

## Bead 401 (Rejected)

Date : Mon Oct 17 13:51:01 PDT 2022

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

Frame size : 12 pixels

Coordinates : 46.0  $\mu\text{m}$  (x), 55.2  $\mu\text{m}$  (y), 9.16  $\mu\text{m}$  (z)

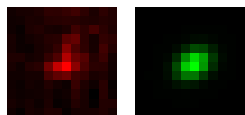
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

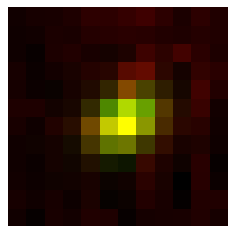
FWHM	Non corrected	Corrected	Theoretical
min	496 nm	516 nm	270 nm
max	660 nm	687 nm	270 nm
z	1.27 $\mu\text{m}$	1.27 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.751		
Theta	34.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.779$



Parameters:

A = 165.510 (brightness)

B = 120.477 (background)

a = 0.385 px

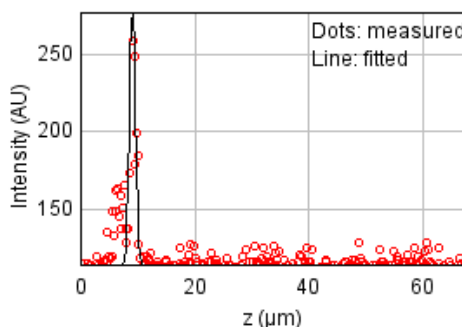
b = 0.111 px

c = 0.470 px

xc = 5.900 px

yc = 5.697 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 34498.4573

Standard deviation: 10.60060

$R^2$ : 0.76470

Parameters:

a = 114.76653

b = 277.92440

c = 9.16277

d = 0.53788

## Bead 402 (Rejected)

Date : Mon Oct 17 13:51:01 PDT 2022

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

Frame size : 12 pixels

Coordinates : -121  $\mu\text{m}$  (x), 53.1  $\mu\text{m}$  (y), 7.66  $\mu\text{m}$  (z)

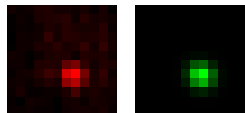
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

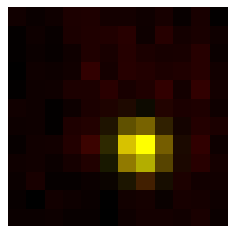
FWHM	Non corrected	Corrected	Theoretical
min	438 nm	456 nm	270 nm
max	468 nm	488 nm	270 nm
z	2.12 $\mu\text{m}$	2.13 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.935		
Theta	-36.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.895$



Parameters:

A = 187.183 (brightness)

B = 116.103 (background)

a = 0.643 px

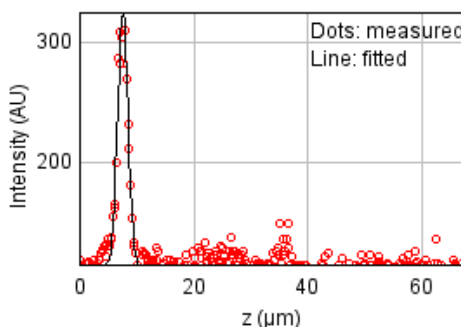
b = -0.042 px

c = 0.670 px

xc = 6.723 px

yc = 7.194 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29428.9999

Standard deviation: 9.79081

$R^2$ : 0.91120

Parameters:

a = 115.28541

b = 324.14153

c = 7.66250

d = 0.90185

## Bead 403

Date : Mon Oct 17 13:51:01 PDT 2022

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

Frame size : 12 pixels

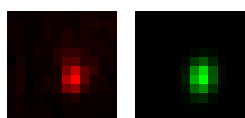
Coordinates : 73.7  $\mu\text{m}$  (x), 37.1  $\mu\text{m}$  (y), 8.07  $\mu\text{m}$  (z)

Corresponding bead : Not found

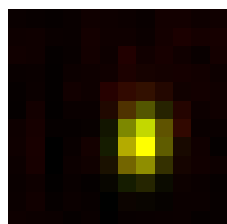
FWHM	Non corrected	Corrected	Theoretical
min	434 nm	452 nm	270 nm
max	597 nm	621 nm	270 nm
z	2.23 $\mu\text{m}$	2.24 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.727		
Theta	84.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 284.686 (brightness)

B = 120.144 (background)

a = 0.710 px

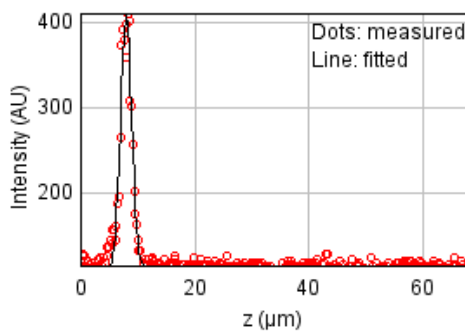
b = 0.032 px

c = 0.380 px

xc = 6.794 px

yc = 6.739 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25345.1468

Standard deviation: 9.08611

$R^2$ : 0.96187

Parameters:

a = 113.35825

b = 410.24604

c = 8.07098

d = 0.94738

## Bead 404 (Rejected)

Date : Mon Oct 17 13:51:01 PDT 2022

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

Frame size : 12 pixels

Coordinates : 16.7  $\mu\text{m}$  (x), 26.2  $\mu\text{m}$  (y), 9.02  $\mu\text{m}$  (z)

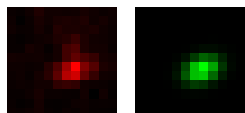
Corresponding bead : Not found

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

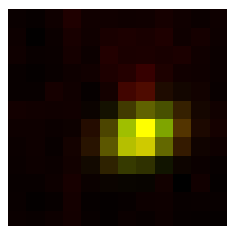
FWHM	Non corrected	Corrected	Theoretical
min	457 nm	476 nm	270 nm
max	652 nm	679 nm	270 nm
z	3.97 $\mu\text{m}$	3.98 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.701		
Theta	22.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 310.147 (brightness)

B = 122.920 (background)

a = 0.363 px

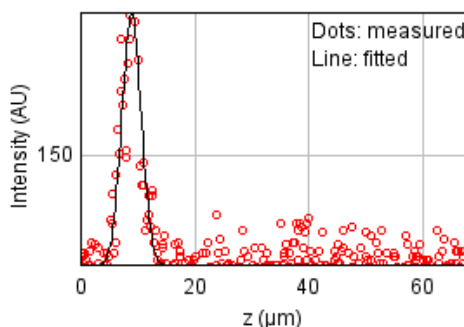
b = 0.115 px

c = 0.594 px

xc = 6.792 px

yc = 6.344 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17743.6336

Standard deviation: 7.60242

$R^2$ : 0.82925

Parameters:

a = 113.96759

b = 197.39292

c = 9.01551

d = 1.68536

## Bead 405 (Rejected)

Date : Mon Oct 17 13:51:01 PDT 2022

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

Frame size : 12 pixels

Coordinates : -52.4  $\mu\text{m}$  (x), -6.27  $\mu\text{m}$  (y), 9.09  $\mu\text{m}$  (z)

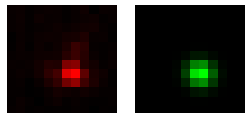
Corresponding bead : Not found

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

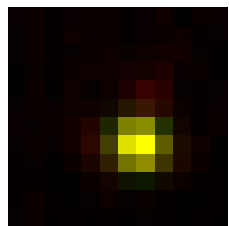
FWHM	Non corrected	Corrected	Theoretical
min	465 nm	485 nm	270 nm
max	489 nm	509 nm	270 nm
z	4.06 $\mu\text{m}$	4.08 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.952		
Theta	-26.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 628.771 (brightness)

B = 124.214 (background)

a = 0.573 px

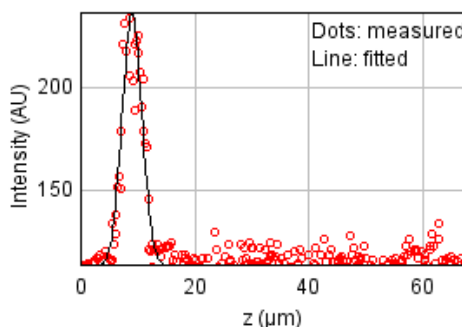
b = -0.023 px

c = 0.608 px

xc = 6.613 px

yc = 6.982 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21594.1506

Standard deviation: 8.38685

$R^2$ : 0.90006

Parameters:

a = 113.10756

b = 237.12342

c = 9.09146

d = 1.72531

## Bead 406 (Rejected)

Date : Mon Oct 17 13:51:02 PDT 2022

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

Frame size : 12 pixels

Coordinates : 23.6  $\mu\text{m}$  (x), -24.4  $\mu\text{m}$  (y), 8.89  $\mu\text{m}$  (z)

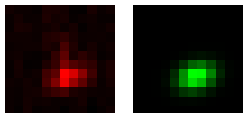
Corresponding bead : Not found

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

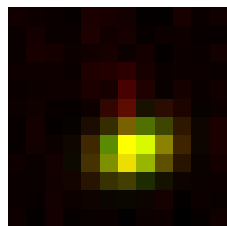
FWHM	Non corrected	Corrected	Theoretical
min	479 nm	498 nm	270 nm
max	680 nm	709 nm	270 nm
z	3.21 $\mu\text{m}$	3.22 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.703		
Theta	17.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 277.750$  (brightness)

$B = 119.224$  (background)

$a = 0.317$  px

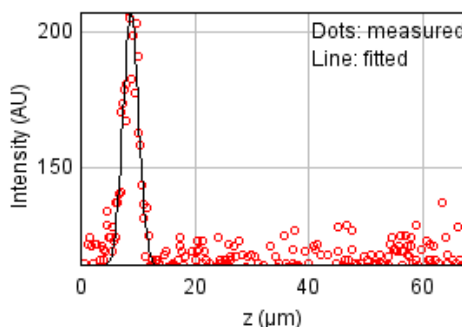
$b = 0.086$  px

$c = 0.558$  px

$x_c = 6.378$  px

$y_c = 7.314$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14172.6362

Standard deviation: 6.79448

$R^2: 0.85931$

Parameters:

$a = 114.78524$

$b = 206.94839$

$c = 8.88822$

$d = 1.36193$

## Bead 407

Date : Mon Oct 17 13:51:02 PDT 2022

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

Frame size : 12 pixels

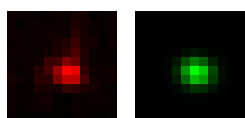
Coordinates : -93.0  $\mu\text{m}$  (x), -58.7  $\mu\text{m}$  (y), 8.73  $\mu\text{m}$  (z)

Corresponding bead : Not found

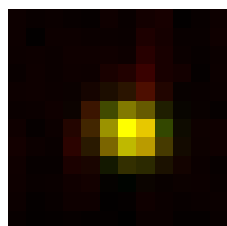
FWHM	Non corrected	Corrected	Theoretical
min	501 nm	521 nm	270 nm
max	587 nm	611 nm	270 nm
z	2.32 $\mu\text{m}$	2.33 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.853		
Theta	-11.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 394.379$  (brightness)

