 nm
max	523 nm	545 nm	270 nm
z	1.9 $\mu\text{m}$	1.9 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.722		
Theta	-81.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 533.404 (brightness)

B = 121.171 (background)

a = 0.931 px

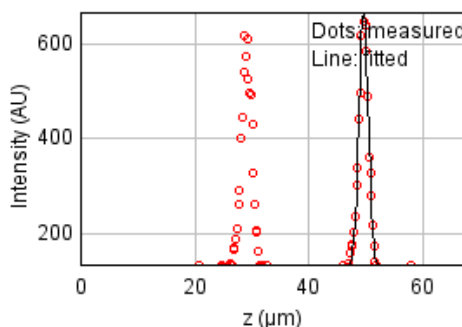
b = -0.064 px

c = 0.500 px

xc = 6.206 px

yc = 6.827 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 1755539.56

Standard deviation: 75.61990

$R^2$ : 0.50363

Parameters:

a = 132.72337

b = 668.07728

c = 49.66542

d = 0.80532



## Bead 2625

Date : Mon Oct 17 13:53:32 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

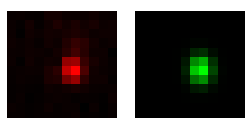
Coordinates : -149  $\mu\text{m}$  (x), 53.2  $\mu\text{m}$  (y), 49.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

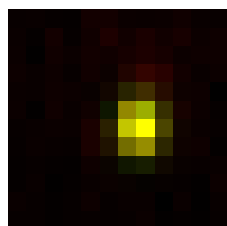
FWHM	Non corrected	Corrected	Theoretical
min	413 nm	430 nm	270 nm
max	524 nm	546 nm	270 nm
z	2.16 $\mu\text{m}$	2.17 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.788		
Theta	-89.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 462.861$  (brightness)

$B = 120.195$  (background)

$a = 0.787$  px

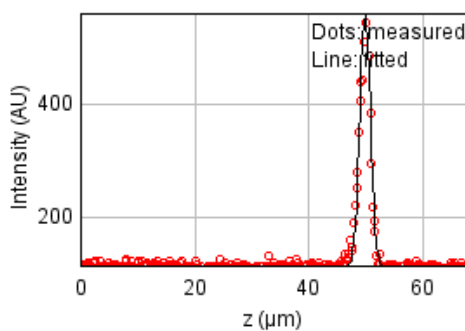
$b = -0.003$  px

$c = 0.489$  px

$x_c = 6.662$  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: 38921.8595

Standard deviation: 11.25972

$R^2: 0.97354$

Parameters:

$a = 112.14222$

$b = 562.80490$

$c = 49.92342$

$d = 0.91927$

## Bead 2626 (Rejected)

Date : Mon Oct 17 13:53:33 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -66.4  $\mu\text{m}$  (x), 43.6  $\mu\text{m}$  (y), 46.0  $\mu\text{m}$  (z)

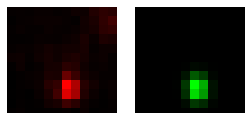
Corresponding bead : Not found

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

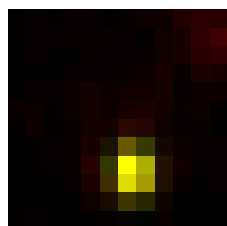
FWHM	Non corrected	Corrected	Theoretical
min	373 nm	389 nm	270 nm
max	470 nm	490 nm	270 nm
z	3.28 $\mu\text{m}$	3.29 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.794		
Theta	-87.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.910$



Parameters:

A = 872.060 (brightness)

B = 143.484 (background)

a = 0.962 px

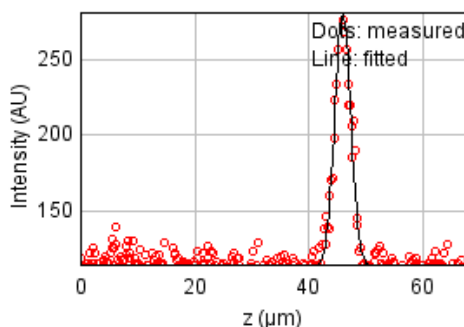
b = -0.018 px

c = 0.608 px

xc = 6.307 px

yc = 8.376 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16548.5784

Standard deviation: 7.34195

$R^2$ : 0.94608

Parameters:

a = 113.80078

b = 280.97177

c = 45.99949

d = 1.39095

## Bead 2627

Date : Mon Oct 17 13:53:33 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

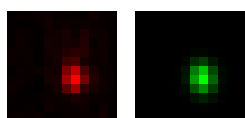
Coordinates : -144  $\mu\text{m}$  (x), 12.3  $\mu\text{m}$  (y), 49.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

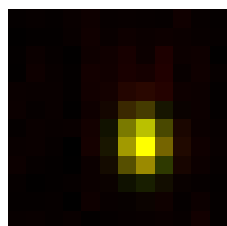
FWHM	Non corrected	Corrected	Theoretical
min	430 nm	448 nm	270 nm
max	549 nm	572 nm	270 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.784		
Theta	-84.9°		

### 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:

$A = 487.126$  (brightness)

$B = 120.773$  (background)

$a = 0.722$  px

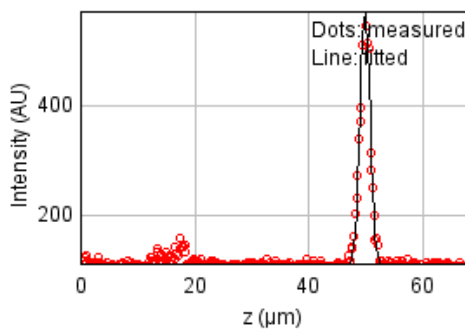
$b = -0.025$  px

$c = 0.448$  px

$x_c = 6.844$  px

$y_c = 6.807$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 41615.4265

Standard deviation: 11.64281

$R^2: 0.97083$

Parameters:

$a = 113.27069$

$b = 568.74842$

$c = 49.91269$

$d = 0.86820$

## Bead 2628

Date : Mon Oct 17 13:53:33 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

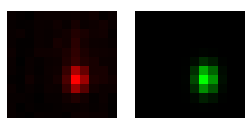
Coordinates : -97.4  $\mu\text{m}$  (x), 8.27  $\mu\text{m}$  (y), 49.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

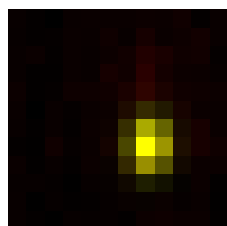
FWHM	Non corrected	Corrected	Theoretical
min	384 nm	400 nm	270 nm
max	521 nm	542 nm	270 nm
z	2.07 $\mu\text{m}$	2.08 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.738		
Theta	89.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 516.284 (brightness)

B = 123.830 (background)

a = 0.908 px

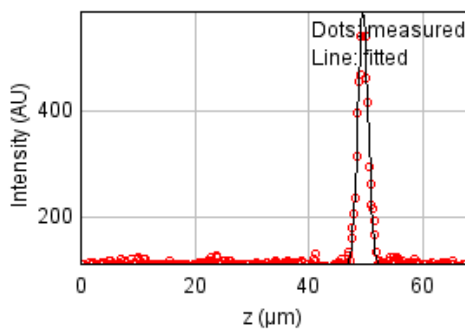
b = 0.007 px

c = 0.495 px

$x_c = 7.203$  px

$y_c = 6.911$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 26851.2252

Standard deviation: 9.35218

$R^2$ : 0.98238

Parameters:

a = 113.90388

b = 584.14651

c = 49.55048

d = 0.88069

## Bead 2629 (Rejected)

Date : Mon Oct 17 13:53:33 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 81.2  $\mu\text{m}$  (x), -6.5  $\mu\text{m}$  (y), 47.7  $\mu\text{m}$  (z)

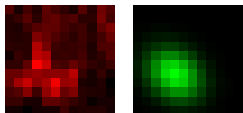
Corresponding bead : Not found

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

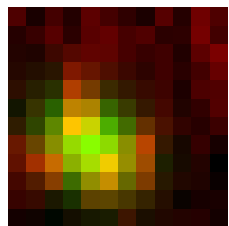
FWHM	Non corrected	Corrected	Theoretical
min	861 nm	896 nm	270 nm
max	1.08 $\mu\text{m}$	1.13 $\mu\text{m}$	270 nm
z	1.25 $\mu\text{m}$	1.26 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.796		
Theta	-40.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.484$



Parameters:

A = 72.805 (brightness)

B = 130.011 (background)

a = 0.143 px

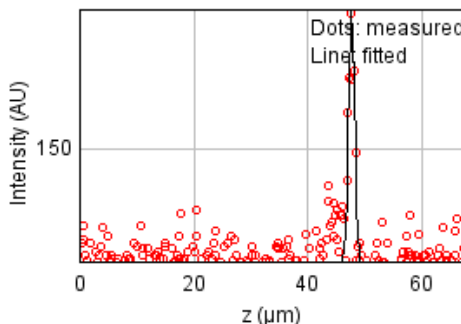
b = -0.033 px

c = 0.153 px

xc = 4.024 px

yc = 7.063 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14272.1700

Standard deviation: 6.81830

$R^2$ : 0.67230

Parameters:

a = 112.30678

b = 196.07243

c = 47.71823

d = 0.53281

## Bead 2630

Date : Mon Oct 17 13:53:33 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

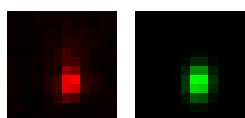
Coordinates : 135  $\mu\text{m}$  (x), -14.9  $\mu\text{m}$  (y), 50.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

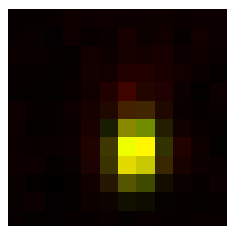
FWHM	Non corrected	Corrected	Theoretical
min	414 nm	431 nm	270 nm
max	588 nm	612 nm	270 nm
z	2.06 $\mu\text{m}$	2.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.704		
Theta	85.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 526.516 (brightness)

B = 122.366 (background)

a = 0.782 px

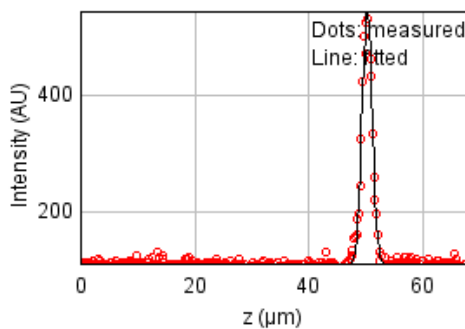
b = 0.030 px

c = 0.391 px

$x_c = 6.467$  px

$y_c = 7.265$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23146.0638

Standard deviation: 8.68299

$R^2$ : 0.98192

Parameters:

a = 112.18486

b = 544.04790

c = 50.28903

d = 0.87674

## Bead 2631

Date : Mon Oct 17 13:53:33 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

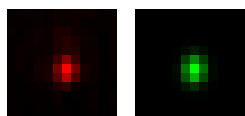
Coordinates : 77.7  $\mu\text{m}$  (x), -23.5  $\mu\text{m}$  (y), 50.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

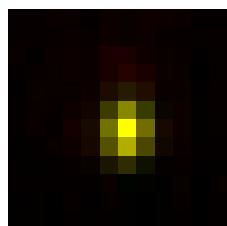
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	418 nm	270 nm
max	514 nm	535 nm	270 nm
z	1.93 $\mu\text{m}$	1.94 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.781		
Theta	87.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 811.328 (brightness)

B = 127.464 (background)

a = 0.832 px

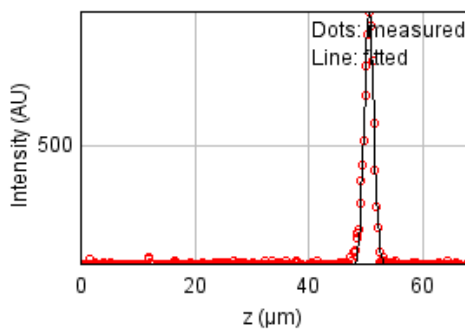
b = 0.017 px

c = 0.510 px

xc = 5.982 px

yc = 6.124 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57381.7042

Standard deviation: 13.67154

$R^2$ : 0.98678

Parameters:

a = 114.30726

b = 936.90599

c = 50.62075

d = 0.82116

## Bead 2632

Date : Mon Oct 17 13:53:34 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

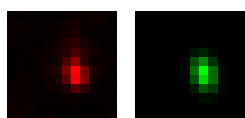
Coordinates : 125  $\mu\text{m}$  (x), -23.7  $\mu\text{m}$  (y), 50.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

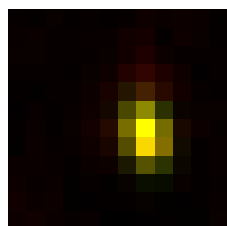
FWHM	Non corrected	Corrected	Theoretical
min	393 nm	409 nm	270 nm
max	596 nm	621 nm	270 nm
z	1.97 $\mu\text{m}$	1.98 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.658		
Theta	-78.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 647.449 (brightness)

B = 124.650 (background)

a = 0.852 px

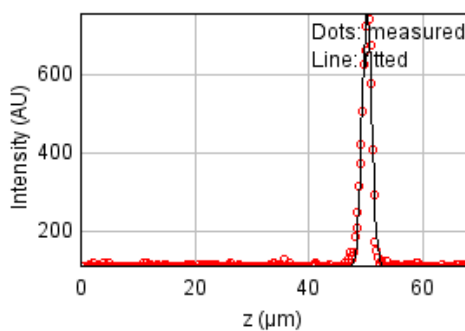
b = -0.093 px

c = 0.396 px

xc = 7.027 px

yc = 6.296 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 45617.8073

Standard deviation: 12.18984

$R^2$ : 0.98324

Parameters:

a = 112.66397

b = 756.25042

c = 50.24790

d = 0.83862



## Bead 2633 (Rejected)

Date : Mon Oct 17 13:53:34 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 427 nm (x), -30.0 um (y), 48.7 um (z)

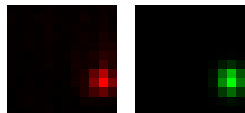
Corresponding bead : Not found

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

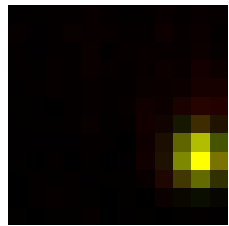
FWHM	Non corrected	Corrected	Theoretical
min	433 nm	450 nm	270 nm
max	478 nm	498 nm	270 nm
z	3.37 um	3.38 um	1.3 um
Asymmetry	0.905		
Theta	-88.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 813.503 (brightness)

B = 125.657 (background)

a = 0.717 px

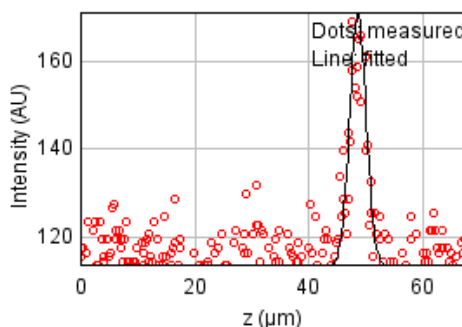
b = -0.004 px

c = 0.588 px

xc = 9.941 px

yc = 7.755 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15332.0415

Standard deviation: 7.06693

$R^2$ : 0.69270

Parameters:

a = 113.88945

b = 170.81680

c = 48.65944

d = 1.43081

## Bead 2634 (Rejected)

Date : Mon Oct 17 13:53:34 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 5.61  $\mu\text{m}$  (x), -71.7  $\mu\text{m}$  (y), 41.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