$B = 122.109$  (background)

$a = 0.396$  px

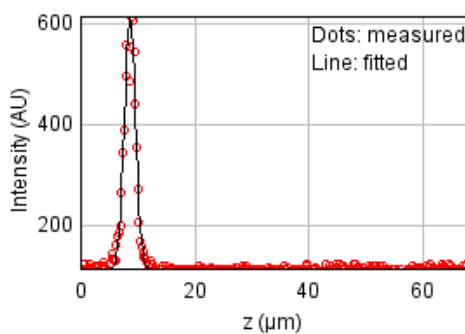
$b = -0.028$  px

$c = 0.530$  px

$x_c = 6.211$  px

$y_c = 6.210$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 47403.0562

Standard deviation: 12.42608

$R^2 = 0.97552$

Parameters:

$a = 112.89163$

$b = 614.25423$

$c = 8.72537$

$d = 0.98354$

## Bead 408 (Rejected)

Date : Mon Oct 17 13:51:02 PDT 2022

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

Frame size : 12 pixels

Coordinates : 73.6  $\mu\text{m}$  (x), -67.0  $\mu\text{m}$  (y), 8.76  $\mu\text{m}$  (z)

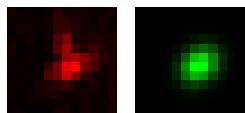
Corresponding bead : Not found

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

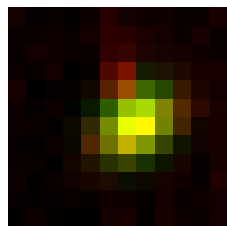
FWHM	Non corrected	Corrected	Theoretical
min	595 nm	620 nm	270 nm
max	745 nm	776 nm	270 nm
z	2.67 $\mu\text{m}$	2.69 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.799		
Theta	44.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.827$



Parameters:

A = 201.138 (brightness)

B = 116.013 (background)

a = 0.308 px

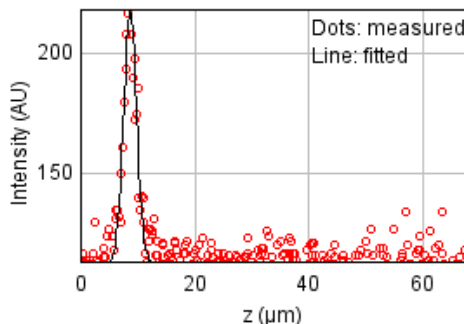
b = 0.068 px

c = 0.312 px

xc = 6.501 px

yc = 5.822 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15564.2867

Standard deviation: 7.12025

$R^2$ : 0.86008

Parameters:

a = 112.72899

b = 218.15475

c = 8.75863

d = 1.13593



## Bead 409

Date : Mon Oct 17 13:51:02 PDT 2022

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

Frame size : 12 pixels

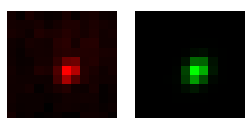
Coordinates : 137 um (x), 87.0 um (y), 8.49 um (z)

Corresponding bead : Not found

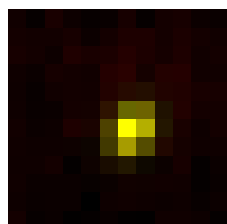
FWHM	Non corrected	Corrected	Theoretical
min	371 nm	387 nm	270 nm
max	474 nm	493 nm	270 nm
z	2.0 um	2.01 um	1.3 um
Asymmetry	0.784		
Theta	57.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 339.743 (brightness)

B = 119.453 (background)

a = 0.865 px

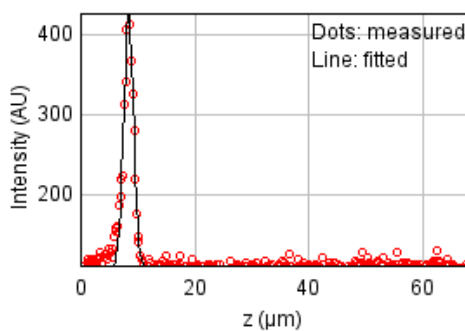
b = 0.170 px

c = 0.707 px

xc = 6.266 px

yc = 6.085 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21992.2011

Standard deviation: 8.46380

$R^2$ : 0.96734

Parameters:

a = 111.69352

b = 427.19239

c = 8.48797

d = 0.84997

## Bead 410

Date : Mon Oct 17 13:51:02 PDT 2022

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

Frame size : 12 pixels

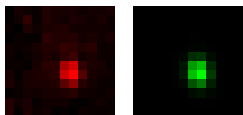
Coordinates : -114  $\mu\text{m}$  (x), 46.1  $\mu\text{m}$  (y), 7.91  $\mu\text{m}$  (z)

Corresponding bead : Not found

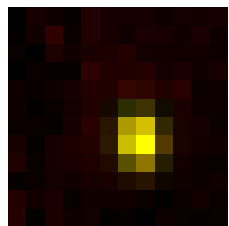
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	403 nm	270 nm
max	505 nm	526 nm	270 nm
z	2.51 $\mu\text{m}$	2.52 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.765		
Theta	-83.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.920$



Parameters:

$A = 248.077$  (brightness)

$B = 120.400$  (background)

$a = 0.894$  px

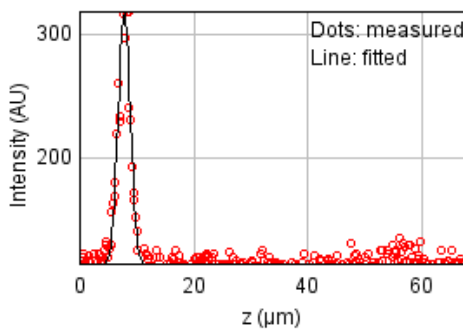
$b = -0.040$  px

$c = 0.531$  px

$x_c = 6.652$  px

$y_c = 6.741$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22404.0984

Standard deviation: 8.54269

$R^2: 0.93864$

Parameters:

$a = 113.27013$

$b = 319.00202$

$c = 7.91197$

$d = 1.06431$

## Bead 411 (Rejected)

Date : Mon Oct 17 13:51:03 PDT 2022

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

Frame size : 12 pixels

Coordinates : 159  $\mu\text{m}$  (x), -11.8  $\mu\text{m}$  (y), 6.88  $\mu\text{m}$  (z)

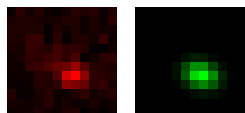
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

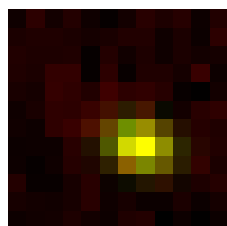
FWHM	Non corrected	Corrected	Theoretical
min	459 nm	478 nm	270 nm
max	626 nm	652 nm	270 nm
z	3.3 $\mu\text{m}$	3.32 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.733		
Theta	-17.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 114.402 (brightness)

B = 115.558 (background)

a = 0.370 px

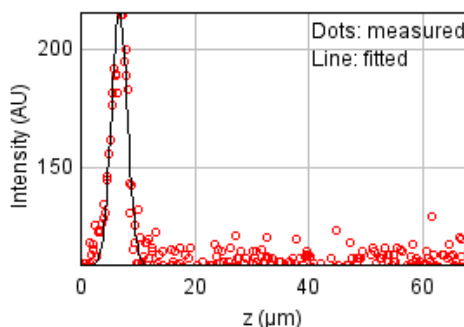
b = -0.085 px

c = 0.611 px

xc = 6.697 px

yc = 6.937 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14257.7661

Standard deviation: 6.81485

$R^2$ : 0.89247

Parameters:

a = 108.94769

b = 215.24566

c = 6.88321

d = 1.40291

## Bead 412 (Rejected)

Date : Mon Oct 17 13:51:03 PDT 2022

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

Frame size : 12 pixels

Coordinates : -163  $\mu\text{m}$  (x), -14.0  $\mu\text{m}$  (y), 11.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

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

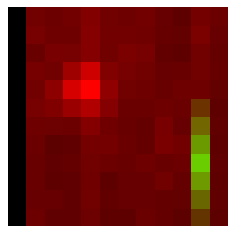
FWHM	Non corrected	Corrected	Theoretical
min	91.0 nm	94.7 nm	270 nm
max	1.5 $\mu\text{m}$	1.56 $\mu\text{m}$	270 nm
z	2.8 $\mu\text{m}$	2.81 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.061		
Theta	86.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.005$



Parameters:

A = 4.532 (brightness)

B = 112.562 (background)

a = 16.145 px

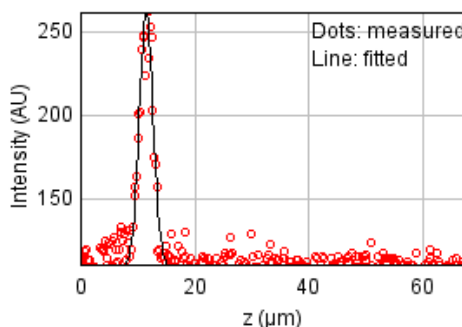
b = 1.059 px

c = 0.010 px

xc = 9.870 px

yc = 8.925 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19529.3297

Standard deviation: 7.97580

$R^2$ : 0.91247

Parameters:

a = 110.82645

b = 261.30742

c = 11.58145

d = 1.19008

## Bead 413 (Rejected)

Date : Mon Oct 17 13:51:03 PDT 2022

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

Frame size : 12 pixels

Coordinates : -124  $\mu\text{m}$  (x), -68.1  $\mu\text{m}$  (y), 9.28  $\mu\text{m}$  (z)

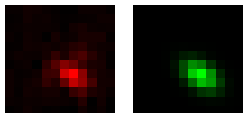
Corresponding bead : Not found

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

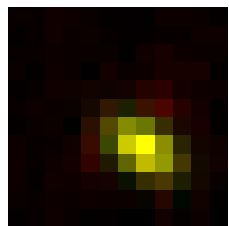
FWHM	Non corrected	Corrected	Theoretical
min	445 nm	463 nm	270 nm
max	706 nm	735 nm	270 nm
z	3.53 $\mu\text{m}$	3.55 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.63		
Theta	-35.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 320.731 (brightness)

B = 121.330 (background)

a = 0.407 px

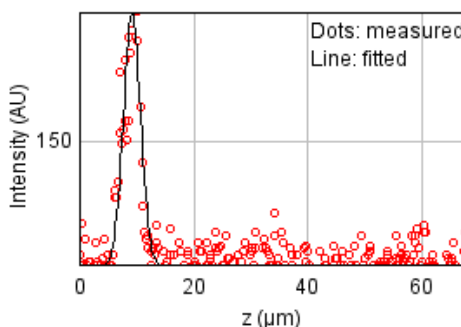
b = -0.194 px

c = 0.541 px

xc = 6.858 px

yc = 7.162 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14406.0778

Standard deviation: 6.85021

$R^2$ : 0.82721

Parameters:

a = 111.51887

b = 190.20341

c = 9.27835

d = 1.50047

## Bead 414 (Rejected)

Date : Mon Oct 17 13:51:03 PDT 2022

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

Frame size : 12 pixels

Coordinates : -115  $\mu\text{m}$  (x), -91.4  $\mu\text{m}$  (y), 6.18  $\mu\text{m}$  (z)