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

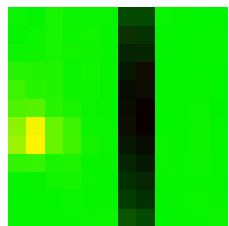
FWHM	Non corrected	Corrected	Theoretical
min	137 nm	142 nm	270 nm
max	3.44 $\mu\text{m}$	3.59 $\mu\text{m}$	270 nm
z	2.89 $\mu\text{m}$	2.9 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.04		
Theta	-90.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.050$



Parameters:

A = -116.789 (brightness)

B = 139.977 (background)

a = 7.169 px

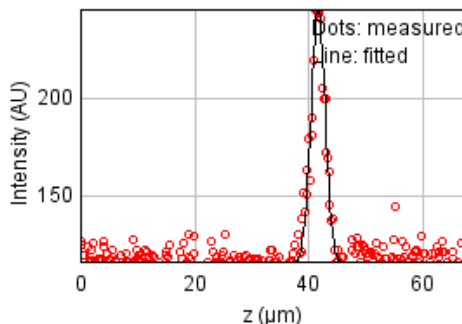
b = -0.003 px

c = -0.011 px

xc = 6.503 px

yc = 5.279 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16111.0271

Standard deviation: 7.24423

$R^2$ : 0.90686

Parameters:

a = 115.84705

b = 246.08950

c = 41.68665

d = 1.22653

## Bead 2635 (Rejected)

Date : Mon Oct 17 13:53:34 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -164  $\mu\text{m}$  (x), -80.3  $\mu\text{m}$  (y), 47.9  $\mu\text{m}$  (z)

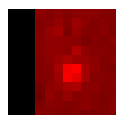
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	2.64 $\mu\text{m}$	2.65 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

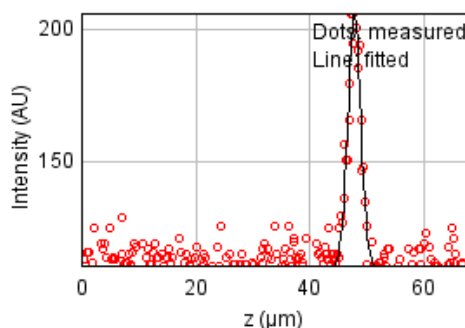
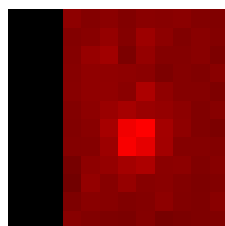
### XY profile & fitting parameters :

(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: 10858.0226

Standard deviation: 5.94711

R<sup>2</sup>: 0.87794

Parameters:

a = 110.32713

b = 206.09979

c = 47.86469

d = 1.12283

## Bead 2636

Date : Mon Oct 17 13:53:34 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

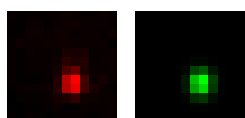
Coordinates : -79.7  $\mu\text{m}$  (x), 77.7  $\mu\text{m}$  (y), 50.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

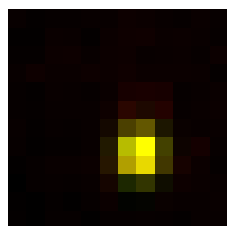
FWHM	Non corrected	Corrected	Theoretical
min	399 nm	416 nm	270 nm
max	465 nm	485 nm	270 nm
z	1.96 $\mu\text{m}$	1.97 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.858		
Theta	89.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 751.799 (brightness)

B = 119.769 (background)

a = 0.841 px

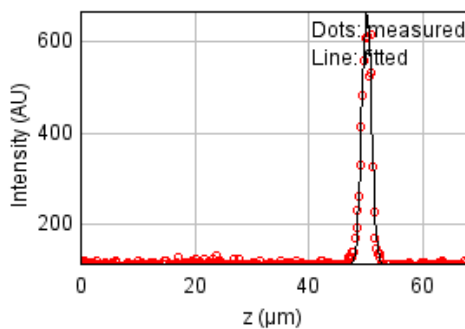
b = 0.002 px

c = 0.620 px

xc = 6.683 px

yc = 7.367 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 52361.2970

Standard deviation: 13.05978

$R^2$ : 0.97398

Parameters:

a = 113.58298

b = 666.36654

c = 50.19612

d = 0.83252

## Bead 2637

Date : Mon Oct 17 13:53:35 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

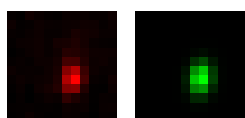
Coordinates : -67.8  $\mu\text{m}$  (x), 56.9  $\mu\text{m}$  (y), 49.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

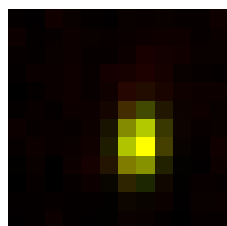
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	417 nm	270 nm
max	585 nm	610 nm	270 nm
z	1.81 $\mu\text{m}$	1.82 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.685		
Theta	83.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 530.826$  (brightness)

$B = 123.152$  (background)

$a = 0.830$  px

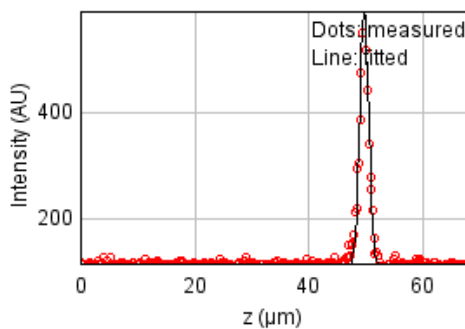
$b = 0.051$  px

$c = 0.398$  px

$x_c = 6.671$  px

$y_c = 6.842$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30580.8837

Standard deviation: 9.98058

$R^2: 0.97817$

Parameters:

$a = 113.67022$

$b = 593.67855$

$c = 49.77340$

$d = 0.76897$

## Bead 2638

Date : Mon Oct 17 13:53:35 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

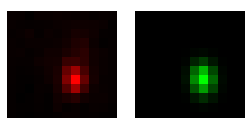
Coordinates : 60.0  $\mu\text{m}$  (x), 35.1  $\mu\text{m}$  (y), 50.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

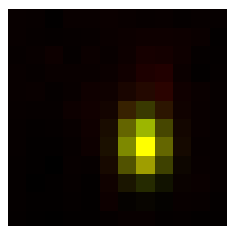
FWHM	Non corrected	Corrected	Theoretical
min	417 nm	434 nm	270 nm
max	571 nm	595 nm	270 nm
z	2.01 $\mu\text{m}$	2.02 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.729		
Theta	-87.3°		

### 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 = 839.651 (brightness)

B = 127.693 (background)

a = 0.772 px

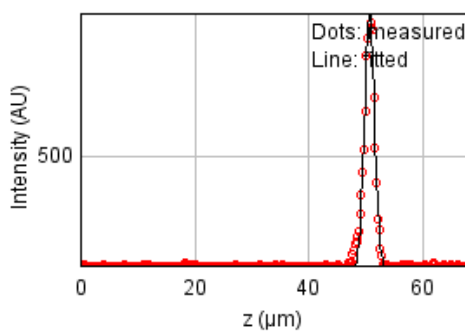
b = -0.017 px

c = 0.412 px

xc = 6.902 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: 57190.7612

Standard deviation: 13.64878

$R^2$ : 0.98909

Parameters:

a = 114.34277

b = 1002.40064

c = 50.70666

d = 0.85453

## Bead 2639

Date : Mon Oct 17 13:53:35 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

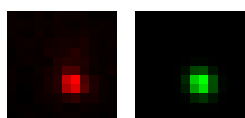
Coordinates : -63.2  $\mu\text{m}$  (x), 12.6  $\mu\text{m}$  (y), 50.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

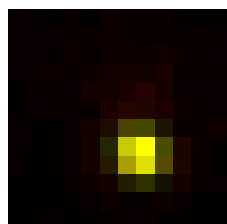
FWHM	Non corrected	Corrected	Theoretical
min	418 nm	435 nm	270 nm
max	456 nm	474 nm	270 nm
z	2.15 $\mu\text{m}$	2.16 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.918		
Theta	-50.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 764.786$  (brightness)

$B = 125.884$  (background)

$a = 0.718$  px

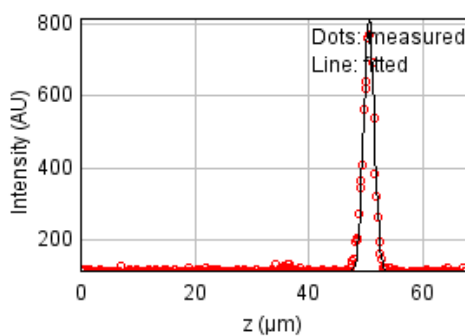
$b = -0.060$  px

$c = 0.696$  px

$x_c = 6.691$  px

$y_c = 7.378$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 76676.0269

Standard deviation: 15.80377

$R^2: 0.97810$

Parameters:

$a = 113.89454$

$b = 813.21452$

$c = 50.60867$

$d = 0.91272$

## Bead 2640

Date : Mon Oct 17 13:53:35 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

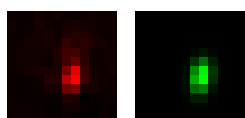
Coordinates : 82.9  $\mu\text{m}$  (x), -5.09  $\mu\text{m}$  (y), 50.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

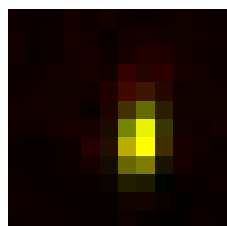
FWHM	Non corrected	Corrected	Theoretical
min	354 nm	369 nm	270 nm
max	601 nm	626 nm	270 nm
z	2.1 $\mu\text{m}$	2.11 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.589		
Theta	81.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 498.925 (brightness)

B = 124.158 (background)

a = 1.054 px

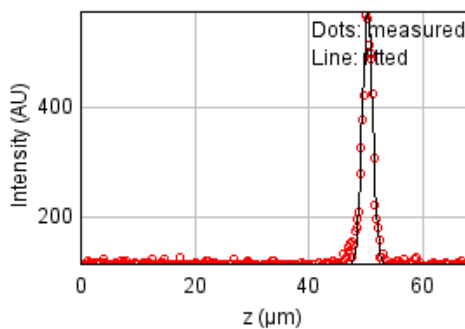
b = 0.102 px

c = 0.387 px

xc = 6.721 px

yc = 6.637 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31184.2400

Standard deviation: 10.07856

$R^2$ : 0.97941

Parameters:

a = 113.11721

b = 577.99211

c = 50.35334

d = 0.89356



## Bead 2641 (Rejected)

Date : Mon Oct 17 13:53:35 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 134  $\mu\text{m}$  (x), -24.4  $\mu\text{m}$  (y), 49.0  $\mu\text{m}$  (z)

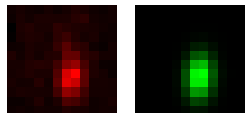
Corresponding bead : Not found

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

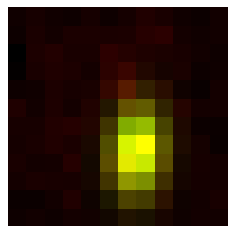
FWHM	Non corrected	Corrected	Theoretical
min	491 nm	512 nm	270 nm
max	827 nm	861 nm	270 nm
z	2.34 $\mu\text{m}$	2.35 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.594		
Theta	86.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 275.560 (brightness)

B = 121.203 (background)

a = 0.554 px

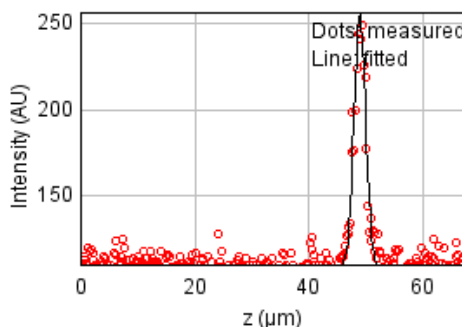
b = 0.022 px

c = 0.198 px

xc = 6.523 px

yc = 7.331 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14759.9886

Standard deviation: 6.93384

$R^2$ : 0.91645

Parameters:

a = 110.21219

b = 256.18159

c = 48.99585

d = 0.99489

## Bead 2642

Date : Mon Oct 17 13:53:35 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

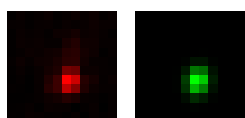
Coordinates : 50.0  $\mu\text{m}$  (x), -43.3  $\mu\text{m}$  (y), 50.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

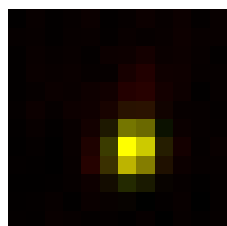
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	412 nm	270 nm
max	494 nm	515 nm	270 nm
z	1.98 $\mu\text{m}$	1.98 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.799		
Theta	78.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 660.621 (brightness)

B = 122.533 (background)

a = 0.846 px

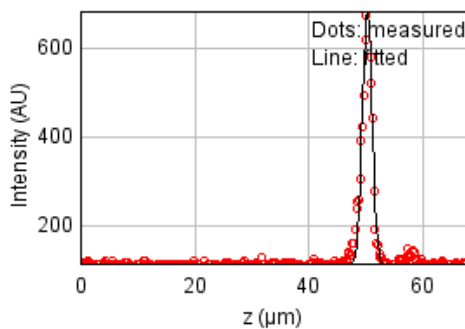
b = 0.063 px

c = 0.562 px

$x_c = 6.348$  px

$y_c = 7.150$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57169.2497

Standard deviation: 13.64621

$R^2$ : 0.97341

Parameters:

a = 114.58321

b = 683.55336

c = 50.30245

d = 0.83921

## Bead 2643

Date : Mon Oct 17 13:53:36 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

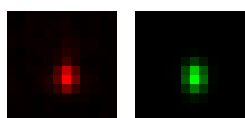
Coordinates : -38.3  $\mu\text{m}$  (x), -56.6  $\mu\text{m}$  (y), 50.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

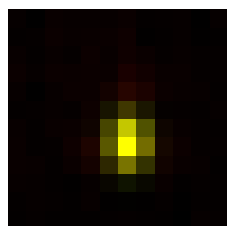
FWHM	Non corrected	Corrected	Theoretical
min	373 nm	389 nm	270 nm
max	508 nm	529 nm	270 nm
z	2.07 $\mu\text{m}$	2.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.735		
Theta	-88.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 801.417 (brightness)

B = 124.927 (background)

a = 0.963 px

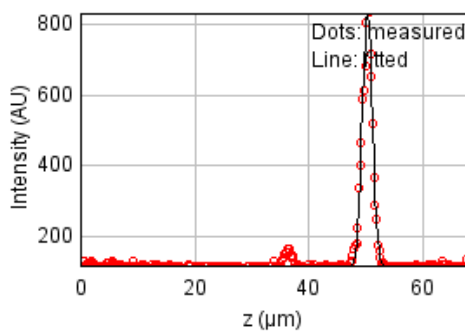
b = -0.009 px

c = 0.521 px

xc = 6.050 px

yc = 6.741 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57205.4073

Standard deviation: 13.65052

$R^2$ : 0.98367

Parameters:

a = 116.23436

b = 830.96425

c = 50.32115

d = 0.87737

## Bead 2644

Date : Mon Oct 17 13:53:36 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

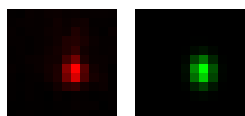
Coordinates : 38.0  $\mu\text{m}$  (x), -64.0  $\mu\text{m}$  (y), 50.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

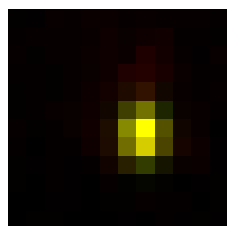
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	407 nm	270 nm
max	511 nm	532 nm	270 nm
z	1.89 $\mu\text{m}$	1.9 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.766		
Theta	-88.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 873.367 (brightness)

B = 126.418 (background)

a = 0.877 px

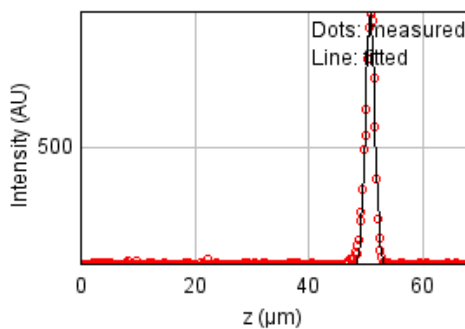
b = -0.011 px

c = 0.515 px

xc = 6.853 px

yc = 6.284 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 56060.4161

Standard deviation: 13.51322

$R^2$ : 0.98744

Parameters:

a = 112.98833

b = 956.28254

c = 50.81923

d = 0.80301

## Bead 2645 (Rejected)

Date : Mon Oct 17 13:53:36 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 2.59  $\mu\text{m}$  (x), -82.7  $\mu\text{m}$  (y), 46.9  $\mu\text{m}$  (z)

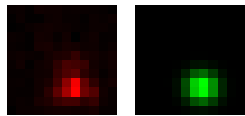
Corresponding bead : Not found

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

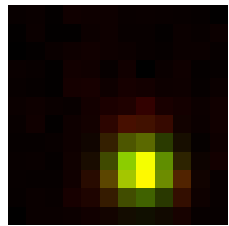
FWHM	Non corrected	Corrected	Theoretical
min	544 nm	567 nm	270 nm
max	579 nm	603 nm	270 nm
z	3.18 $\mu\text{m}$	3.19 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.94		
Theta	-5.6°		

### 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 = 337.201 (brightness)

B = 122.546 (background)

a = 0.401 px

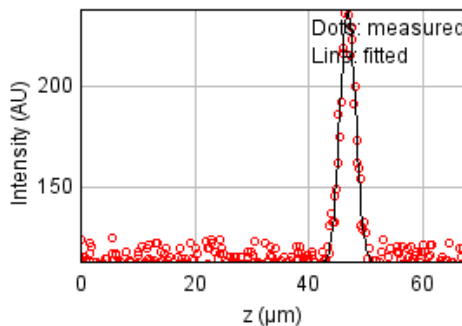
b = -0.005 px

c = 0.453 px

xc = 6.779 px

yc = 8.471 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 11175.2717

Standard deviation: 6.03337

$R^2$ : 0.93417

Parameters:

a = 113.05340

b = 238.25647

c = 46.89032

d = 1.35121

## Bead 2646

Date : Mon Oct 17 13:53:36 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

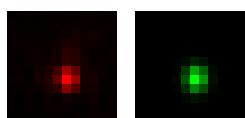
Coordinates : 52.2  $\mu\text{m}$  (x), -94.9  $\mu\text{m}$  (y), 50.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

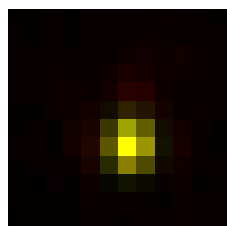
FWHM	Non corrected	Corrected	Theoretical
min	406 nm	423 nm	270 nm
max	482 nm	502 nm	270 nm
z	2.07 $\mu\text{m}$	2.08 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.843		
Theta	-89.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 718.192$  (brightness)

$B = 125.507$  (background)

$a = 0.812$  px

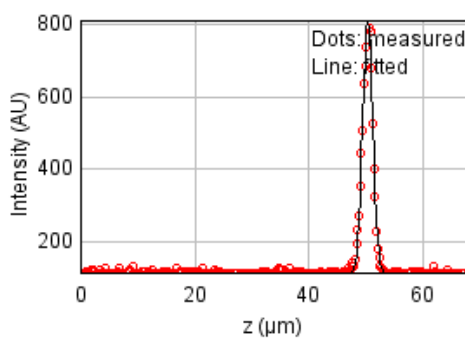
$b = -0.001$  px

$c = 0.577$  px

$x_c = 6.170$  px

$y_c = 6.891$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28413.8321

Standard deviation: 9.62046

$R^2: 0.99140$

Parameters:

$a = 112.99749$

$b = 809.83799$

$c = 50.38468$

$d = 0.87785$

## Bead 2647

Date : Mon Oct 17 13:53:37 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

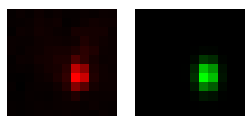
Coordinates : 32.4  $\mu\text{m}$  (x), 56.9  $\mu\text{m}$  (y), 50.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

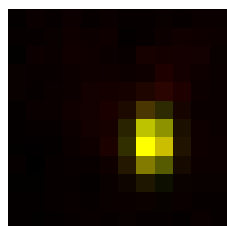
FWHM	Non corrected	Corrected	Theoretical
min	366 nm	381 nm	270 nm
max	517 nm	539 nm	270 nm
z	2.06 $\mu\text{m}$	2.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.707		
Theta	89.2°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 790.003$  (brightness)

$B = 129.513$  (background)

$a = 1.004$  px

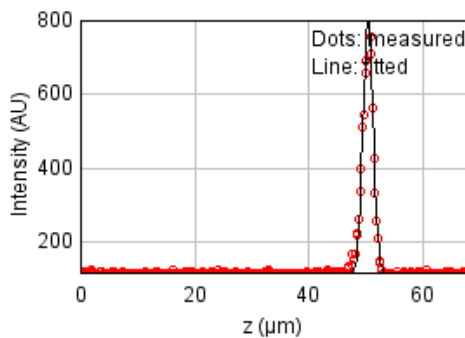
$b = 0.007$  px

$c = 0.501$  px

$x_c = 7.354$  px

$y_c = 6.769$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 41657.3075

Standard deviation: 11.64867

$R^2: 0.98719$

Parameters:

$a = 113.59192$

$b = 803.87327$

$c = 50.45417$

$d = 0.87651$

## Bead 2648

Date : Mon Oct 17 13:53:37 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

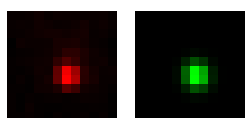
Coordinates : -112  $\mu\text{m}$  (x), 52.6  $\mu\text{m}$  (y), 50.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

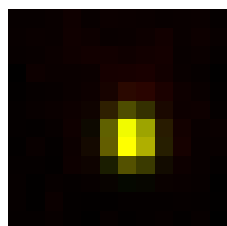
FWHM	Non corrected	Corrected	Theoretical
min	440 nm	458 nm	270 nm
max	481 nm	501 nm	270 nm
z	1.96 $\mu\text{m}$	1.97 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.913		
Theta	-77.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 677.216$  (brightness)

$B = 123.188$  (background)

$a = 0.689$  px

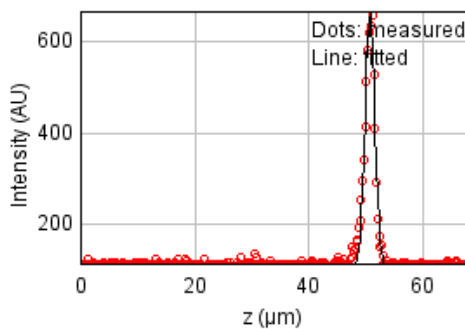
$b = -0.024$  px

$c = 0.584$  px

$x_c = 6.209$  px

$y_c = 6.522$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36030.5368

Standard deviation: 10.83343

$R^2: 0.98203$

Parameters:

$a = 112.37959$

$b = 666.43403$

$c = 50.78845$

$d = 0.83230$



## Bead 2649

Date : Mon Oct 17 13:53:37 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

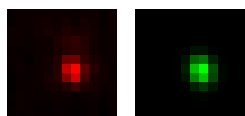
Coordinates : -153  $\mu\text{m}$  (x), 24.0  $\mu\text{m}$  (y), 51.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

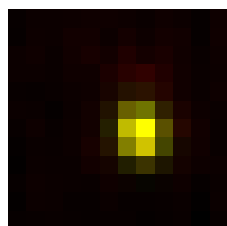
FWHM	Non corrected	Corrected	Theoretical
min	422 nm	440 nm	270 nm
max	510 nm	532 nm	270 nm
z	1.87 $\mu\text{m}$	1.88 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.828		
Theta	-74.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 689.107 (brightness)

B = 124.400 (background)

a = 0.736 px

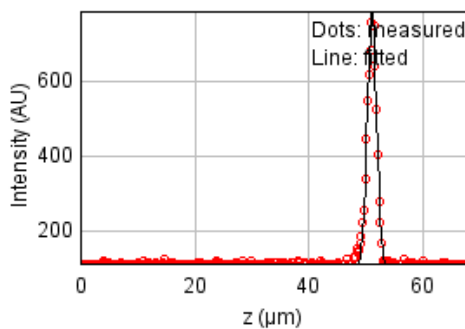
b = -0.060 px

c = 0.531 px

xc = 6.728 px

yc = 6.213 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31209.1599

Standard deviation: 10.08258

$R^2$ : 0.98901

Parameters:

a = 111.50312

b = 788.54981

c = 51.12976

d = 0.79323

## Bead 2650

Date : Mon Oct 17 13:53:37 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

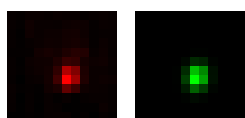
Coordinates : -31.4  $\mu\text{m}$  (x), 12.7  $\mu\text{m}$  (y), 50.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

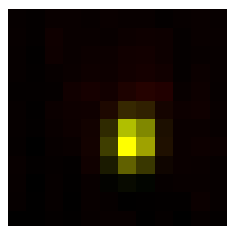
FWHM	Non corrected	Corrected	Theoretical
min	377 nm	393 nm	270 nm
max	465 nm	484 nm	270 nm
z	2.2 $\mu\text{m}$	2.21 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.811		
Theta	79.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 759.648 (brightness)

B = 123.932 (background)

a = 0.933 px

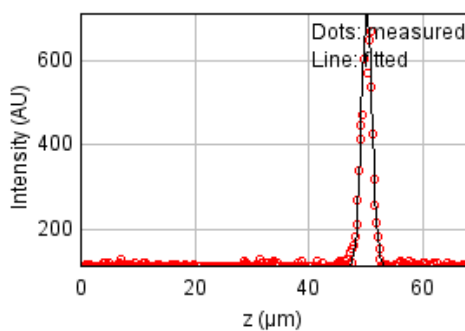
b = 0.057 px

c = 0.631 px

xc = 6.274 px

yc = 6.706 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 66066.1155

Standard deviation: 14.66967

$R^2$ : 0.97488

Parameters:

a = 113.42931

b = 712.08731

c = 50.21641

d = 0.93341

## Bead 2651

Date : Mon Oct 17 13:53:37 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

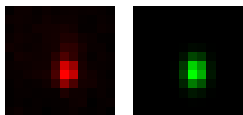
Coordinates : -51.6  $\mu\text{m}$  (x), 10.7  $\mu\text{m}$  (y), 50.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

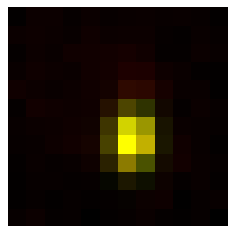
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	411 nm	270 nm
max	540 nm	563 nm	270 nm
z	2.12 $\mu\text{m}$	2.13 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.731		
Theta	87.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 649.235 (brightness)

B = 123.643 (background)

a = 0.860 px

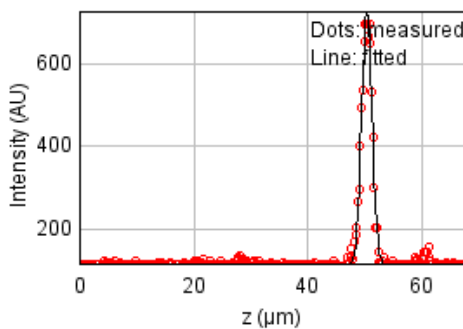
b = 0.016 px

c = 0.460 px

xc = 6.288 px

yc = 6.697 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37058.4693

Standard deviation: 10.98688

$R^2$ : 0.98571

Parameters:

a = 115.82739

b = 724.52166

c = 50.40961

d = 0.89890

## Bead 2652

Date : Mon Oct 17 13:53:37 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

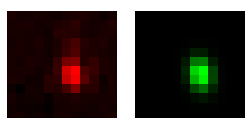
Coordinates : -144  $\mu\text{m}$  (x), -13.6  $\mu\text{m}$  (y), 49.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

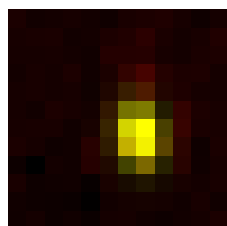
FWHM	Non corrected	Corrected	Theoretical
min	409 nm	426 nm	270 nm
max	591 nm	616 nm	270 nm
z	2.22 $\mu\text{m}$	2.23 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.692		
Theta	-81.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 346.019 (brightness)

B = 119.190 (background)

a = 0.791 px

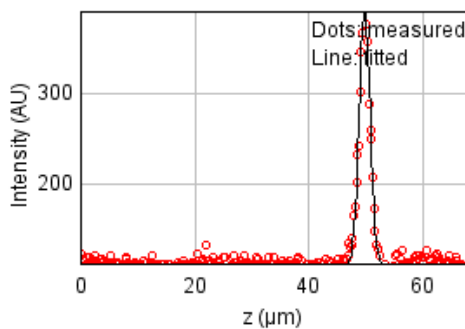
b = -0.062 px

c = 0.393 px

xc = 6.647 px

yc = 6.373 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15011.8915

Standard deviation: 6.99276

$R^2$ : 0.97446

Parameters:

a = 111.67629

b = 393.15835

c = 49.84068

d = 0.94374

## Bead 2653

Date : Mon Oct 17 13:53:38 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

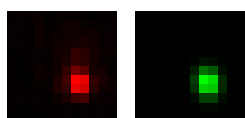
Coordinates : -53.4  $\mu\text{m}$  (x), -28.3  $\mu\text{m}$  (y), 51.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