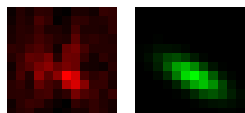
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

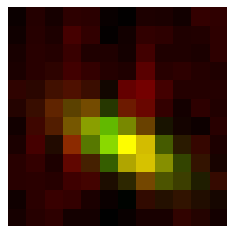
FWHM	Non corrected	Corrected	Theoretical
min	463 nm	482 nm	270 nm
max	1.15 $\mu\text{m}$	1.2 $\mu\text{m}$	270 nm
z	2.45 $\mu\text{m}$	2.46 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.403		
Theta	-28.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.657$



Parameters:

A = 78.302 (brightness)

B = 116.856 (background)

a = 0.222 px

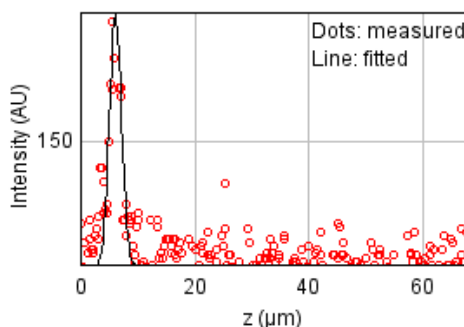
b = -0.220 px

c = 0.507 px

xc = 5.875 px

yc = 7.041 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17056.2883

Standard deviation: 7.45372

$R^2$ : 0.73805

Parameters:

a = 111.71032

b = 189.56500

c = 6.18299

d = 1.04077

## Bead 415

Date : Mon Oct 17 13:51:03 PDT 2022

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

Frame size : 12 pixels

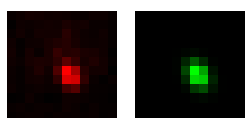
Coordinates : -100  $\mu\text{m}$  (x), 79.6  $\mu\text{m}$  (y), 8.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

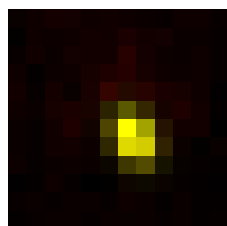
FWHM	Non corrected	Corrected	Theoretical
min	370 nm	385 nm	270 nm
max	514 nm	535 nm	270 nm
z	2.75 $\mu\text{m}$	2.76 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.72		
Theta	-62.4°		

### 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:

$A = 364.540$  (brightness)

$B = 120.963$  (background)

$a = 0.879$  px

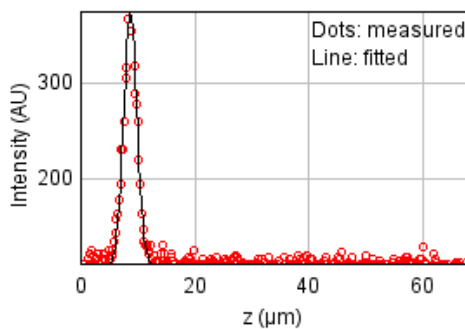
$b = -0.194$  px

$c = 0.610$  px

$x_c = 6.352$  px

$y_c = 6.478$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16053.0464

Standard deviation: 7.23119

$R^2: 0.97393$

Parameters:

$a = 112.47902$

$b = 372.97510$

$c = 8.79502$

$d = 1.16827$

## Bead 416

Date : Mon Oct 17 13:51:04 PDT 2022

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

Frame size : 12 pixels

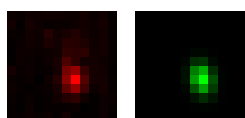
Coordinates : -12.1  $\mu\text{m}$  (x), 72.9  $\mu\text{m}$  (y), 8.61  $\mu\text{m}$  (z)

Corresponding bead : Not found

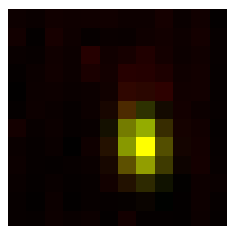
FWHM	Non corrected	Corrected	Theoretical
min	394 nm	410 nm	270 nm
max	569 nm	593 nm	270 nm
z	1.95 $\mu\text{m}$	1.96 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.693		
Theta	-78.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 379.988$  (brightness)

$B = 121.607$  (background)

$a = 0.845$  px

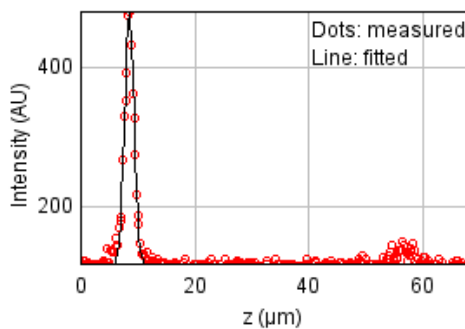
$b = -0.089$  px

$c = 0.433$  px

$x_c = 6.790$  px

$y_c = 6.909$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29558.7765

Standard deviation: 9.81237

$R^2: 0.96615$

Parameters:

$a = 116.30239$

$b = 479.95603$

$c = 8.61018$

$d = 0.82779$



## Bead 417 (Rejected)

Date : Mon Oct 17 13:51:04 PDT 2022

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

Frame size : 12 pixels

Coordinates : 159  $\mu\text{m}$  (x), 40.8  $\mu\text{m}$  (y), 8.12  $\mu\text{m}$  (z)

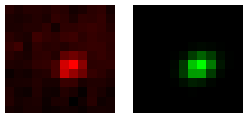
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

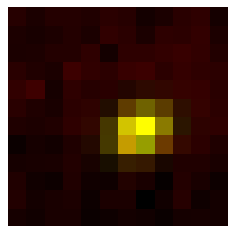
FWHM	Non corrected	Corrected	Theoretical
min	417 nm	434 nm	270 nm
max	550 nm	573 nm	270 nm
z	2.33 $\mu\text{m}$	2.34 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.758		
Theta	24.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 171.475 (brightness)

B = 116.962 (background)

a = 0.500 px

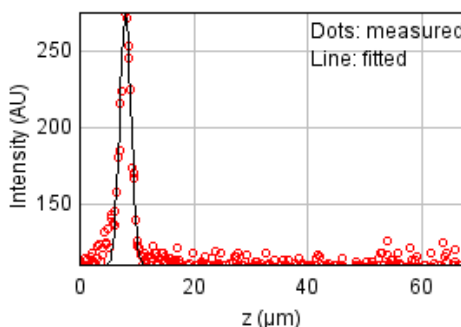
b = 0.123 px

c = 0.716 px

xc = 6.707 px

yc = 6.215 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14495.6812

Standard deviation: 6.87148

$R^2$ : 0.93435

Parameters:

a = 109.97944

b = 275.12827

c = 8.11532

d = 0.99026

## Bead 418 (Rejected)

Date : Mon Oct 17 13:51:04 PDT 2022

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

Frame size : 12 pixels

Coordinates : -37.0  $\mu\text{m}$  (x), 15.5  $\mu\text{m}$  (y), 9.17  $\mu\text{m}$  (z)

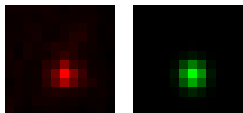
Corresponding bead : Not found

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

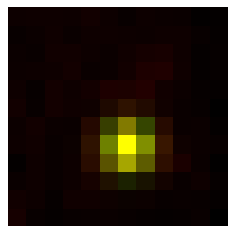
FWHM	Non corrected	Corrected	Theoretical
min	460 nm	480 nm	270 nm
max	479 nm	499 nm	270 nm
z	4.11 $\mu\text{m}$	4.12 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.961		
Theta	88.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 369.728 (brightness)

B = 122.521 (background)

a = 0.633 px

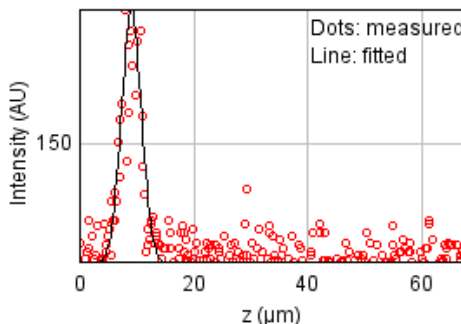
b = 0.001 px

c = 0.584 px

xc = 6.040 px

yc = 7.129 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19989.7491

Standard deviation: 8.06927

$R^2$ : 0.80458

Parameters:

a = 112.36270

b = 192.64666

c = 9.16869

d = 1.74399

## Bead 419 (Rejected)

Date : Mon Oct 17 13:51:04 PDT 2022

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

Frame size : 12 pixels

Coordinates : 124 um (x), 8.65 um (y), 7.97 um (z)

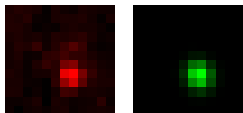
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

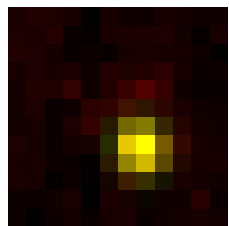
FWHM	Non corrected	Corrected	Theoretical
min	451 nm	470 nm	270 nm
max	513 nm	535 nm	270 nm
z	2.38 um	2.39 um	1.3 um
Asymmetry	0.878		
Theta	-71.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.893$



Parameters:

A = 211.708 (brightness)

B = 118.553 (background)

a = 0.645 px

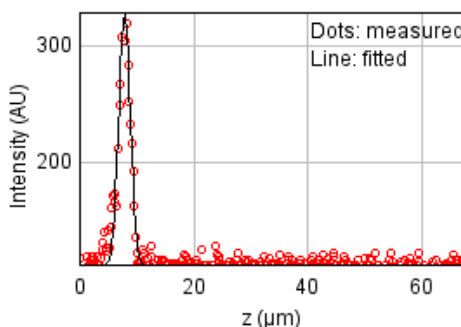
b = -0.045 px

c = 0.524 px

xc = 6.700 px

yc = 7.173 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19599.2774

Standard deviation: 7.99007

$R^2$ : 0.94806

Parameters:

a = 112.22323

b = 327.75134

c = 7.96614

d = 1.00919

## Bead 420

Date : Mon Oct 17 13:51:04 PDT 2022

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

Frame size : 12 pixels

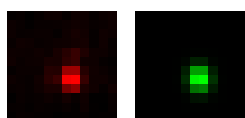
Coordinates : -56.4  $\mu\text{m}$  (x), 3.88  $\mu\text{m}$  (y), 9.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

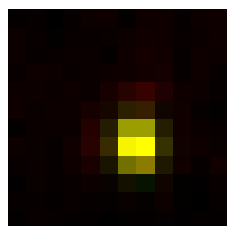
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	414 nm	270 nm
max	473 nm	493 nm	270 nm
z	2.15 $\mu\text{m}$	2.15 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.839		
Theta	-84.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 567.257$  (brightness)

$B = 124.334$  (background)

$a = 0.848$  px

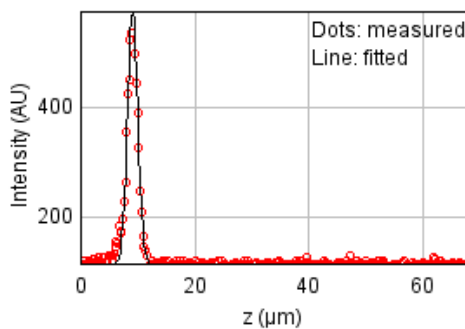
$b = -0.022$  px

$c = 0.601$  px

$x_c = 6.524$  px

$y_c = 6.882$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27496.0004

Standard deviation: 9.46380

$R^2: 0.98179$

Parameters:

$a = 113.89106$

$b = 574.34731$

$c = 9.19864$

$d = 0.91141$

## Bead 421 (Rejected)

Date : Mon Oct 17 13:51:04 PDT 2022

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

Frame size : 12 pixels

Coordinates : -5.95  $\mu\text{m}$  (x), -46.8  $\mu\text{m}$  (y), 11.6  $\mu\text{m}$  (z)

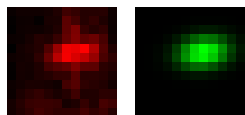
Corresponding bead : Not found

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

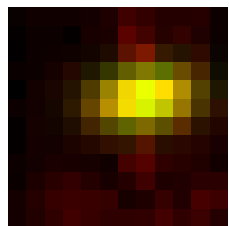
FWHM	Non corrected	Corrected	Theoretical
min	574 nm	598 nm	270 nm
max	938 nm	977 nm	270 nm
z	3.33 $\mu\text{m}$	3.34 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.612		
Theta	7.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.876$



Parameters:

A = 276.990 (brightness)

B = 136.924 (background)

a = 0.157 px

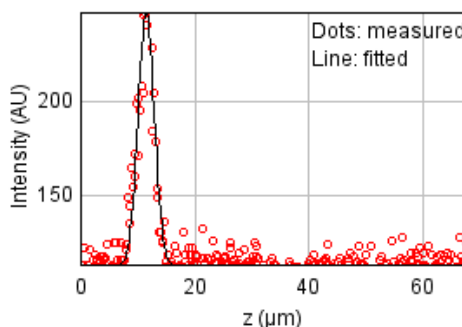
b = 0.034 px

c = 0.402 px

xc = 6.956 px

yc = 4.445 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20661.5796

Standard deviation: 8.20375

$R^2$ : 0.90362

Parameters:

a = 112.55158

b = 248.11033

c = 11.57928

d = 1.41281

## Bead 422

Date : Mon Oct 17 13:51:05 PDT 2022

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

Frame size : 12 pixels

Coordinates : -30.6  $\mu\text{m}$  (x), -66.8  $\mu\text{m}$  (y), 8.85  $\mu\text{m}$  (z)

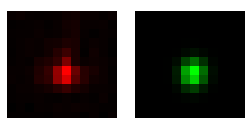
Corresponding bead : Not found



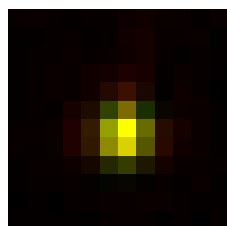
FWHM	Non corrected	Corrected	Theoretical
min	449 nm	467 nm	270 nm
max	504 nm	525 nm	270 nm
z	1.94 $\mu\text{m}$	1.95 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.89		
Theta	82.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 546.349$  (brightness)

$B = 122.634$  (background)

$a = 0.665$  px

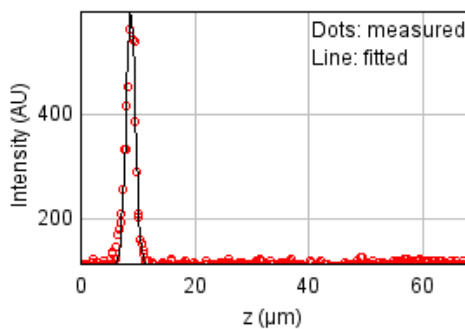
$b = 0.017$  px

$c = 0.531$  px

$x_c = 5.839$  px

$y_c = 6.322$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 38301.7178

Standard deviation: 11.16966

$R^2: 0.97467$

Parameters:

$a = 114.32719$

$b = 596.12766$

$c = 8.84906$

$d = 0.82361$

## Bead 423 (Rejected)

Date : Mon Oct 17 13:51:05 PDT 2022

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

Frame size : 12 pixels

Coordinates : -96.7  $\mu\text{m}$  (x), -96.1  $\mu\text{m}$  (y), 9.37  $\mu\text{m}$  (z)

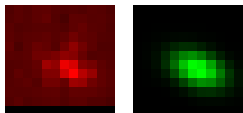
Corresponding bead : Not found

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

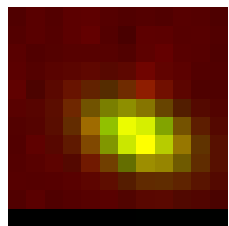
FWHM	Non corrected	Corrected	Theoretical
min	614 nm	639 nm	270 nm
max	1.01 $\mu\text{m}$	1.06 $\mu\text{m}$	270 nm
z	3.65 $\mu\text{m}$	3.66 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.605		
Theta	-21.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.579$



Parameters:

A = 204.892 (brightness)

B = 104.308 (background)

a = 0.160 px

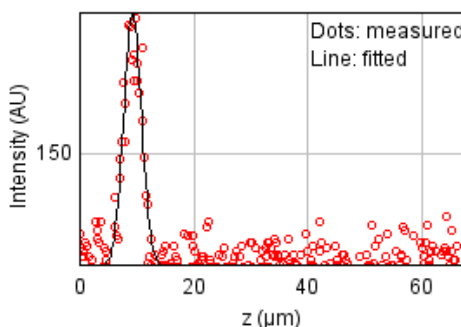
b = -0.076 px

c = 0.327 px

xc = 6.569 px

yc = 6.500 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16434.4226

Standard deviation: 7.31658

$R^2$ : 0.83711

Parameters:

a = 111.93551

b = 197.73765

c = 9.37045

d = 1.54956

## Bead 424 (Rejected)

Date : Mon Oct 17 13:51:05 PDT 2022

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

Frame size : 12 pixels

Coordinates : 159  $\mu\text{m}$  (x), -96.4  $\mu\text{m}$  (y), 8.26  $\mu\text{m}$  (z)

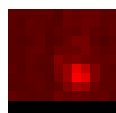
Corresponding bead : Not found

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	2.67 $\mu\text{m}$	2.68 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

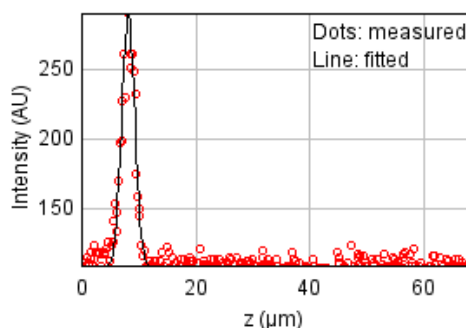
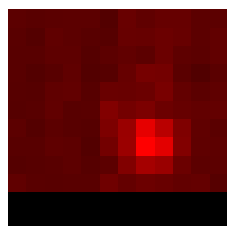
### XY profile & fitting parameters :

(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: 15931.7256

Standard deviation: 7.20381

R<sup>2</sup>: 0.94695

Parameters:

a = 108.89022

b = 290.84144

c = 8.25989

d = 1.13347



## Bead 425

Date : Mon Oct 17 13:51:05 PDT 2022

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

Frame size : 12 pixels

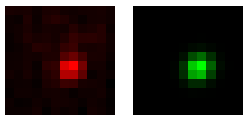
Coordinates : 147 um (x), 90.0 um (y), 9.04 um (z)

Corresponding bead : Not found

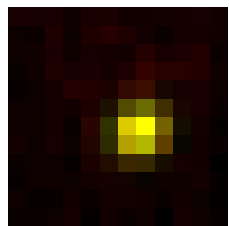
FWHM	Non corrected	Corrected	Theoretical
min	453 nm	472 nm	270 nm
max	497 nm	518 nm	270 nm
z	2.42 um	2.43 um	1.3 um
Asymmetry	0.911		
Theta	41.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 258.289 (brightness)

B = 117.173 (background)

a = 0.592 px

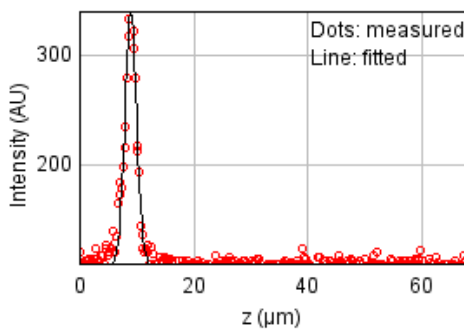
b = 0.055 px

c = 0.604 px

xc = 6.674 px

yc = 6.252 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17387.0875

Standard deviation: 7.52565

$R^2$ : 0.95905

Parameters:

a = 110.73690

b = 338.82866

c = 9.04438

d = 1.02663

## Bead 426

Date : Mon Oct 17 13:51:06 PDT 2022

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

Frame size : 12 pixels

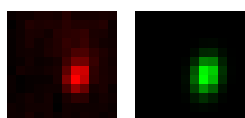
Coordinates : 54.6  $\mu\text{m}$  (x), 69.1  $\mu\text{m}$  (y), 8.95  $\mu\text{m}$  (z)

Corresponding bead : Not found

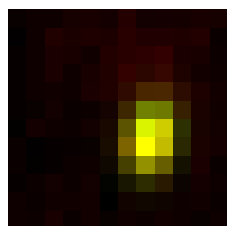
FWHM	Non corrected	Corrected	Theoretical
min	460 nm	479 nm	270 nm
max	679 nm	708 nm	270 nm
z	2.44 $\mu\text{m}$	2.45 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.677		
Theta	79.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 295.677$  (brightness)

$B = 120.521$  (background)

$a = 0.624$  px

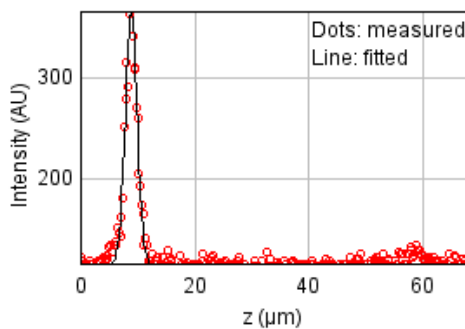
$b = 0.062$  px

$c = 0.302$  px

$x_c = 7.302$  px

$y_c = 6.504$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20622.8822

Standard deviation: 8.19607

$R^2: 0.96066$

Parameters:

$a = 114.49105$

$b = 366.80336$

$c = 8.94950$

$d = 1.03825$

## Bead 427

Date : Mon Oct 17 13:51:06 PDT 2022

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

Frame size : 12 pixels

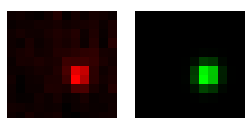
Coordinates : -95.6  $\mu\text{m}$  (x), 68.4  $\mu\text{m}$  (y), 8.56  $\mu\text{m}$  (z)

Corresponding bead : Not found

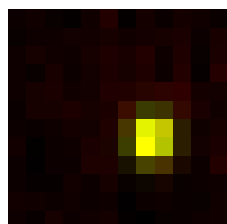
FWHM	Non corrected	Corrected	Theoretical
min	399 nm	416 nm	270 nm
max	444 nm	463 nm	270 nm
z	2.35 $\mu\text{m}$	2.36 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.899		
Theta	79.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 321.803 (brightness)

B = 121.992 (background)

a = 0.836 px

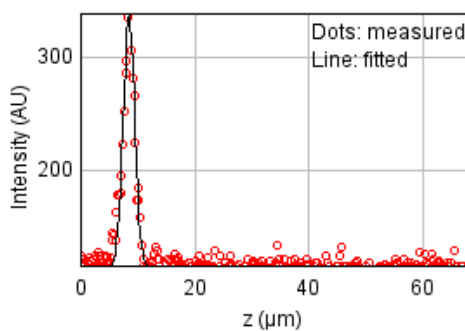
b = 0.028 px

c = 0.684 px

$x_c = 7.357$  px

$y_c = 6.521$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21320.3868

Standard deviation: 8.33352

$R^2$ : 0.94816

Parameters:

a = 113.47219

b = 339.72365

c = 8.56292

d = 0.99756

## Bead 428

Date : Mon Oct 17 13:51:06 PDT 2022

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

Frame size : 12 pixels

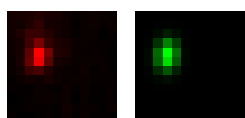
Coordinates : 79.2  $\mu\text{m}$  (x), 15.2  $\mu\text{m}$  (y), 16.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

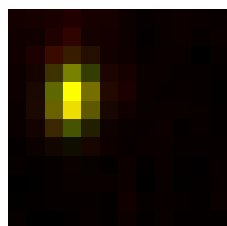
FWHM	Non corrected	Corrected	Theoretical
min	394 nm	411 nm	270 nm
max	569 nm	593 nm	270 nm
z	2.1 $\mu\text{m}$	2.11 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.693		
Theta	85.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.941$



Parameters:

A = 519.166 (brightness)

B = 123.890 (background)

a = 0.860 px

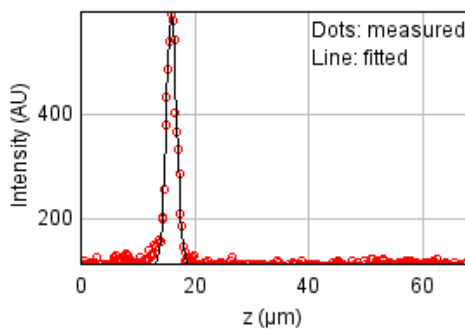
b = 0.034 px

c = 0.417 px

xc = 3.003 px

yc = 4.325 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31124.2281

Standard deviation: 10.06886

$R^2$ : 0.98086

Parameters:

a = 114.56978

b = 597.33953

c = 16.00199

d = 0.89073

## Bead 429

Date : Mon Oct 17 13:51:06 PDT 2022

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

Frame size : 12 pixels

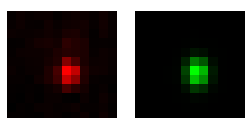
Coordinates : -28.8  $\mu\text{m}$  (x), 6.22  $\mu\text{m}$  (y), 9.12  $\mu\text{m}$  (z)

Corresponding bead : Not found

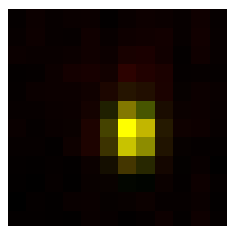
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	417 nm	270 nm
max	511 nm	532 nm	270 nm
z	2.05 $\mu\text{m}$	2.06 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.784		
Theta	-89.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 513.337 (brightness)

B = 121.461 (background)

a = 0.836 px

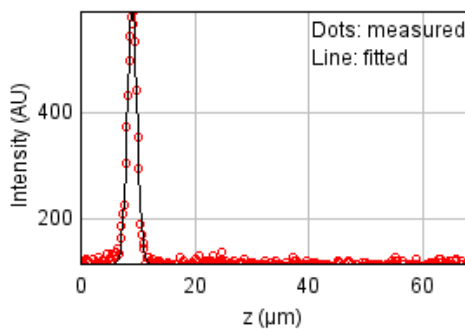
b = -0.003 px

c = 0.514 px

xc = 6.298 px

yc = 6.239 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23950.7269

Standard deviation: 8.83263

$R^2$ : 0.98467

Parameters:

a = 114.22105

b = 593.54368

c = 9.12182

d = 0.87102

## Bead 430

Date : Mon Oct 17 13:51:06 PDT 2022

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

Frame size : 12 pixels

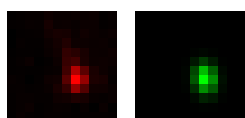
Coordinates : 33.9  $\mu\text{m}$  (x), -1.18  $\mu\text{m}$  (y), 9.25  $\mu\text{m}$  (z)

Corresponding bead : Not found

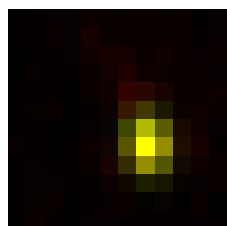
FWHM	Non corrected	Corrected	Theoretical
min	398 nm	415 nm	270 nm
max	550 nm	573 nm	270 nm
z	2.16 $\mu\text{m}$	2.17 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.724		
Theta	-83.0°		

### 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 = 610.291 (brightness)

B = 122.859 (background)

a = 0.840 px

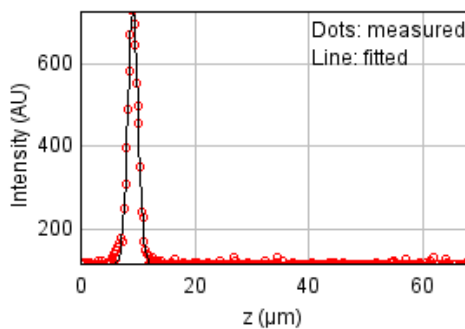
b = -0.049 px

c = 0.449 px

xc = 7.138 px

yc = 6.862 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23529.0519

Standard deviation: 8.75453

$R^2$ : 0.99110

Parameters:

a = 114.15164

b = 724.40429

c = 9.25194

d = 0.91748

## Bead 431

Date : Mon Oct 17 13:51:06 PDT 2022

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

Frame size : 12 pixels

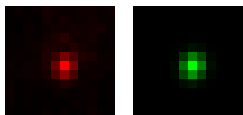
Coordinates : -139  $\mu\text{m}$  (x), -11.3  $\mu\text{m}$  (y), 9.28  $\mu\text{m}$  (z)

Corresponding bead : Not found

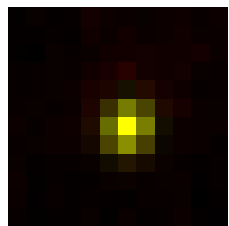
FWHM	Non corrected	Corrected	Theoretical
min	410 nm	427 nm	270 nm
max	462 nm	481 nm	270 nm
z	2.32 $\mu\text{m}$	2.33 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.887		
Theta	69.9°		

### 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:

$A = 477.489$  (brightness)

$B = 122.774$  (background)

$a = 0.779$  px

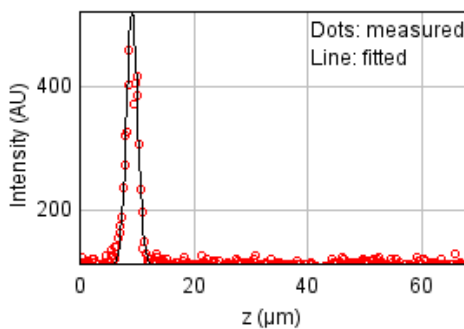
$b = 0.055$  px

$c = 0.649$  px

$x_c = 6.041$  px

$y_c = 6.053$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 49386.2592

Standard deviation: 12.68335

$R^2: 0.96259$

Parameters:

$a = 111.46781$

$b = 522.00155$

$c = 9.27526$

$d = 0.98683$

## Bead 432 (Rejected)

Date : Mon Oct 17 13:51:07 PDT 2022

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

Frame size : 12 pixels

Coordinates : -164  $\mu\text{m}$  (x), -12.8  $\mu\text{m}$  (y), 11.6  $\mu\text{m}$  (z)

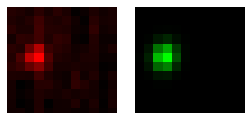
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

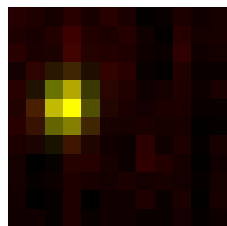
FWHM	Non corrected	Corrected	Theoretical
min	424 nm	441 nm	270 nm
max	495 nm	515 nm	270 nm
z	2.8 $\mu\text{m}$	2.81 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.856		
Theta	78.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.860$



Parameters:

A = 169.600 (brightness)

B = 117.966 (background)

a = 0.741 px

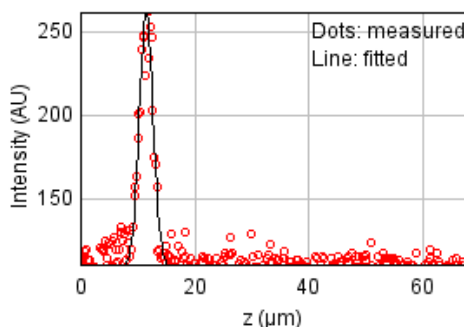
b = 0.038 px

c = 0.556 px

xc = 2.712 px

yc = 4.895 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19529.3297

Standard deviation: 7.97580

$R^2$ : 0.91247

Parameters:

a = 110.82645

b = 261.30742

c = 11.58145

d = 1.19008



## Bead 433

Date : Mon Oct 17 13:51:07 PDT 2022

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

Frame size : 12 pixels

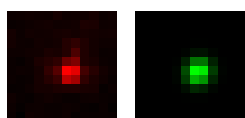
Coordinates : -58.6  $\mu\text{m}$  (x), -28.1  $\mu\text{m}$  (y), 9.37  $\mu\text{m}$  (z)

Corresponding bead : Not found

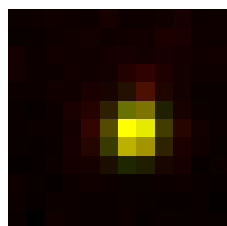
FWHM	Non corrected	Corrected	Theoretical
min	446 nm	464 nm	270 nm
max	488 nm	508 nm	270 nm
z	2.38 $\mu\text{m}$	2.39 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.914		
Theta	62.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 590.568 (brightness)