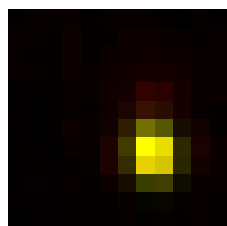
FWHM	Non corrected	Corrected	Theoretical
min	409 nm	426 nm	270 nm
max	513 nm	534 nm	270 nm
z	2.14 $\mu\text{m}$	2.15 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.796		
Theta	-81.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 940.309 (brightness)

B = 129.425 (background)

a = 0.797 px

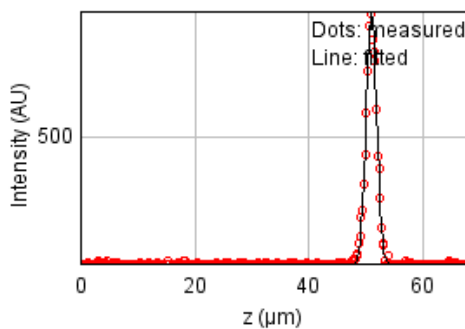
b = -0.044 px

c = 0.517 px

$x_c = 7.427$  px

$y_c = 7.340$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28923.0025

Standard deviation: 9.70627

$R^2$ : 0.99297

Parameters:

a = 113.43887

b = 879.31794

c = 51.03595

d = 0.90793

## Bead 2654 (Rejected)

Date : Mon Oct 17 13:53:38 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 92.4  $\mu\text{m}$  (x), -31.0  $\mu\text{m}$  (y), 51.5  $\mu\text{m}$  (z)

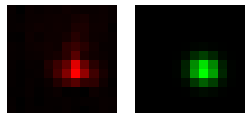
Corresponding bead : Not found

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

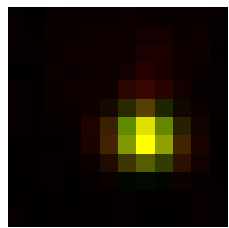
FWHM	Non corrected	Corrected	Theoretical
min	483 nm	503 nm	270 nm
max	524 nm	545 nm	270 nm
z	3.16 $\mu\text{m}$	3.18 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.923		
Theta	-13.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.918$



Parameters:

A = 732.197 (brightness)

B = 127.124 (background)

a = 0.494 px

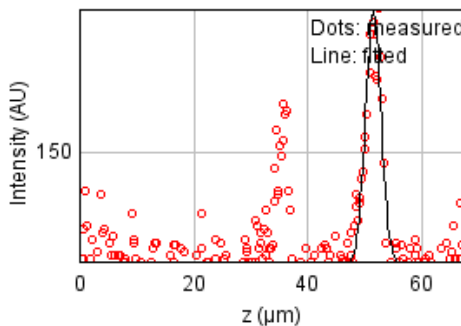
b = -0.020 px

c = 0.570 px

xc = 7.008 px

yc = 6.614 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33273.0006

Standard deviation: 10.41062

$R^2$ : 0.65306

Parameters:

a = 115.48253

b = 194.38653

c = 51.54172

d = 1.34301

## Bead 2655

Date : Mon Oct 17 13:53:38 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

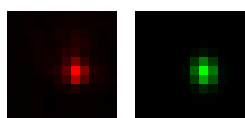
Coordinates : 35.9  $\mu\text{m}$  (x), -38.2  $\mu\text{m}$  (y), 50.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

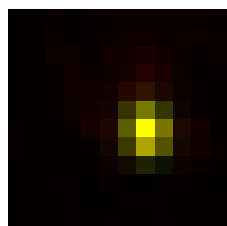
FWHM	Non corrected	Corrected	Theoretical
min	388 nm	404 nm	270 nm
max	481 nm	500 nm	270 nm
z	1.96 $\mu\text{m}$	1.97 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.807		
Theta	-83.0°		

### 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 = 665.657 (brightness)

B = 123.445 (background)

a = 0.888 px

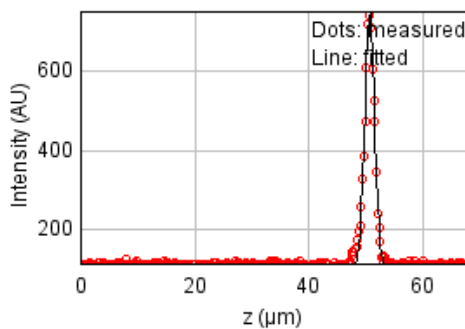
b = -0.038 px

c = 0.586 px

xc = 7.071 px

yc = 6.128 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 26185.6593

Standard deviation: 9.23555

$R^2$ : 0.99009

Parameters:

a = 113.33442

b = 751.99949

c = 50.73744

d = 0.83237

## Bead 2656

Date : Mon Oct 17 13:53:38 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

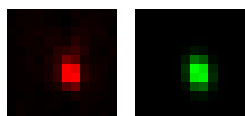
Coordinates : -22.8  $\mu\text{m}$  (x), 67.8  $\mu\text{m}$  (y), 50.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

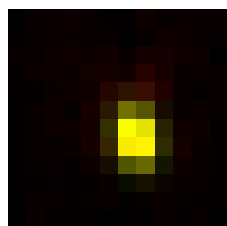
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	402 nm	270 nm
max	546 nm	568 nm	270 nm
z	2.0 $\mu\text{m}$	2.01 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.707		
Theta	-80.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 806.329 (brightness)

B = 124.920 (background)

a = 0.889 px

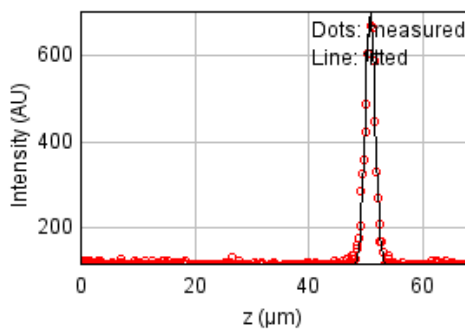
b = -0.077 px

c = 0.465 px

xc = 6.476 px

yc = 6.484 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30722.6978

Standard deviation: 10.00370

$R^2$ : 0.98660

Parameters:

a = 114.20978

b = 702.11427

c = 50.82131

d = 0.85040



## Bead 2657

Date : Mon Oct 17 13:53:38 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

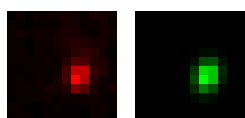
Coordinates : -156  $\mu\text{m}$  (x), 41.6  $\mu\text{m}$  (y), 50.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

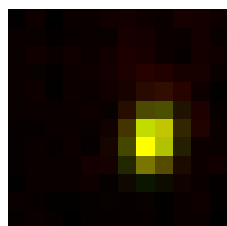
FWHM	Non corrected	Corrected	Theoretical
min	410 nm	427 nm	270 nm
max	551 nm	573 nm	270 nm
z	2.13 $\mu\text{m}$	2.14 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.745		
Theta	75.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.951$



Parameters:

$A = 393.281$  (brightness)

$B = 116.950$  (background)

$a = 0.777$  px

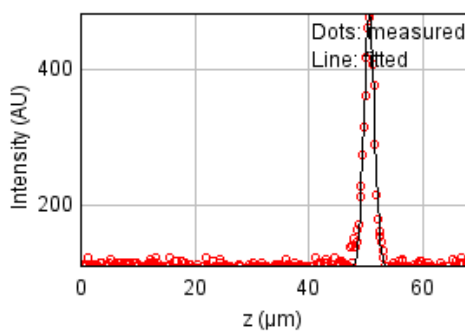
$b = 0.084$  px

$c = 0.464$  px

$x_c = 7.369$  px

$y_c = 6.595$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21346.0384

Standard deviation: 8.33853

$R^2: 0.97824$

Parameters:

$a = 110.85756$

$b = 482.51833$

$c = 50.65359$

$d = 0.90536$

## Bead 2658

Date : Mon Oct 17 13:53:38 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

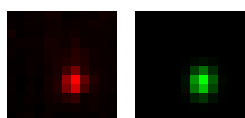
Coordinates : -77.3  $\mu\text{m}$  (x), 28.4  $\mu\text{m}$  (y), 50.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

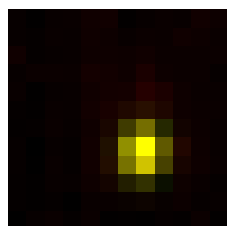
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	422 nm	270 nm
max	492 nm	512 nm	270 nm
z	1.83 $\mu\text{m}$	1.84 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.824		
Theta	85.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 598.270 (brightness)

B = 122.729 (background)

a = 0.815 px

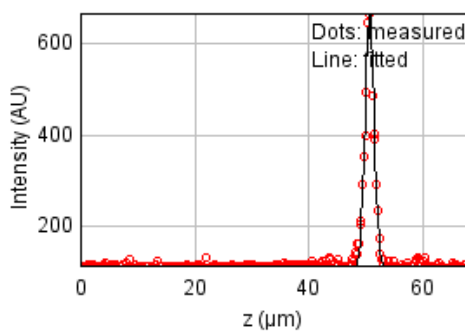
b = 0.021 px

c = 0.556 px

xc = 6.847 px

yc = 7.261 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 38002.5128

Standard deviation: 11.12595

$R^2$ : 0.97983

Parameters:

a = 114.52989

b = 668.54317

c = 50.72532

d = 0.77813

## Bead 2659

Date : Mon Oct 17 13:53:38 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

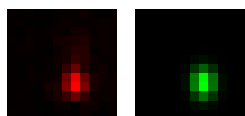
Coordinates : -136  $\mu\text{m}$  (x), 20.0  $\mu\text{m}$  (y), 51.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

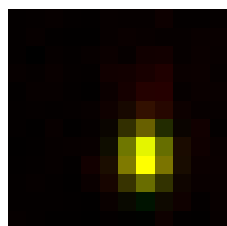
FWHM	Non corrected	Corrected	Theoretical
min	419 nm	437 nm	270 nm
max	547 nm	570 nm	270 nm
z	2.13 $\mu\text{m}$	2.14 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.767		
Theta	-88.7°		

### 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 = 705.287 (brightness)

B = 125.204 (background)

a = 0.763 px

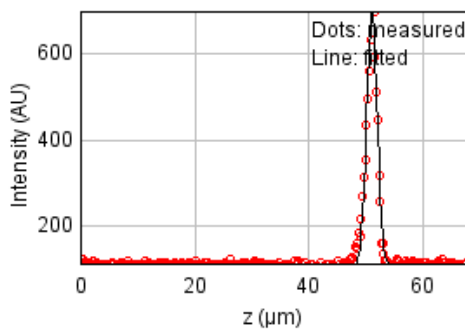
b = -0.007 px

c = 0.449 px

$x_c = 6.977$  px

$y_c = 7.544$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33744.5440

Standard deviation: 10.48413

$R^2$ : 0.98619

Parameters:

a = 112.55044

b = 701.11560

c = 51.12568

d = 0.90657

## Bead 2660

Date : Mon Oct 17 13:53:39 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

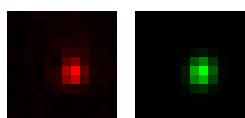
Coordinates : -40.5  $\mu\text{m}$  (x), 4.03  $\mu\text{m}$  (y), 50.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

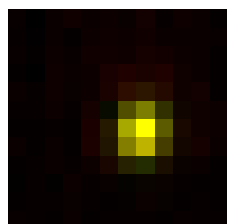
FWHM	Non corrected	Corrected	Theoretical
min	428 nm	446 nm	270 nm
max	504 nm	525 nm	270 nm
z	1.89 $\mu\text{m}$	1.9 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.849		
Theta	81.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 536.779 (brightness)

B = 122.451 (background)

a = 0.727 px

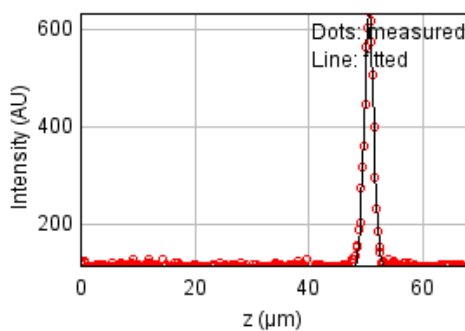
b = 0.029 px

c = 0.531 px

xc = 6.782 px

yc = 6.183 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17202.4679

Standard deviation: 7.48559

$R^2$ : 0.98979

Parameters:

a = 113.29499

b = 631.86349

c = 50.61017

d = 0.80328

## Bead 2661 (Rejected)

Date : Mon Oct 17 13:53:39 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -155  $\mu\text{m}$  (x), -17.6  $\mu\text{m}$  (y), 47.4  $\mu\text{m}$  (z)

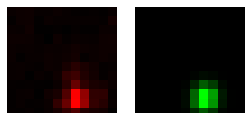
Corresponding bead : Not found

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

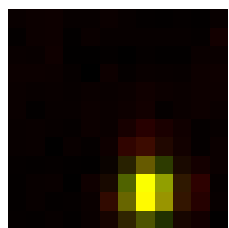
FWHM	Non corrected	Corrected	Theoretical
min	434 nm	452 nm	270 nm
max	503 nm	524 nm	270 nm
z	2.97 $\mu\text{m}$	2.98 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.863		
Theta	82.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 497.676 (brightness)

B = 121.711 (background)

a = 0.708 px

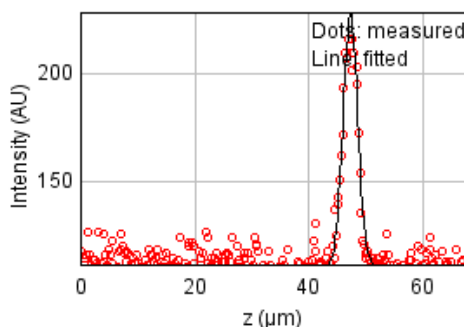
b = 0.024 px

c = 0.533 px

xc = 7.151 px

yc = 9.473 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15632.6622

Standard deviation: 7.13588

$R^2$ : 0.89275

Parameters:

a = 110.99336

b = 228.05718

c = 47.35035

d = 1.26184

## Bead 2662

Date : Mon Oct 17 13:53:39 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

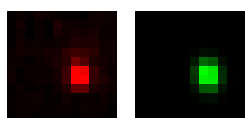
Coordinates : -98.9  $\mu\text{m}$  (x), -51.9  $\mu\text{m}$  (y), 50.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

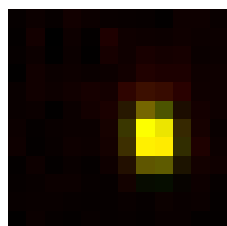
FWHM	Non corrected	Corrected	Theoretical
min	404 nm	420 nm	270 nm
max	529 nm	551 nm	270 nm
z	2.46 $\mu\text{m}$	2.47 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.763		
Theta	-82.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 528.337$  (brightness)

$B = 121.505$  (background)

$a = 0.818$  px

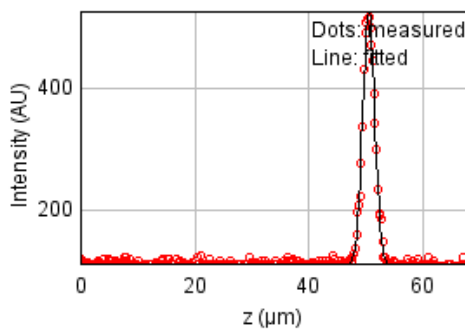
$b = -0.044$  px

$c = 0.486$  px

$x_c = 7.459$  px

$y_c = 6.480$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16698.0523

Standard deviation: 7.37503

$R^2: 0.98766$

Parameters:

$a = 113.27923$

$b = 523.47611$

$c = 50.57192$

$d = 1.04265$

## Bead 2663 (Rejected)

Date : Mon Oct 17 13:53:39 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -93.1  $\mu\text{m}$  (x), -56.0  $\mu\text{m}$  (y), 33.8  $\mu\text{m}$  (z)

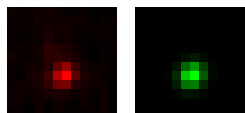
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

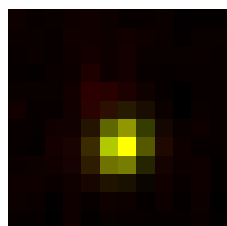
FWHM	Non corrected	Corrected	Theoretical
min	434 nm	452 nm	270 nm
max	490 nm	510 nm	270 nm
z	1.8 $\mu\text{m}$	1.81 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.887		
Theta	50.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 424.405 (brightness)

B = 120.886 (background)

a = 0.651 px

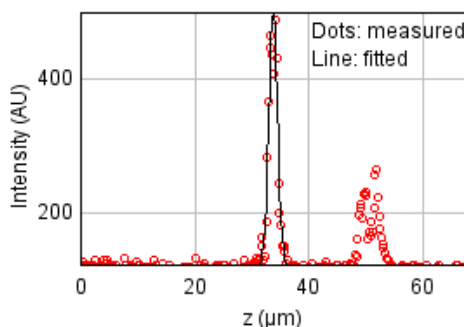
b = 0.074 px

c = 0.620 px

xc = 5.689 px

yc = 6.959 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 212948.798

Standard deviation: 26.33713

$R^2$ : 0.80200

Parameters:

a = 119.97932

b = 501.76639

c = 33.82561

d = 0.76514

## Bead 2664

Date : Mon Oct 17 13:53:39 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

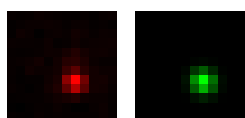
Coordinates : -58.8  $\mu\text{m}$  (x), -58.0  $\mu\text{m}$  (y), 50.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

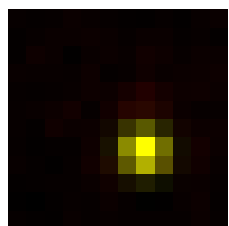
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	440 nm	270 nm
max	442 nm	460 nm	270 nm
z	1.87 $\mu\text{m}$	1.88 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.957		
Theta	-52.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 550.424 (brightness)

B = 121.754 (background)

a = 0.727 px

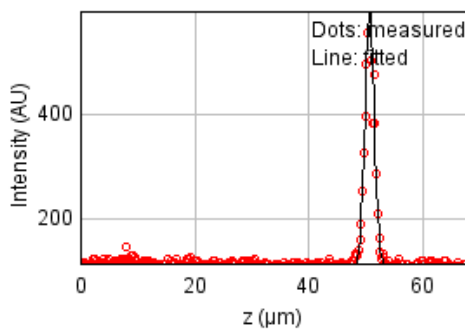
b = -0.031 px

c = 0.712 px

xc = 6.930 px

yc = 7.233 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 42194.3773

Standard deviation: 11.72352

$R^2$ : 0.97185

Parameters:

a = 114.45087

b = 601.81580

c = 50.72290

d = 0.79420



## Bead 2665

Date : Mon Oct 17 13:53:39 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

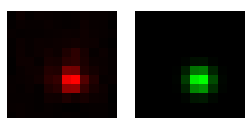
Coordinates : 53.8  $\mu\text{m}$  (x), -91.2  $\mu\text{m}$  (y), 51.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

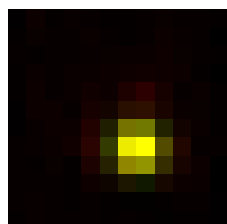
FWHM	Non corrected	Corrected	Theoretical
min	451 nm	469 nm	270 nm
max	460 nm	479 nm	270 nm
z	2.02 $\mu\text{m}$	2.03 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.98		
Theta	-51.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 787.805$  (brightness)

$B = 125.738$  (background)

$a = 0.651$  px

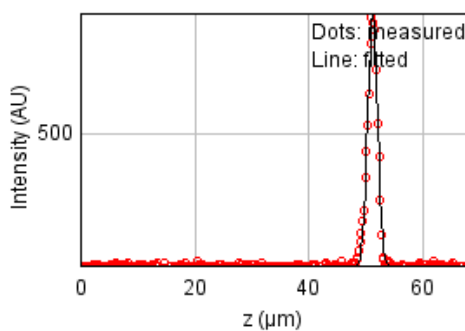
$b = -0.013$  px

$c = 0.645$  px

$x_c = 6.562$  px

$y_c = 7.074$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36529.6160

Standard deviation: 10.90821

$R^2 = 0.98992$

Parameters:

$a = 112.56018$

$b = 849.88365$

$c = 51.23946$

$d = 0.85735$

## Bead 2666

Date : Mon Oct 17 13:53:40 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

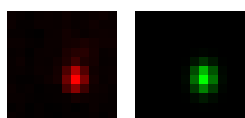
Coordinates : -149  $\mu\text{m}$  (x), 94.7  $\mu\text{m}$  (y), 50.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

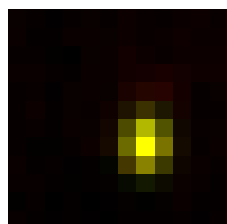
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	417 nm	270 nm
max	515 nm	537 nm	270 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.777		
Theta	88.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 546.729 (brightness)

B = 120.339 (background)

a = 0.836 px

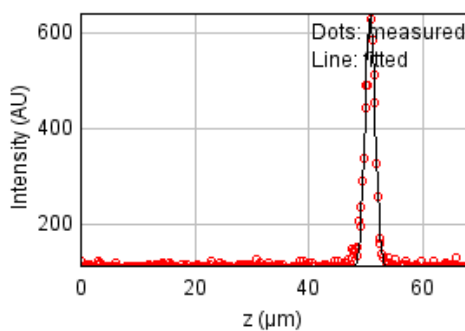
b = 0.009 px

c = 0.506 px

xc = 7.023 px

yc = 6.831 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33645.0520

Standard deviation: 10.46867

$R^2$ : 0.98240

Parameters:

a = 110.89761

b = 641.71258

c = 50.81263

d = 0.86666

## Bead 2667

Date : Mon Oct 17 13:53:40 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

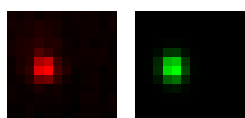
Coordinates : 11.8  $\mu\text{m}$  (x), 44.4  $\mu\text{m}$  (y), 33.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

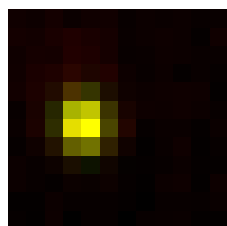
FWHM	Non corrected	Corrected	Theoretical
min	429 nm	447 nm	270 nm
max	503 nm	524 nm	270 nm
z	2.14 $\mu\text{m}$	2.15 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.853		
Theta	-83.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 507.987$  (brightness)

$B = 122.073$  (background)

$a = 0.725$  px

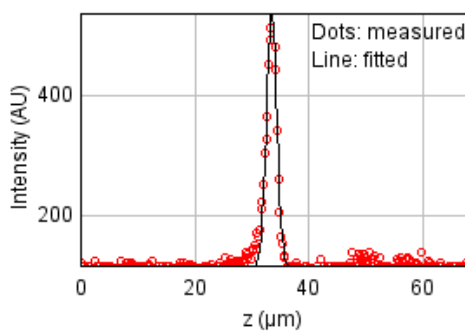
$b = -0.022$  px

$c = 0.532$  px

$x_c = 3.590$  px

$y_c = 5.726$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 40916.1559

Standard deviation: 11.54458

$R^2: 0.96813$

Parameters:

$a = 117.18410$

$b = 539.68863$

$c = 33.55008$

$d = 0.90743$

## Bead 2668

Date : Mon Oct 17 13:53:40 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

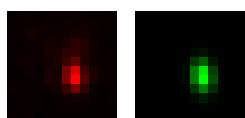
Coordinates : 76.5  $\mu\text{m}$  (x), 41.1  $\mu\text{m}$  (y), 51.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

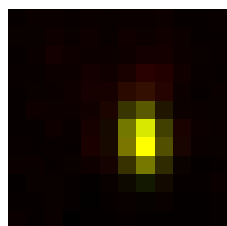
FWHM	Non corrected	Corrected	Theoretical
min	371 nm	386 nm	270 nm
max	567 nm	591 nm	270 nm
z	2.0 $\mu\text{m}$	2.01 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.654		
Theta	-84.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 693.448 (brightness)

B = 127.650 (background)

a = 0.970 px

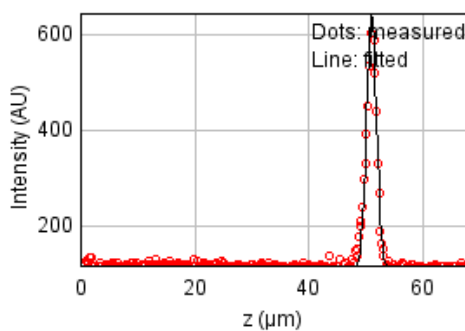
b = -0.058 px

c = 0.424 px

$x_c = 6.873$  px

$y_c = 6.596$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 32984.8437

Standard deviation: 10.36545

$R^2$ : 0.98240

Parameters:

a = 114.33063

b = 644.49758

c = 51.06427

d = 0.85077

## Bead 2669 (Rejected)

Date : Mon Oct 17 13:53:40 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -158  $\mu\text{m}$  (x), 13.5  $\mu\text{m}$  (y), 6.43  $\mu\text{m}$  (z)

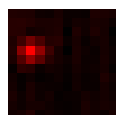
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	2.73 $\mu\text{m}$	2.74 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

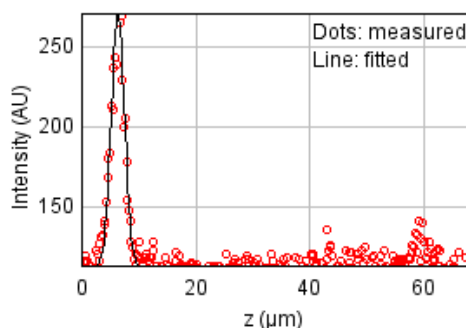
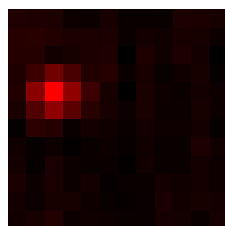
### XY profile & fitting parameters :

(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: 19827.2341

Standard deviation: 8.03641

R<sup>2</sup>: 0.91634

Parameters:

a = 113.24511

b = 270.48848

c = 6.42835

d = 1.16070

## Bead 2670

Date : Mon Oct 17 13:53:40 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

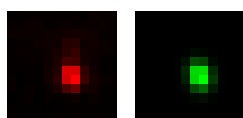
Coordinates : -2.07  $\mu\text{m}$  (x), 2.41  $\mu\text{m}$  (y), 51.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

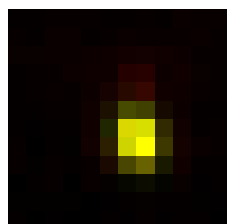
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	407 nm	270 nm
max	506 nm	527 nm	270 nm
z	1.95 $\mu\text{m}$	1.96 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.773		
Theta	-76.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 892.772 (brightness)

B = 125.144 (background)

a = 0.858 px

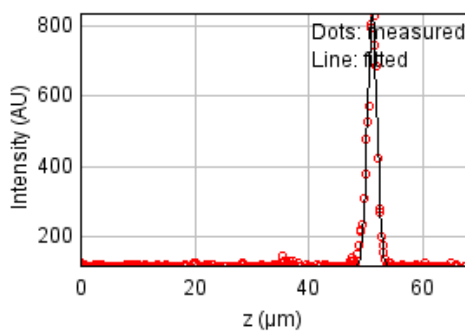
b = -0.081 px

c = 0.543 px

xc = 6.570 px

yc = 6.564 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 70678.8844

Standard deviation: 15.17315

$R^2$ : 0.97926

Parameters:

a = 114.97748

b = 837.36270

c = 51.17734

d = 0.82969

## Bead 2671

Date : Mon Oct 17 13:53:40 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

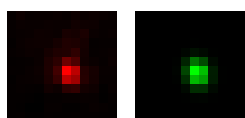
Coordinates : 46.1  $\mu\text{m}$  (x), -15.3  $\mu\text{m}$  (y), 51.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

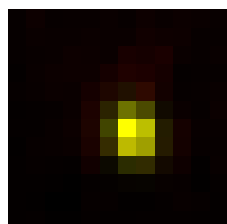
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	422 nm	270 nm
max	495 nm	516 nm	270 nm
z	2.03 $\mu\text{m}$	2.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.817		
Theta	-75.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 838.556$  (brightness)

$B = 125.952$  (background)

$a = 0.801$  px

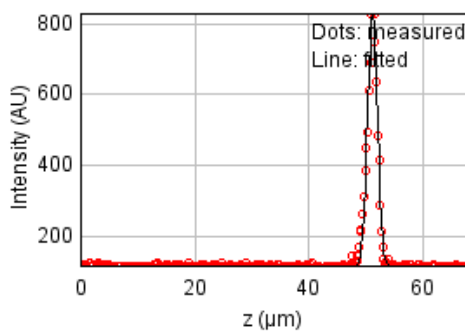
$b = -0.068$  px

$c = 0.565$  px

$x_c = 6.338$  px

$y_c = 6.259$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 48138.3821

Standard deviation: 12.52208

$R^2: 0.98594$

Parameters:

$a = 114.46767$

$b = 828.45557$

$c = 51.21730$

$d = 0.86096$

## Bead 2672

Date : Mon Oct 17 13:53:40 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

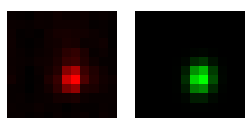
Coordinates : -98.4  $\mu\text{m}$  (x), -18.1  $\mu\text{m}$  (y), 51.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

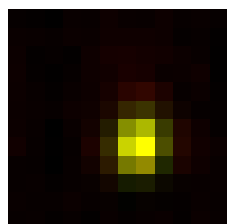
FWHM	Non corrected	Corrected	Theoretical
min	439 nm	457 nm	270 nm
max	534 nm	557 nm	270 nm
z	2.09 $\mu\text{m}$	2.1 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.822		
Theta	82.3°		

### 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 = 555.770 (brightness)

B = 121.874 (background)

a = 0.692 px

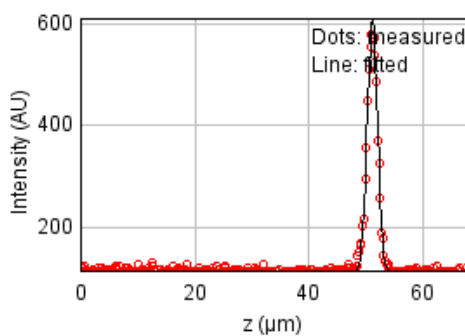
b = 0.030 px

c = 0.474 px

$x_c = 6.644$  px

$y_c = 6.869$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16423.5635

Standard deviation: 7.31416

$R^2$ : 0.99037

Parameters:

a = 114.02222

b = 611.95499

c = 51.19470

d = 0.88698



## Bead 2673

Date : Mon Oct 17 13:53:41 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

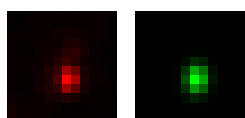
Coordinates : 47.6  $\mu\text{m}$  (x), -23.4  $\mu\text{m}$  (y), 51.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

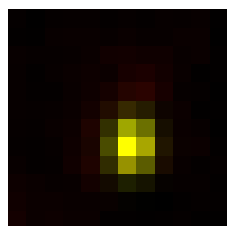
FWHM	Non corrected	Corrected	Theoretical
min	404 nm	420 nm	270 nm
max	522 nm	543 nm	270 nm
z	1.98 $\mu\text{m}$	1.98 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.774		
Theta	87.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 905.303 (brightness)

B = 139.198 (background)

a = 0.823 px

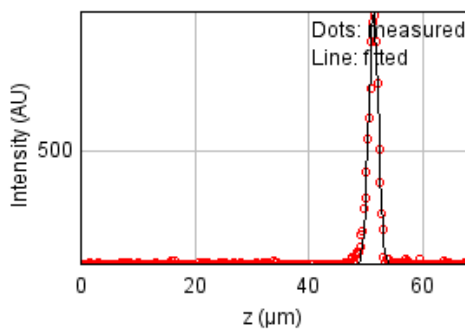
b = 0.014 px

c = 0.494 px

xc = 6.238 px

yc = 6.923 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 63961.8686

Standard deviation: 14.43416

$R^2$ : 0.98673

Parameters:

a = 114.83559

b = 972.68374

c = 51.39572

d = 0.83881

## Bead 2674 (Rejected)

Date : Mon Oct 17 13:53:41 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 128 um (x), -33.0 um (y), 14.4 um (z)

Corresponding bead : Not found

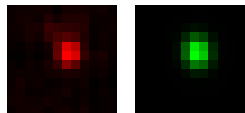
Reason of rejection : R or C parameter off limits.