B = 125.425 (background)

a = 0.651 px

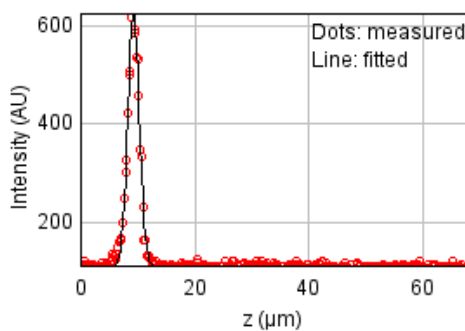
b = 0.046 px

c = 0.588 px

xc = 6.426 px

yc = 6.154 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27210.1246

Standard deviation: 9.41447

$R^2$ : 0.98671

Parameters:

a = 113.13942

b = 625.22483

c = 9.36597

d = 1.00968

## Bead 434 (Rejected)

Date : Mon Oct 17 13:51:07 PDT 2022

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

Frame size : 12 pixels

Coordinates : 2.06  $\mu\text{m}$  (x), -46.4  $\mu\text{m}$  (y), 10.7  $\mu\text{m}$  (z)

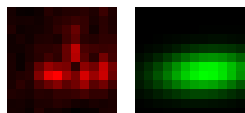
Corresponding bead : Not found

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

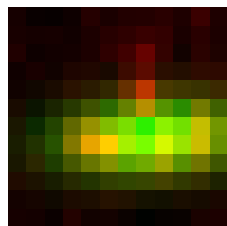
FWHM	Non corrected	Corrected	Theoretical
min	762 nm	794 nm	270 nm
max	1.83 $\mu\text{m}$	1.9 $\mu\text{m}$	270 nm
z	2.49 $\mu\text{m}$	2.5 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.418		
Theta	3.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.669$



Parameters:

A = 117.188 (brightness)

B = 118.752 (background)

a = 0.041 px

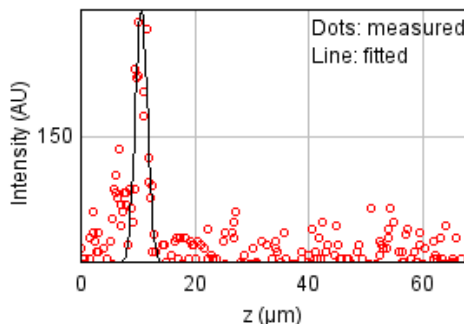
b = 0.012 px

c = 0.230 px

xc = 7.373 px

yc = 6.601 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18470.6086

Standard deviation: 7.75660

$R^2$ : 0.71490

Parameters:

a = 112.60740

b = 188.47486

c = 10.72335

d = 1.05727

## Bead 435

Date : Mon Oct 17 13:51:07 PDT 2022

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

Frame size : 12 pixels

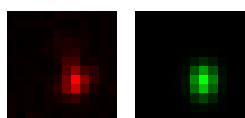
Coordinates : 62.3  $\mu\text{m}$  (x), -51.0  $\mu\text{m}$  (y), 9.21  $\mu\text{m}$  (z)

Corresponding bead : Not found

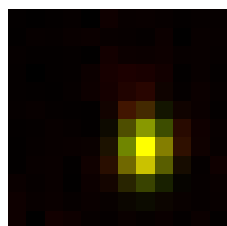
FWHM	Non corrected	Corrected	Theoretical
min	445 nm	464 nm	270 nm
max	584 nm	608 nm	270 nm
z	2.11 $\mu\text{m}$	2.12 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.763		
Theta	88.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 509.822 (brightness)

B = 126.715 (background)

a = 0.677 px

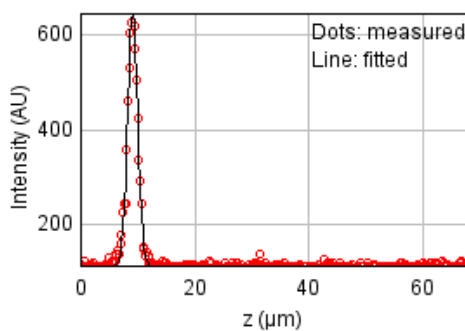
b = 0.010 px

c = 0.394 px

xc = 6.976 px

yc = 7.153 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21974.8764

Standard deviation: 8.46046

$R^2$ : 0.98874

Parameters:

a = 113.51360

b = 643.15137

c = 9.20574

d = 0.89581

## Bead 436 (Rejected)

Date : Mon Oct 17 13:51:07 PDT 2022

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

Frame size : 12 pixels

Coordinates : 151 um (x), -51.5 um (y), 6.29 um (z)

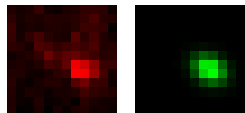
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

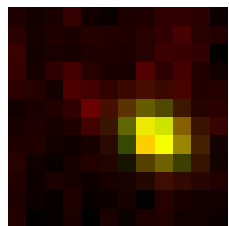
FWHM	Non corrected	Corrected	Theoretical
min	472 nm	492 nm	270 nm
max	618 nm	643 nm	270 nm
z	3.71 um	3.72 um	1.3 um
Asymmetry	0.764		
Theta	-32.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.809$



Parameters:

A = 114.713 (brightness)

B = 113.036 (background)

a = 0.424 px

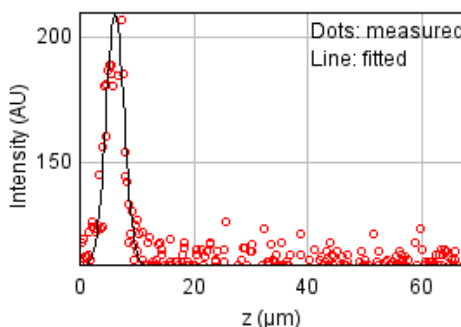
b = -0.114 px

c = 0.530 px

xc = 7.613 px

yc = 6.517 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15150.7662

Standard deviation: 7.02503

$R^2$ : 0.88588

Parameters:

a = 109.39769

b = 209.89756

c = 6.29064

d = 1.57506

## Bead 437

Date : Mon Oct 17 13:51:08 PDT 2022

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

Frame size : 12 pixels

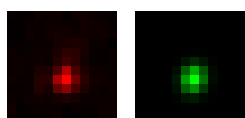
Coordinates : -64.5  $\mu\text{m}$  (x), -66.3  $\mu\text{m}$  (y), 9.28  $\mu\text{m}$  (z)

Corresponding bead : Not found

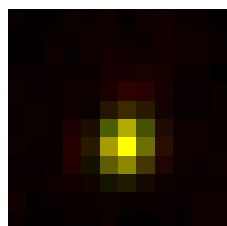
FWHM	Non corrected	Corrected	Theoretical
min	441 nm	460 nm	270 nm
max	519 nm	540 nm	270 nm
z	2.16 $\mu\text{m}$	2.17 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.851		
Theta	73.2°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 537.343$  (brightness)

$B = 125.964$  (background)

$a = 0.673$  px

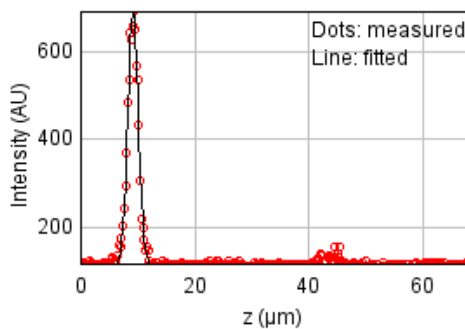
$b = 0.052$  px

$c = 0.515$  px

$x_c = 5.882$  px

$y_c = 6.903$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30372.0188

Standard deviation: 9.94644

$R^2 = 0.98723$

Parameters:

$a = 114.69901$

$b = 691.84352$

$c = 9.28116$

$d = 0.91923$

## Bead 438

Date : Mon Oct 17 13:51:08 PDT 2022

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

Frame size : 12 pixels

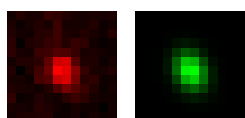
Coordinates : 152  $\mu\text{m}$  (x), -70.1  $\mu\text{m}$  (y), 8.23  $\mu\text{m}$  (z)

Corresponding bead : Not found

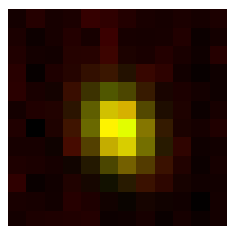
FWHM	Non corrected	Corrected	Theoretical
min	557 nm	580 nm	270 nm
max	725 nm	756 nm	270 nm
z	3.03 $\mu\text{m}$	3.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.768		
Theta	-65.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 149.221 (brightness)

B = 114.192 (background)

a = 0.403 px

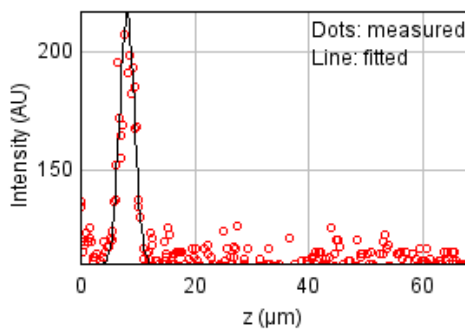
b = -0.067 px

c = 0.285 px

xc = 5.558 px

yc = 6.034 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19991.9566

Standard deviation: 8.06972

$R^2$ : 0.84726

Parameters:

a = 110.36500

b = 217.48772

c = 8.22550

d = 1.28598

## Bead 439 (Rejected)

Date : Mon Oct 17 13:51:08 PDT 2022

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

Frame size : 12 pixels

Coordinates : -106  $\mu\text{m}$  (x), -72.2  $\mu\text{m}$  (y), 7.23  $\mu\text{m}$  (z)

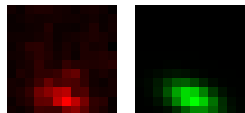
Corresponding bead : Not found

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

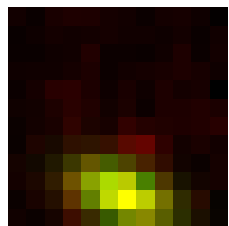
FWHM	Non corrected	Corrected	Theoretical
min	526 nm	547 nm	270 nm
max	971 nm	1.01 $\mu\text{m}$	270 nm
z	3.5 $\mu\text{m}$	3.52 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.541		
Theta	-21.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.874$



Parameters:

A = 195.594 (brightness)

B = 120.495 (background)

a = 0.190 px

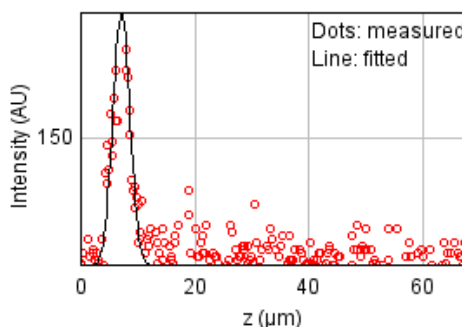
b = -0.119 px

c = 0.438 px

xc = 5.725 px

yc = 9.691 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 12926.7889

Standard deviation: 6.48898

$R^2$ : 0.82040

Parameters:

a = 113.12714

b = 186.22274

c = 7.23480

d = 1.48750

## Bead 440 (Rejected)

Date : Mon Oct 17 13:51:08 PDT 2022

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

Frame size : 12 pixels

Coordinates : 116 um (x), -76.0 um (y), 8.68 um (z)