FWHM	Non corrected	Corrected	Theoretical
min	464 nm	484 nm	270 nm
max	559 nm	582 nm	270 nm
z	2.59 um	2.6 um	1.3 um
Asymmetry	0.831		
Theta	-83.7°		

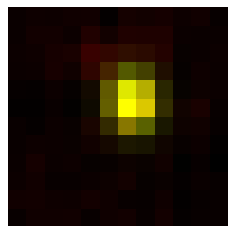
### XY profile & fitting parameters :

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



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

$R^2 = 0.949$



Parameters:

A = 418.956 (brightness)

B = 123.477 (background)

a = 0.620 px

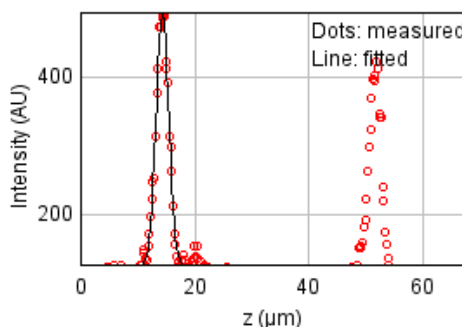
b = -0.021 px

c = 0.431 px

xc = 6.289 px

yc = 4.625 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 812408.407

Standard deviation: 51.44202

$R^2$ : 0.58493

Parameters:

a = 126.53390

b = 496.80956

c = 14.41497

d = 1.09973

## Bead 2675

Date : Mon Oct 17 13:53:41 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

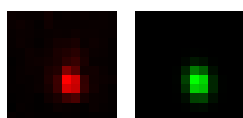
Coordinates : 28.2  $\mu\text{m}$  (x), -47.5  $\mu\text{m}$  (y), 51.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

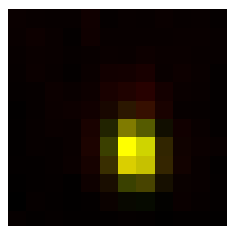
FWHM	Non corrected	Corrected	Theoretical
min	411 nm	428 nm	270 nm
max	540 nm	562 nm	270 nm
z	2.03 $\mu\text{m}$	2.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.762		
Theta	-80.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 783.945$  (brightness)

$B = 127.125$  (background)

$a = 0.784$  px

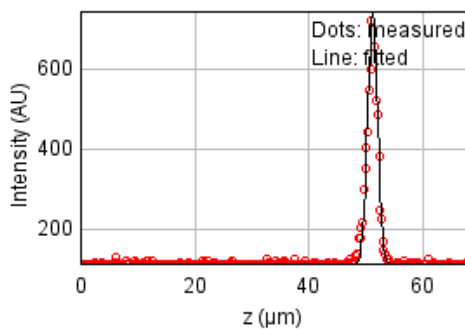
$b = -0.057$  px

$c = 0.471$  px

$x_c = 6.404$  px

$y_c = 7.325$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 50109.0073

Standard deviation: 12.77582

$R^2: 0.98133$

Parameters:

$a = 113.99542$

$b = 744.29469$

$c = 51.23667$

$d = 0.86158$

## Bead 2676 (Rejected)

Date : Mon Oct 17 13:53:41 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 117 um (x), -59.2 um (y), 47.7 um (z)

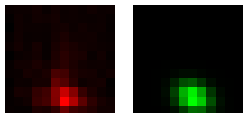
Corresponding bead : Not found

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

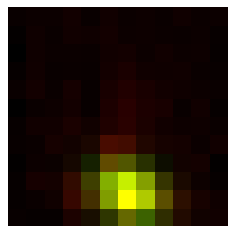
FWHM	Non corrected	Corrected	Theoretical
min	505 nm	526 nm	270 nm
max	653 nm	681 nm	270 nm
z	4.17 um	4.18 um	1.3 um
Asymmetry	0.773		
Theta	-27.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.910$



Parameters:

A = 319.328 (brightness)

B = 119.377 (background)

a = 0.360 px

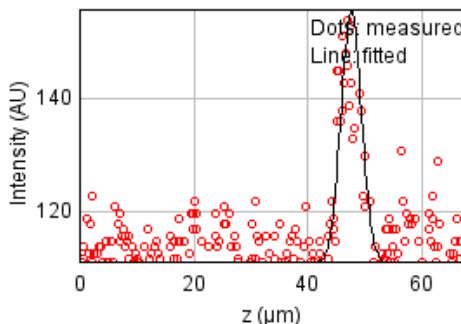
b = -0.087 px

c = 0.481 px

xc = 6.072 px

yc = 9.581 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15530.1847

Standard deviation: 7.11245

$R^2$ : 0.62164

Parameters:

a = 111.17066

b = 155.58089

c = 47.67938

d = 1.76964

## Bead 2677

Date : Mon Oct 17 13:53:41 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

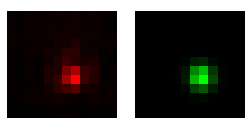
Coordinates : -148  $\mu\text{m}$  (x), -75.5  $\mu\text{m}$  (y), 50.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

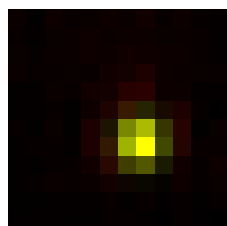
FWHM	Non corrected	Corrected	Theoretical
min	412 nm	430 nm	270 nm
max	443 nm	462 nm	270 nm
z	2.15 $\mu\text{m}$	2.16 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.93		
Theta	-85.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 481.118 (brightness)

B = 119.638 (background)

a = 0.788 px

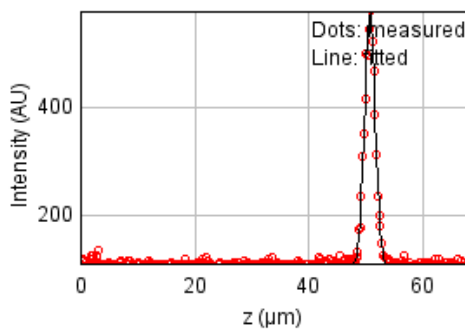
b = -0.008 px

c = 0.683 px

xc = 6.719 px

yc = 6.721 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17254.9937

Standard deviation: 7.49701

$R^2$ : 0.98879

Parameters:

a = 110.95324

b = 576.76254

c = 50.77051

d = 0.91466

## Bead 2678

Date : Mon Oct 17 13:53:41 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

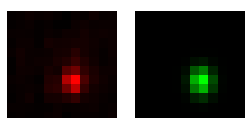
Coordinates : -70.9  $\mu\text{m}$  (x), -76.9  $\mu\text{m}$  (y), 51.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

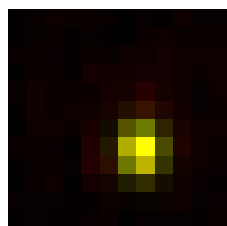
FWHM	Non corrected	Corrected	Theoretical
min	404 nm	421 nm	270 nm
max	496 nm	517 nm	270 nm
z	1.9 $\mu\text{m}$	1.91 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.815		
Theta	-87.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 534.438$  (brightness)

$B = 121.288$  (background)

$a = 0.820$  px

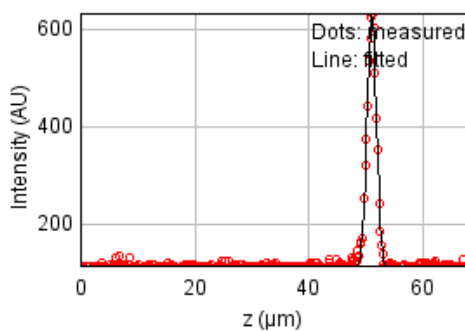
$b = -0.011$  px

$c = 0.545$  px

$x_c = 6.740$  px

$y_c = 7.172$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19149.6893

Standard deviation: 7.89790

$R^2: 0.98882$

Parameters:

$a = 112.91018$

$b = 634.48034$

$c = 51.09629$

$d = 0.80665$

## Bead 2679

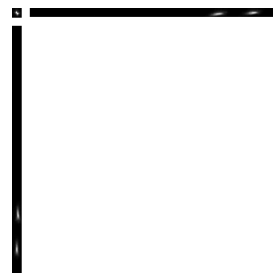
Date : Mon Oct 17 13:53:42 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 13.9  $\mu\text{m}$  (x), -78.7  $\mu\text{m}$  (y), 51.1  $\mu\text{m}$  (z)

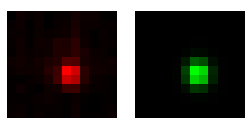
Corresponding bead : Not found



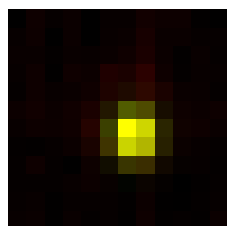
FWHM	Non corrected	Corrected	Theoretical
min	414 nm	431 nm	270 nm
max	471 nm	490 nm	270 nm
z	1.91 $\mu\text{m}$	1.92 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.879		
Theta	-86.9°		

### 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:

$A = 593.706$  (brightness)

$B = 123.109$  (background)

$a = 0.784$  px

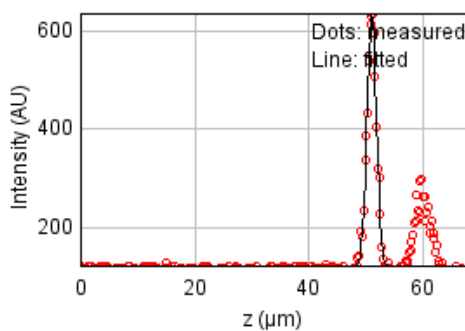
$b = -0.010$  px

$c = 0.606$  px

$x_c = 6.389$  px

$y_c = 6.353$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 280839.246

Standard deviation: 30.24543

$R^2 = 0.85448$

Parameters:

$a = 122.71155$

$b = 635.88966$

$c = 51.09107$

$d = 0.81167$

## Bead 2680

Date : Mon Oct 17 13:53:42 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

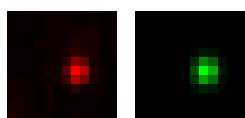
Coordinates : -75.0  $\mu\text{m}$  (x), 75.8  $\mu\text{m}$  (y), 51.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

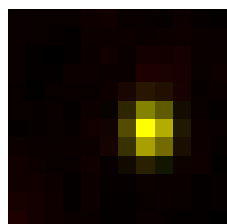
FWHM	Non corrected	Corrected	Theoretical
min	410 nm	427 nm	270 nm
max	487 nm	508 nm	270 nm
z	1.98 $\mu\text{m}$	1.99 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.841		
Theta	87.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 621.108 (brightness)

B = 126.717 (background)

a = 0.799 px

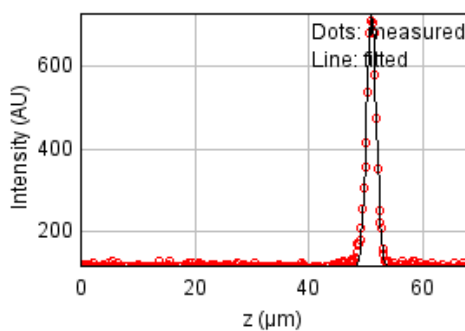
b = 0.011 px

c = 0.565 px

xc = 7.255 px

yc = 6.084 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29243.7842

Standard deviation: 9.75995

$R^2$ : 0.98821

Parameters:

a = 114.21326

b = 728.87133

c = 51.04319

d = 0.84222



## Bead 2681

Date : Mon Oct 17 13:53:42 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

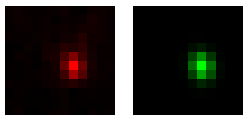
Coordinates : 24.6  $\mu\text{m}$  (x), 52.9  $\mu\text{m}$  (y), 51.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

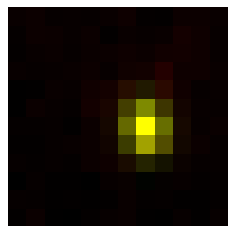
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	407 nm	270 nm
max	503 nm	524 nm	270 nm
z	2.05 $\mu\text{m}$	2.06 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.777		
Theta	-81.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 583.313 (brightness)

B = 123.892 (background)

a = 0.870 px

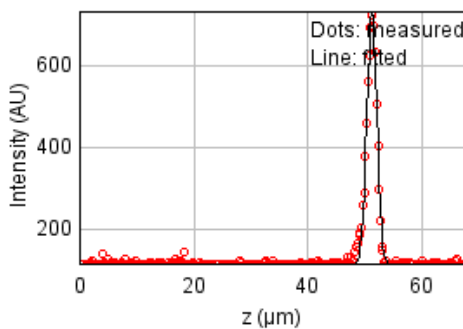
b = -0.053 px

c = 0.538 px

xc = 7.017 px

yc = 6.077 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31709.2352

Standard deviation: 10.16304

$R^2$ : 0.98783

Parameters:

a = 113.79059

b = 733.51692

c = 51.29035

d = 0.87190

## Bead 2682

Date : Mon Oct 17 13:53:42 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

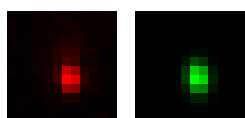
Coordinates : -16.9  $\mu\text{m}$  (x), -69.8  $\mu\text{m}$  (y), 51.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

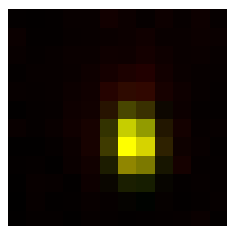
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	417 nm	270 nm
max	560 nm	584 nm	270 nm
z	2.27 $\mu\text{m}$	2.28 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.714		
Theta	-84.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 717.830 (brightness)

B = 126.204 (background)

a = 0.833 px

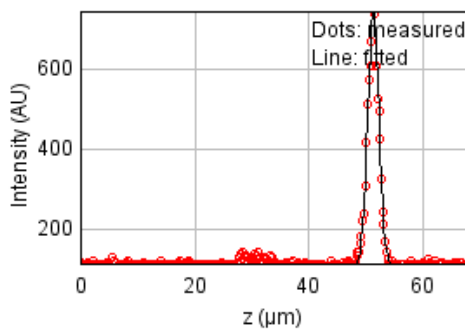
b = -0.043 px

c = 0.432 px

xc = 6.374 px

yc = 6.790 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36098.7774

Standard deviation: 10.84369

$R^2$ : 0.98797

Parameters:

a = 115.00031

b = 748.30197

c = 51.36639

d = 0.96608

## Bead 2683

Date : Mon Oct 17 13:53:42 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

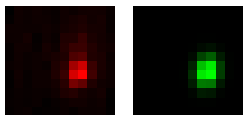
Coordinates : -41.0  $\mu\text{m}$  (x), -71.1  $\mu\text{m}$  (y), 50.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

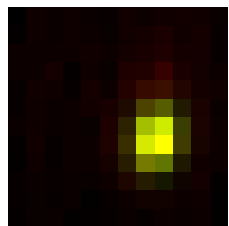
FWHM	Non corrected	Corrected	Theoretical
min	415 nm	432 nm	270 nm
max	568 nm	592 nm	270 nm
z	2.19 $\mu\text{m}$	2.2 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.73		
Theta	80.3°		

### 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 = 538.559 (brightness)

B = 126.739 (background)

a = 0.771 px

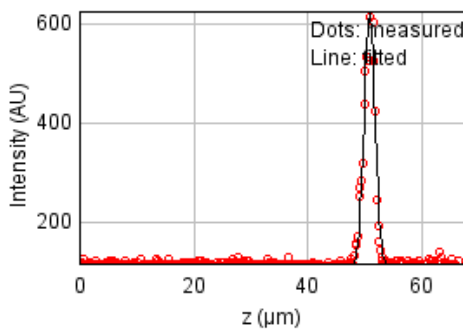
b = 0.061 px

c = 0.426 px

$x_c = 7.585$  px

$y_c = 6.653$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 69733.7052

Standard deviation: 15.07135

$R^2$ : 0.96425

Parameters:

a = 113.89856

b = 627.55629

c = 50.89865

d = 0.93007

## Bead 2684

Date : Mon Oct 17 13:53:42 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

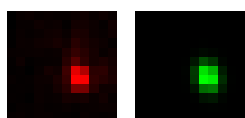
Coordinates : -133  $\mu\text{m}$  (x), -72.0  $\mu\text{m}$  (y), 51.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

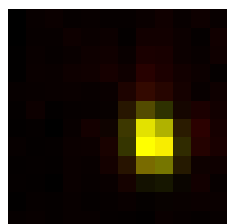
FWHM	Non corrected	Corrected	Theoretical
min	399 nm	416 nm	270 nm
max	532 nm	555 nm	270 nm
z	2.56 $\mu\text{m}$	2.57 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.75		
Theta	-76.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 581.432 (brightness)

B = 122.911 (background)

a = 0.821 px

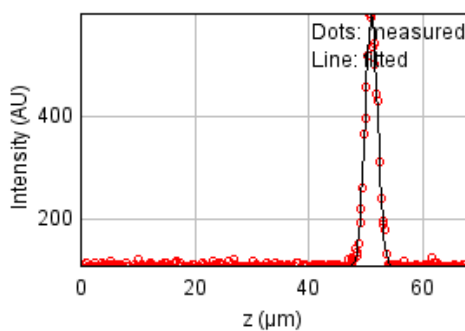
b = -0.085 px

c = 0.494 px

$x_c = 7.425$  px

$y_c = 6.697$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22650.2810

Standard deviation: 8.58949

$R^2$ : 0.98847

Parameters:

a = 110.60277

b = 595.92284

c = 51.03108

d = 1.08513

## Bead 2685 (Rejected)

Date : Mon Oct 17 13:53:42 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 156  $\mu\text{m}$  (x), -73.7  $\mu\text{m}$  (y), 48.9  $\mu\text{m}$  (z)

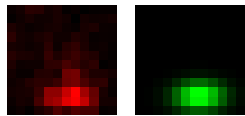
Corresponding bead : Not found

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

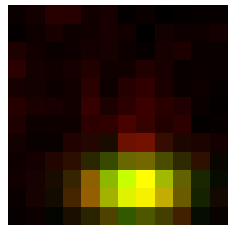
FWHM	Non corrected	Corrected	Theoretical
min	532 nm	554 nm	270 nm
max	919 nm	957 nm	270 nm
z	3.36 $\mu\text{m}$	3.37 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.579		
Theta	1.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.855$



Parameters:

A = 189.801 (brightness)

B = 121.879 (background)

a = 0.159 px

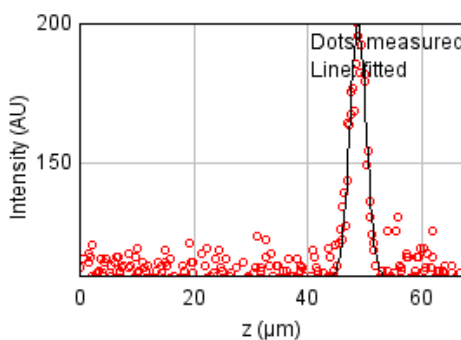
b = 0.006 px

c = 0.474 px

xc = 6.490 px

yc = 9.443 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 12884.5011

Standard deviation: 6.47835

$R^2$ : 0.87082

Parameters:

a = 109.63670

b = 200.05581

c = 48.85011

d = 1.42485

## Bead 2686 (Rejected)

Date : Mon Oct 17 13:53:43 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -94.8  $\mu\text{m}$  (x), -84.9  $\mu\text{m}$  (y), 48.4  $\mu\text{m}$  (z)

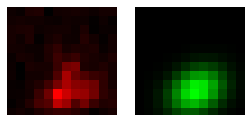
Corresponding bead : Not found

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

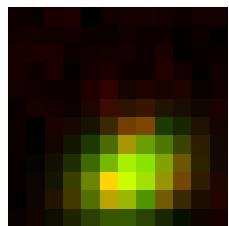
FWHM	Non corrected	Corrected	Theoretical
min	781 nm	813 nm	270 nm
max	1.03 $\mu\text{m}$	1.07 $\mu\text{m}$	270 nm
z	2.74 $\mu\text{m}$	2.75 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.758		
Theta	28.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.852$



Parameters:

A = 145.857 (brightness)

B = 117.786 (background)

a = 0.148 px

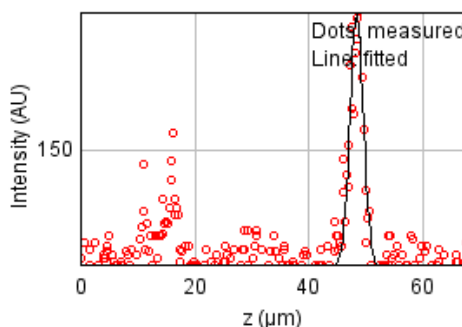
b = 0.040 px

c = 0.198 px

xc = 6.194 px

yc = 8.626 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21437.7751

Standard deviation: 8.35643

$R^2$ : 0.72840

Parameters:

a = 113.53614

b = 194.31364

c = 48.44604

d = 1.16462

## Bead 2687

Date : Mon Oct 17 13:53:43 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

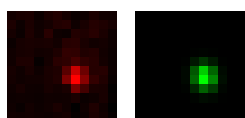
Coordinates : -145  $\mu\text{m}$  (x), 71.2  $\mu\text{m}$  (y), 51.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

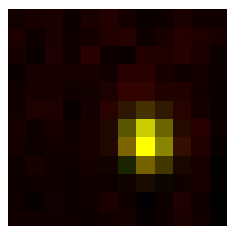
FWHM	Non corrected	Corrected	Theoretical
min	413 nm	430 nm	270 nm
max	479 nm	499 nm	270 nm
z	2.16 $\mu\text{m}$	2.17 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.861		
Theta	-80.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.913$



Parameters:

$A = 265.478$  (brightness)

$B = 116.938$  (background)

$a = 0.782$  px

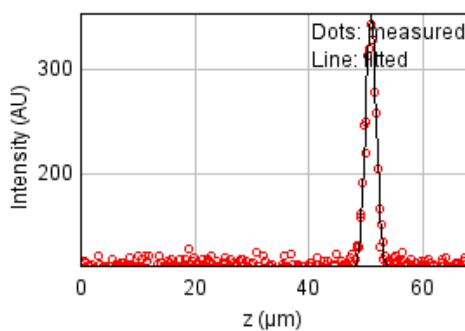
$b = -0.034$  px

$c = 0.590$  px

$x_c = 7.076$  px

$y_c = 6.690$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17496.9494

Standard deviation: 7.54939

$R^2: 0.95903$

Parameters:

$a = 112.26156$

$b = 353.41039$

$c = 50.95212$

$d = 0.91842$

## Bead 2688

Date : Mon Oct 17 13:53:43 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

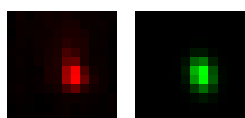
Coordinates : 94.1  $\mu\text{m}$  (x), 46.4  $\mu\text{m}$  (y), 51.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

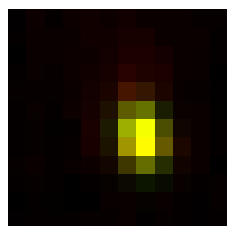
FWHM	Non corrected	Corrected	Theoretical
min	410 nm	427 nm	270 nm
max	581 nm	605 nm	270 nm
z	2.06 $\mu\text{m}$	2.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.706		
Theta	-78.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 692.695$  (brightness)

$B = 128.234$  (background)

$a = 0.782$  px

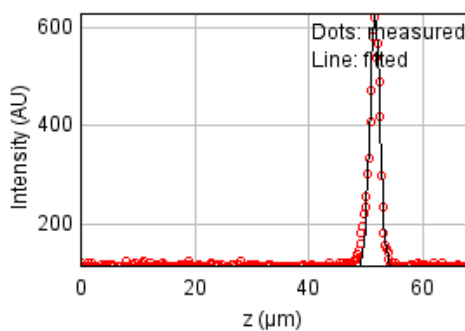
$b = -0.076$  px

$c = 0.412$  px

$x_c = 6.779$  px

$y_c = 6.440$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 47000.8810

Standard deviation: 12.37325

$R^2: 0.97448$

Parameters:

$a = 113.28768$

$b = 629.53375$

$c = 51.63494$

$d = 0.87613$



## Bead 2689

Date : Mon Oct 17 13:53:43 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

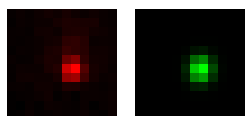
Coordinates : -155  $\mu\text{m}$  (x), 37.3  $\mu\text{m}$  (y), 51.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

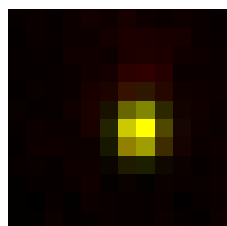
FWHM	Non corrected	Corrected	Theoretical
min	422 nm	439 nm	270 nm
max	488 nm	508 nm	270 nm
z	1.98 $\mu\text{m}$	1.99 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.864		
Theta	85.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 410.146 (brightness)

B = 118.065 (background)

a = 0.754 px

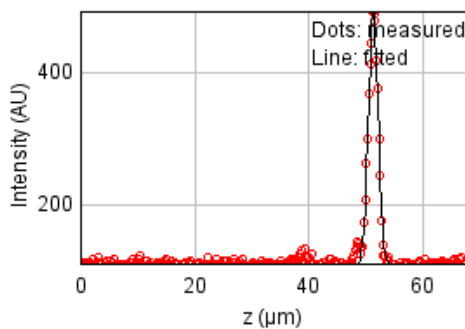
b = 0.014 px

c = 0.565 px

xc = 6.658 px

yc = 6.082 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17786.2606

Standard deviation: 7.61155

$R^2$ : 0.98184

Parameters:

a = 111.00829

b = 496.23538

c = 51.35883

d = 0.84149

## Bead 2690

Date : Mon Oct 17 13:53:43 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

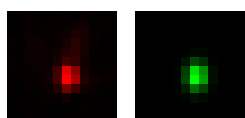
Coordinates : 54.4  $\mu\text{m}$  (x), 29.2  $\mu\text{m}$  (y), 51.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

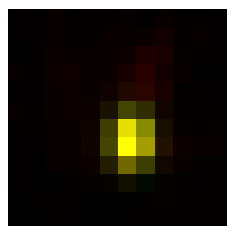
FWHM	Non corrected	Corrected	Theoretical
min	387 nm	403 nm	270 nm
max	509 nm	530 nm	270 nm
z	2.07 $\mu\text{m}$	2.08 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.76		
Theta	89.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 898.319$  (brightness)

$B = 130.874$  (background)

$a = 0.898$  px

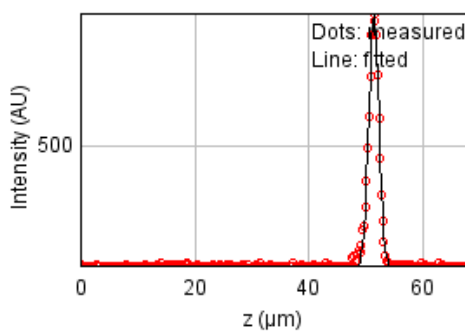
$b = 0.006$  px

$c = 0.518$  px

$x_c = 6.231$  px

$y_c = 6.627$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27451.9326

Standard deviation: 9.45621

$R^2: 0.99387$

Parameters:

$a = 113.09276$

$b = 924.21948$

$c = 51.45365$

$d = 0.87996$

## Bead 2691

Date : Mon Oct 17 13:53:43 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

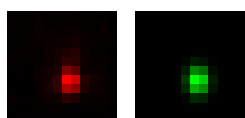
Coordinates : -7.4  $\mu\text{m}$  (x), 27.1  $\mu\text{m}$  (y), 52.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

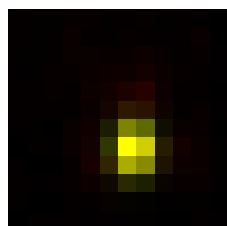
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	407 nm	270 nm
max	503 nm	524 nm	270 nm
z	1.95 $\mu\text{m}$	1.95 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.777		
Theta	-89.8°		

### 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 = 1249.218 (brightness)

B = 132.892 (background)

a = 0.879 px

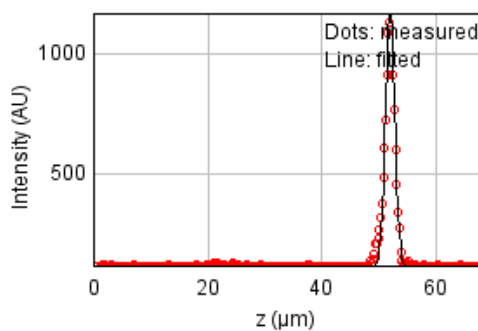
b = -0.001 px

c = 0.530 px

$x_c = 6.376$  px

$y_c = 7.126$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 82504.6182

Standard deviation: 16.39343

$R^2$ : 0.98858

Parameters:

a = 116.08750

b = 1175.15085

c = 52.03161

d = 0.82599

## Bead 2692

Date : Mon Oct 17 13:53:43 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

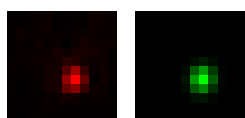
Coordinates : -64.3  $\mu\text{m}$  (x), 4.52  $\mu\text{m}$  (y), 51.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

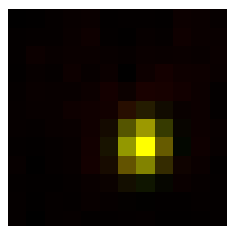
FWHM	Non corrected	Corrected	Theoretical
min	413 nm	431 nm	270 nm
max	480 nm	499 nm	270 nm
z	1.99 $\mu\text{m}$	2.0 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.862		
Theta	79.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 750.766$  (brightness)

$B = 124.750$  (background)

$a = 0.779$  px

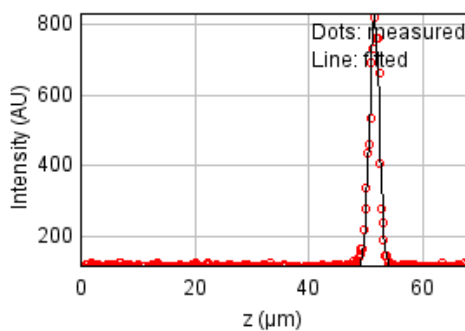
$b = 0.035$  px

$c = 0.590$  px

$x_c = 6.838$  px

$y_c = 6.944$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57918.3723

Standard deviation: 13.73533

$R^2: 0.98312$

Parameters:

$a = 113.92940$

$b = 833.34964$

$c = 51.56219$

$d = 0.84626$

## Bead 2693

Date : Mon Oct 17 13:53:44 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

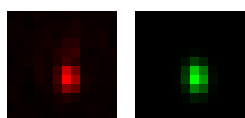
Coordinates : 33.1  $\mu\text{m}$  (x), -15.2  $\mu\text{m}$  (y), 51.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

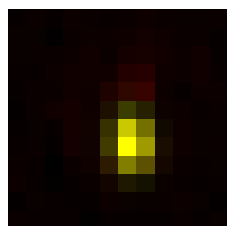
FWHM	Non corrected	Corrected	Theoretical
min	368 nm	384 nm	270 nm
max	532 nm	554 nm	270 nm
z	2.15 $\mu\text{m}$	2.16 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.693		
Theta	-86.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 666.507 (brightness)

B = 121.730 (background)

a = 0.987 px

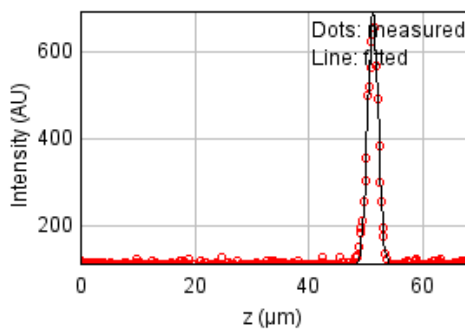
b = -0.035 px

c = 0.477 px

xc = 6.236 px

yc = 6.776 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29092.6042

Standard deviation: 9.73469

$R^2$ : 0.98766

Parameters:

a = 114.07236

b = 690.93481

c = 51.29382

d = 0.91238

## Bead 2694 (Rejected)

Date : Mon Oct 17 13:53:44 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 128  $\mu\text{m}$  (x), -33.0  $\mu\text{m}$  (y), 14.4  $\mu\text{m}$  (z)

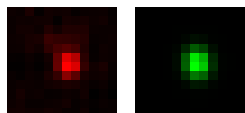
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

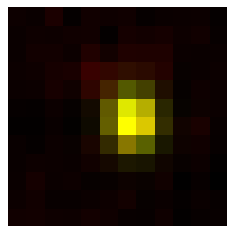
FWHM	Non corrected	Corrected	Theoretical
min	464 nm	484 nm	270 nm
max	559 nm	582 nm	270 nm
z	2.59 $\mu\text{m}$	2.6 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.831		
Theta	-83.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 418.949 (brightness)

B = 123.452 (background)

a = 0.620 px

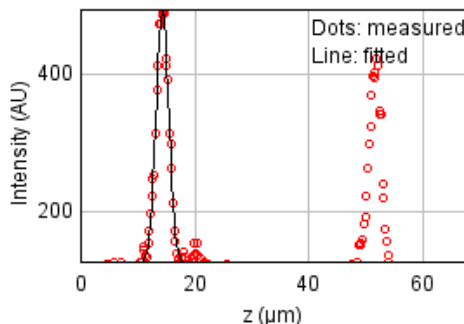
b = -0.021 px

c = 0.431 px

xc = 6.289 px

yc = 5.625 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 812408.407

Standard deviation: 51.44202

$R^2$ : 0.58493

Parameters:

a = 126.53390

b = 496.80956

c = 14.41497

d = 1.09973

## Bead 2695

Date : Mon Oct 17 13:53:44 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

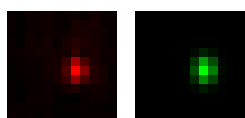
Coordinates : 1.57  $\mu\text{m}$  (x), -36.4  $\mu\text{m}$  (y), 51.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

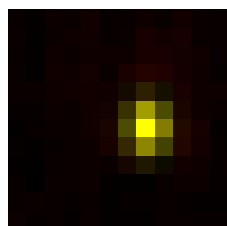
FWHM	Non corrected	Corrected	Theoretical
min	374 nm	389 nm	270 nm
max	488 nm	509 nm	270 nm
z	1.98 $\mu\text{m}$	1.99 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.766		
Theta	-89.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 591.360 (brightness)

B = 123.295 (background)

a = 0.960 px

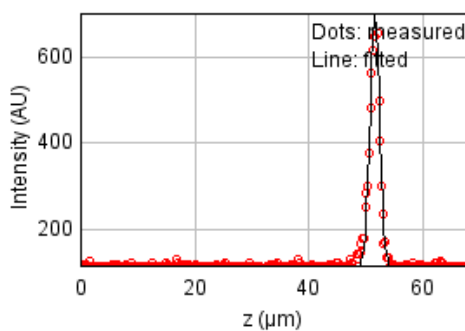
b = -0.007 px

c = 0.563 px

xc = 7.123 px

yc = 5.926 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36845.2530

Standard deviation: 10.95523

$R^2$ : 0.98391

Parameters:

a = 113.95902

b = 703.18784

c = 51.62143

d = 0.84287

## Bead 2696

Date : Mon Oct 17 13:53:44 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

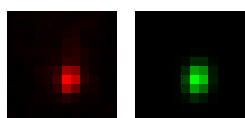
Coordinates : 13.5  $\mu\text{m}$  (x), -47.8  $\mu\text{m}$  (y), 51.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

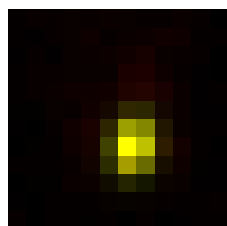
FWHM	Non corrected	Corrected	Theoretical
min	403 nm	420 nm	270 nm
max	535 nm	557 nm	270 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.754		
Theta	81.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 651.173$  (brightness)

$B = 124.807$  (background)

$a = 0.817$  px

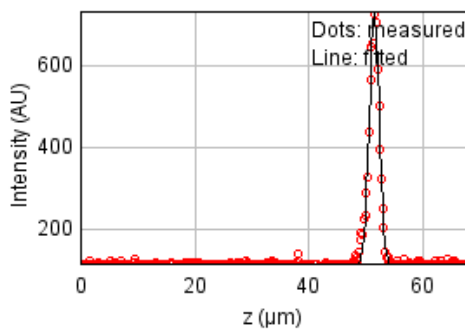
$b = 0.055$  px

$c = 0.478$  px

$x_c = 6.332$  px

$y_c = 6.949$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28186.9358

Standard deviation: 9.58197

$R^2: 0.98912$

Parameters:

$a = 112.92464$

$b = 732.90439$

$c = 51.53729$

$d = 0.86669$



## Bead 2697 (Rejected)

Date : Mon Oct 17 13:53:44 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : -96.2  $\mu\text{m}$  (x), -52.9  $\mu\text{m}$  (y), 47.6  $\mu\text{m}$  (z)

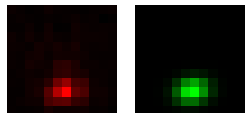
Corresponding bead : Not found

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

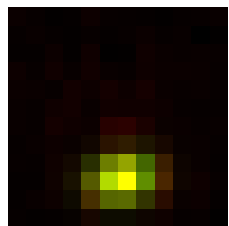
FWHM	Non corrected	Corrected	Theoretical
min	446 nm	465 nm	270 nm
max	611 nm	636 nm	270 nm
z	2.08 $\mu\text{m}$	2.09 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.731		
Theta	10.9°		

### 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 = 434.496 (brightness)

B = 125.921 (background)

a = 0.371 px

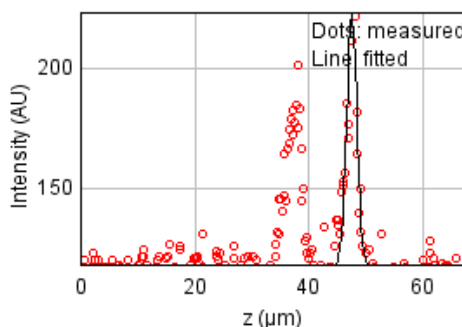
b = 0.058 px

c = 0.663 px

xc = 5.727 px

yc = 8.858 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 72359.6750

Standard deviation: 15.35250

$R^2$ : 0.51357

Parameters:

a = 117.74103

b = 223.73972

c = 47.58580

d = 0.88494

## Bead 2698

Date : Mon Oct 17 13:53:44 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

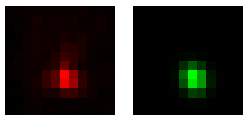
Coordinates : 104 µm (x), -68.6 µm (y), 51.4 µm (z)

Corresponding bead : Not found

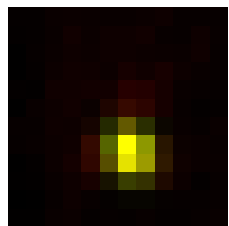
FWHM	Non corrected	Corrected	Theoretical
min	422 nm	439 nm	270 nm
max	490 nm	510 nm	270 nm
z	1.93 µm	1.93 µm	1.3 µm
Asymmetry	0.861		
Theta	-66.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 643.462 (brightness)

B = 127.227 (background)

a = 0.724 px

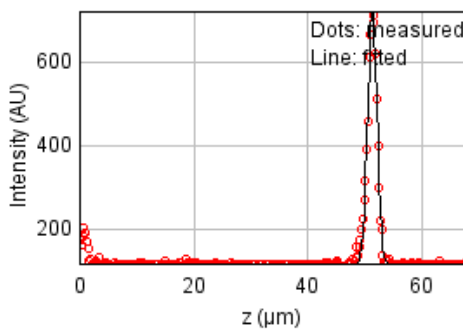
b = -0.072 px

c = 0.591 px

xc = 6.182 px

yc = 7.418 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 58004.3645

Standard deviation: 13.74552

$R^2$ : 0.97606

Parameters:

a = 114.18605

b = 726.66103

c = 51.37050

d = 0.81762

## Bead 2699

Date : Mon Oct 17 13:53:44 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

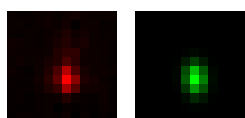
Coordinates : 129  $\mu\text{m}$  (x), -72.2  $\mu\text{m}$  (y), 51.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

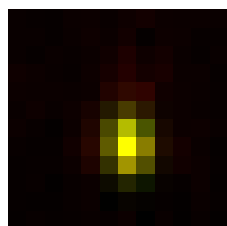
FWHM	Non corrected	Corrected	Theoretical
min	392 nm	408 nm	270 nm
max	565 nm	588 nm	270 nm
z	1.97 $\mu\text{m}$	1.98 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.693		
Theta	-85.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 530.036 (brightness)

B = 121.896 (background)

a = 0.871 px

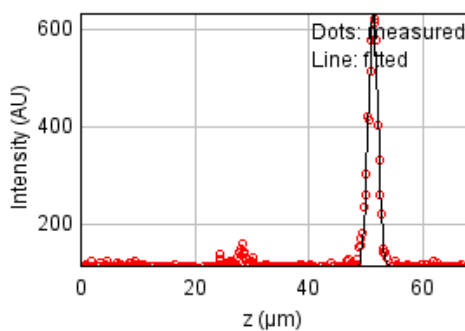
b = -0.040 px

c = 0.424 px

xc = 6.083 px

yc = 6.870 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 38378.4411

Standard deviation: 11.18084

$R^2$ : 0.97860

Parameters:

a = 112.83432

b = 634.13196

c = 51.32582

d = 0.83828

## Bead 2700 (Rejected)

Date : Mon Oct 17 13:53:45 PDT 2022

Origin : data\_traditional.tif ( Nikon 40x0.95 air )

Frame size : 12 pixels

Coordinates : 31.6  $\mu\text{m}$  (x), -78.6  $\mu\text{m}$  (y), 50.7  $\mu\text{m}$  (z)

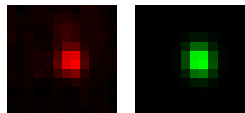
Corresponding bead : Not found

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

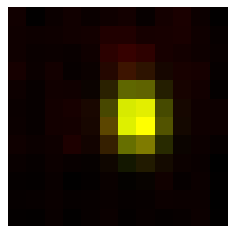
FWHM	Non corrected	Corrected	Theoretical
min	477 nm	497 nm	270 nm
max	582 nm	606 nm	270 nm
z	2.51 $\mu\text{m}$	2.52 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.82		
Theta	-83.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 446.202 (brightness)

B = 125.845 (background)

a = 0.587 px

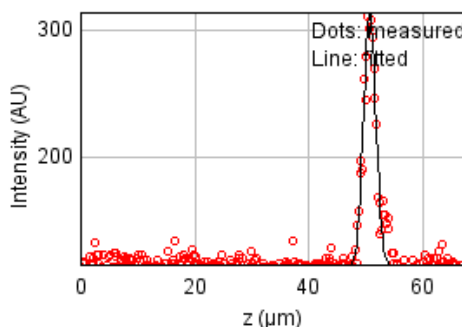
b = -0.023 px

c = 0.399 px

xc = 6.534 px

yc = 5.560 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22405.1562

Standard deviation: 8.54289

$R^2$ : 0.93627

Parameters:

a = 113.44229

b = 315.06400

c = 50.74204

d = 1.06423