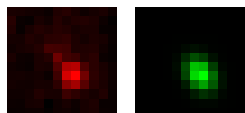
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

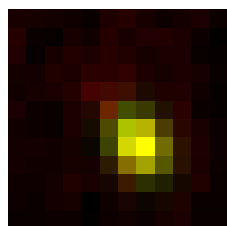
FWHM	Non corrected	Corrected	Theoretical
min	480 nm	500 nm	270 nm
max	642 nm	668 nm	270 nm
z	2.63 um	2.65 um	1.3 um
Asymmetry	0.748		
Theta	-58.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.897$



Parameters:

A = 218.409 (brightness)

B = 119.439 (background)

a = 0.510 px

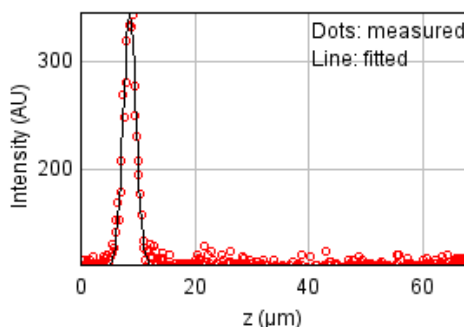
b = -0.115 px

c = 0.398 px

xc = 6.617 px

yc = 6.825 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15252.1650

Standard deviation: 7.04850

$R^2$ : 0.96816

Parameters:

a = 112.14524

b = 345.90267

c = 8.67673

d = 1.11898



## Bead 441 (Rejected)

Date : Mon Oct 17 13:51:08 PDT 2022

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

Frame size : 12 pixels

Coordinates : -110  $\mu\text{m}$  (x), -93.4  $\mu\text{m}$  (y), 9.45  $\mu\text{m}$  (z)

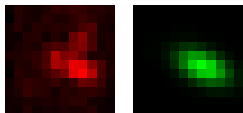
Corresponding bead : Not found

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

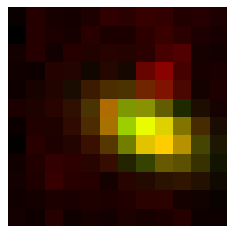
FWHM	Non corrected	Corrected	Theoretical
min	537 nm	559 nm	270 nm
max	973 nm	1.01 $\mu\text{m}$	270 nm
z	3.22 $\mu\text{m}$	3.23 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.552		
Theta	-24.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.791$



Parameters:

A = 126.757 (brightness)

B = 118.286 (background)

a = 0.198 px

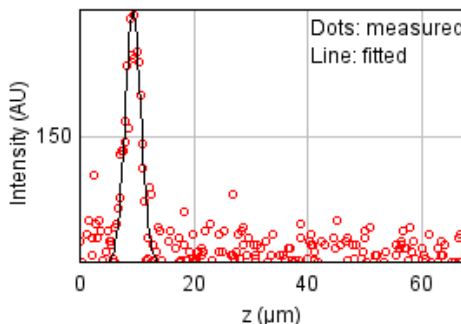
b = -0.123 px

c = 0.409 px

xc = 7.146 px

yc = 6.221 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14422.0973

Standard deviation: 6.85401

$R^2$ : 0.80282

Parameters:

a = 112.43764

b = 188.22016

c = 9.45304

d = 1.36685

## Bead 442 (Rejected)

Date : Mon Oct 17 13:51:08 PDT 2022

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

Frame size : 12 pixels

Coordinates : 114 µm (x), -96.5 µm (y), 6.57 µm (z)

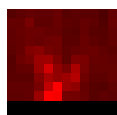
Corresponding bead : Not found

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	2.17 µm	2.18 µm	1.3 µm
Asymmetry	0.0		
Theta	0.0°		

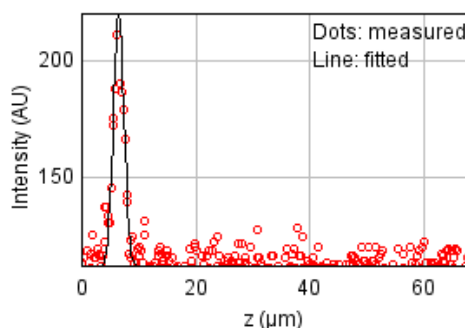
### XY profile & fitting parameters :

(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: 13163.0456

Standard deviation: 6.54801

R<sup>2</sup>: 0.86307

Parameters:

a = 112.17207

b = 220.41917

c = 6.57307

d = 0.92351

## Bead 443 (Rejected)

Date : Mon Oct 17 13:51:09 PDT 2022

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

Frame size : 12 pixels

Coordinates : 124 um (x), 63.0 um (y), 8.57 um (z)

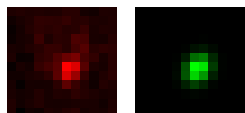
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

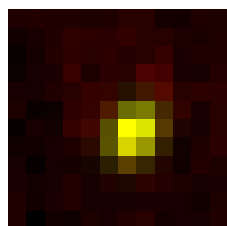
FWHM	Non corrected	Corrected	Theoretical
min	437 nm	455 nm	270 nm
max	552 nm	575 nm	270 nm
z	2.2 um	2.21 um	1.3 um
Asymmetry	0.791		
Theta	58.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.873$



Parameters:

A = 187.632 (brightness)

B = 118.617 (background)

a = 0.630 px

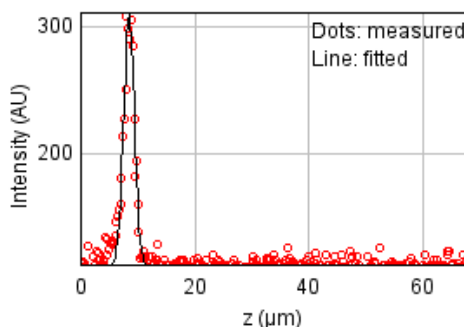
b = 0.118 px

c = 0.514 px

xc = 6.375 px

yc = 6.241 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15574.3588

Standard deviation: 7.12256

$R^2$ : 0.94771

Parameters:

a = 112.73846

b = 311.41245

c = 8.56883

d = 0.93325

## Bead 444

Date : Mon Oct 17 13:51:09 PDT 2022

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

Frame size : 12 pixels

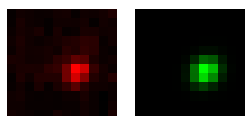
Coordinates : -153  $\mu\text{m}$  (x), 44.5  $\mu\text{m}$  (y), 8.83  $\mu\text{m}$  (z)

Corresponding bead : Not found

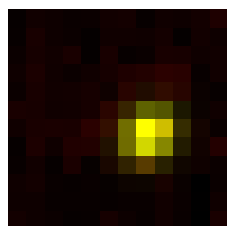
FWHM	Non corrected	Corrected	Theoretical
min	454 nm	473 nm	270 nm
max	524 nm	545 nm	270 nm
z	3.06 $\mu\text{m}$	3.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.867		
Theta	46.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 226.501 (brightness)

B = 116.331 (background)

a = 0.573 px

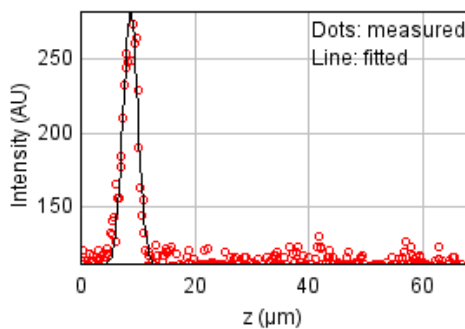
b = 0.080 px

c = 0.566 px

xc = 7.192 px

yc = 6.321 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17949.1738

Standard deviation: 7.64633

$R^2$ : 0.94063

Parameters:

a = 111.16008

b = 281.94170

c = 8.83159

d = 1.29851

## Bead 445 (Rejected)

Date : Mon Oct 17 13:51:09 PDT 2022

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

Frame size : 12 pixels

Coordinates : 112  $\mu\text{m}$  (x), 16.9  $\mu\text{m}$  (y), 57.3  $\mu\text{m}$  (z)

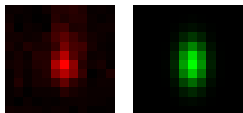
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

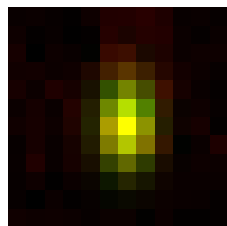
FWHM	Non corrected	Corrected	Theoretical
min	509 nm	531 nm	270 nm
max	831 nm	865 nm	270 nm
z	2.48 $\mu\text{m}$	2.49 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.613		
Theta	89.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 257.791 (brightness)

B = 124.847 (background)

a = 0.517 px

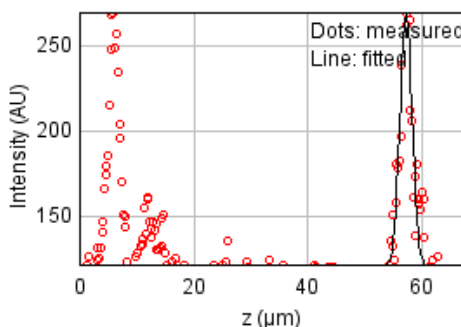
b = 0.003 px

c = 0.195 px

xc = 5.968 px

yc = 5.847 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 223280.536

Standard deviation: 26.96847

$R^2$ : 0.44010

Parameters:

a = 121.28514

b = 269.32799

c = 57.27140

d = 1.05182

## Bead 446

Date : Mon Oct 17 13:51:09 PDT 2022

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

Frame size : 12 pixels

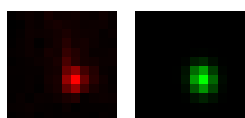
Coordinates : 33.6  $\mu\text{m}$  (x), 5.18  $\mu\text{m}$  (y), 9.44  $\mu\text{m}$  (z)

Corresponding bead : Not found

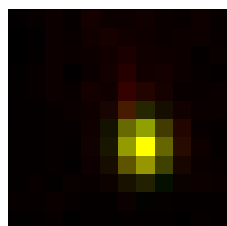
FWHM	Non corrected	Corrected	Theoretical
min	434 nm	452 nm	270 nm
max	523 nm	545 nm	270 nm
z	2.16 $\mu\text{m}$	2.16 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.829		
Theta	-79.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 450.865$  (brightness)

$B = 124.517$  (background)

$a = 0.707$  px

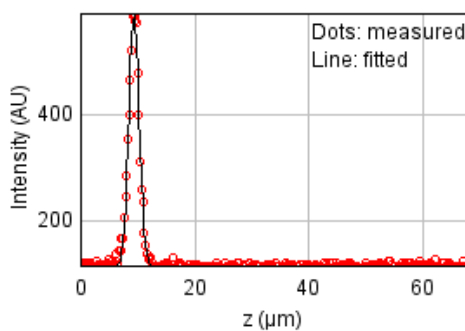
$b = -0.039$  px

$c = 0.498$  px

$x_c = 6.850$  px

$y_c = 6.955$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17412.2449

Standard deviation: 7.53110

$R^2: 0.98918$

Parameters:

$a = 113.37798$

$b = 589.55169$

$c = 9.44468$

$d = 0.91543$

## Bead 447 (Rejected)

Date : Mon Oct 17 13:51:09 PDT 2022

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

Frame size : 12 pixels

Coordinates : -162  $\mu\text{m}$  (x), -7.58  $\mu\text{m}$  (y), 6.04  $\mu\text{m}$  (z)

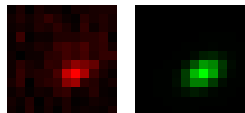
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

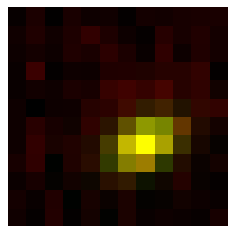
FWHM	Non corrected	Corrected	Theoretical
min	438 nm	456 nm	270 nm
max	662 nm	689 nm	270 nm
z	2.7 $\mu\text{m}$	2.71 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.662		
Theta	28.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.838$



Parameters:

A = 126.384 (brightness)

B = 115.493 (background)

a = 0.394 px

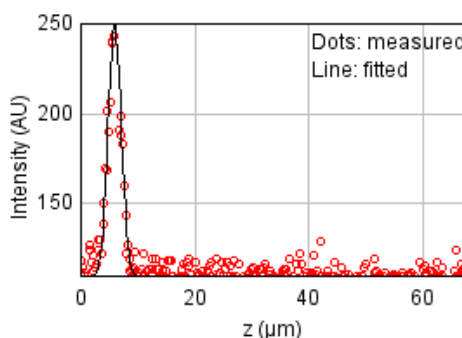
b = 0.164 px

c = 0.612 px

xc = 6.942 px

yc = 6.933 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13406.8552

Standard deviation: 6.60837

$R^2$ : 0.92818

Parameters:

a = 109.71446

b = 251.00859

c = 6.04393

d = 1.14602

## Bead 448

Date : Mon Oct 17 13:51:09 PDT 2022

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

Frame size : 12 pixels

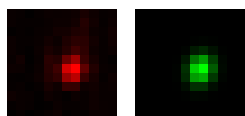
Coordinates : -55.1  $\mu\text{m}$  (x), -52.7  $\mu\text{m}$  (y), 9.33  $\mu\text{m}$  (z)

Corresponding bead : Not found

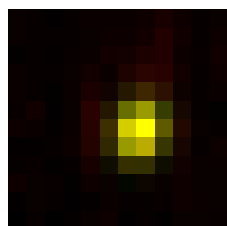
FWHM	Non corrected	Corrected	Theoretical
min	457 nm	476 nm	270 nm
max	556 nm	579 nm	270 nm
z	2.2 $\mu\text{m}$	2.21 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.821		
Theta	73.8°		

### 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 = 468.691 (brightness)

B = 124.791 (background)

a = 0.627 px

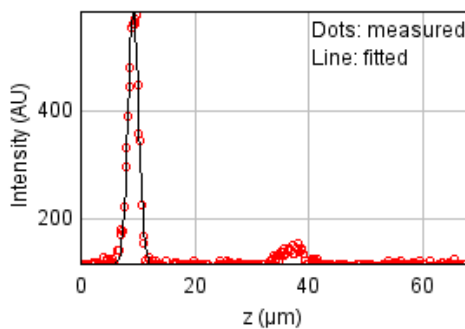
b = 0.056 px

c = 0.450 px

xc = 6.661 px

yc = 6.100 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 44762.4335

Standard deviation: 12.07501

$R^2$ : 0.97283

Parameters:

a = 115.79692

b = 588.54071

c = 9.33139

d = 0.93580



## Bead 449 (Rejected)

Date : Mon Oct 17 13:51:09 PDT 2022

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

Frame size : 12 pixels

Coordinates : 19.4  $\mu\text{m}$  (x), -62.6  $\mu\text{m}$  (y), 35.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	2.03 $\mu\text{m}$	2.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

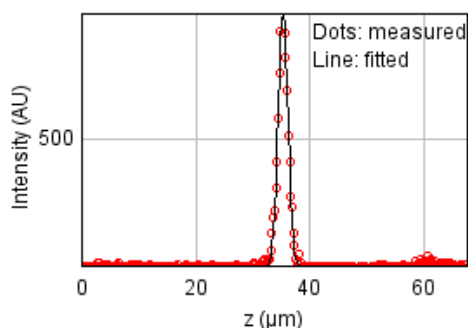
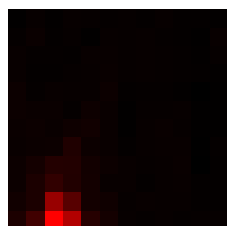
### XY profile & fitting parameters :

(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: 32672.9225

Standard deviation: 10.31632

R<sup>2</sup>: 0.99157

Parameters:

a = 115.19920

b = 876.27403

c = 35.37257

d = 0.86198

## Bead 450

Date : Mon Oct 17 13:51:09 PDT 2022

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

Frame size : 12 pixels

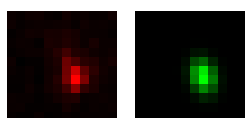
Coordinates : 87.3  $\mu\text{m}$  (x), -70.2  $\mu\text{m}$  (y), 9.43  $\mu\text{m}$  (z)

Corresponding bead : Not found

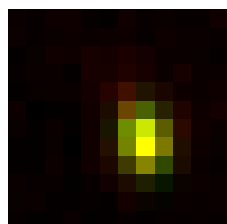
FWHM	Non corrected	Corrected	Theoretical
min	431 nm	448 nm	270 nm
max	610 nm	635 nm	270 nm
z	2.32 $\mu\text{m}$	2.33 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.706		
Theta	-76.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 431.099 (brightness)

B = 122.511 (background)

a = 0.704 px

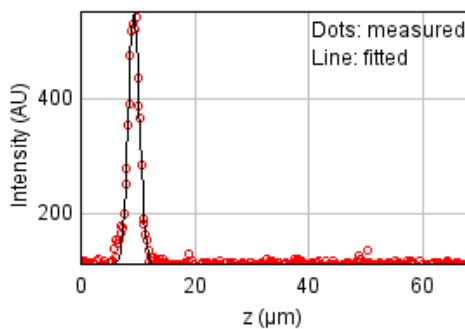
b = -0.083 px

c = 0.381 px

xc = 6.924 px

yc = 6.615 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23239.5639

Standard deviation: 8.70051

$R^2$ : 0.98436

Parameters:

a = 112.89706

b = 553.63140

c = 9.42802

d = 0.98528

## Bead 451 (Rejected)

Date : Mon Oct 17 13:51:09 PDT 2022

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

Frame size : 12 pixels

Coordinates : 1.7  $\mu\text{m}$  (x), 90.0  $\mu\text{m}$  (y), 9.85  $\mu\text{m}$  (z)

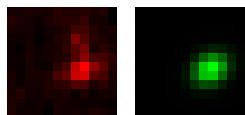
Corresponding bead : Not found

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

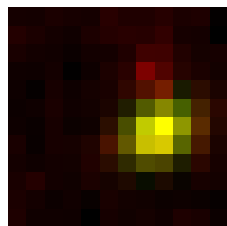
FWHM	Non corrected	Corrected	Theoretical
min	520 nm	541 nm	270 nm
max	657 nm	685 nm	270 nm
z	3.26 $\mu\text{m}$	3.28 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.791		
Theta	35.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.824$



Parameters:

A = 185.148 (brightness)

B = 119.485 (background)

a = 0.373 px

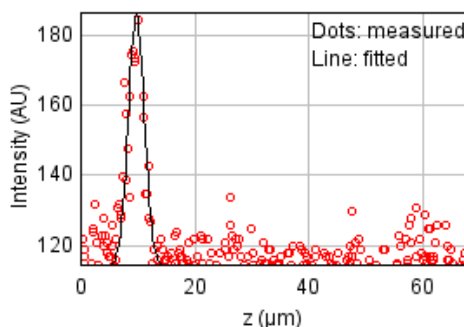
b = 0.088 px

c = 0.434 px

xc = 7.734 px

yc = 6.285 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15353.5600

Standard deviation: 7.07189

$R^2$ : 0.77903

Parameters:

a = 114.32668

b = 186.63656

c = 9.85064

d = 1.38537

## Bead 452

Date : Mon Oct 17 13:51:09 PDT 2022

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

Frame size : 12 pixels

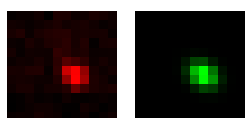
Coordinates : -114  $\mu\text{m}$  (x), 86.5  $\mu\text{m}$  (y), 9.18  $\mu\text{m}$  (z)

Corresponding bead : Not found

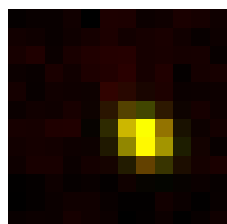
FWHM	Non corrected	Corrected	Theoretical
min	420 nm	438 nm	270 nm
max	539 nm	561 nm	270 nm
z	2.47 $\mu\text{m}$	2.48 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.78		
Theta	-35.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.941$



Parameters:

$A = 274.108$  (brightness)

$B = 120.191$  (background)

$a = 0.564$  px

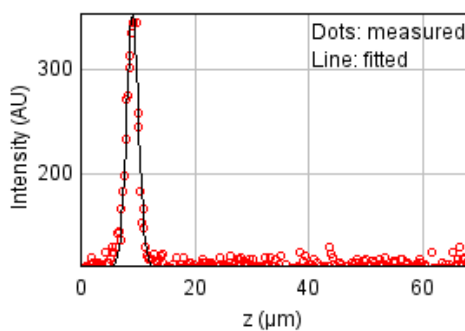
$b = -0.141$  px

$c = 0.658$  px

$x_c = 6.911$  px

$y_c = 6.464$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19340.9547

Standard deviation: 7.93724

$R^2: 0.96023$

Parameters:

$a = 112.28131$

$b = 354.24813$

$c = 9.18425$

$d = 1.04731$

## Bead 453 (Rejected)

Date : Mon Oct 17 13:51:10 PDT 2022

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

Frame size : 12 pixels

Coordinates : -152  $\mu\text{m}$  (x), 68.8  $\mu\text{m}$  (y), 7.24  $\mu\text{m}$  (z)

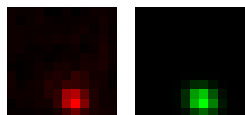
Corresponding bead : Not found

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

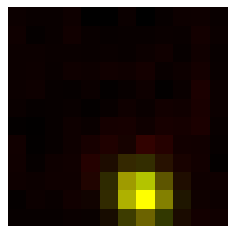
FWHM	Non corrected	Corrected	Theoretical
min	457 nm	476 nm	270 nm
max	522 nm	544 nm	270 nm
z	3.89 $\mu\text{m}$	3.9 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.874		
Theta	-30.3°		

### 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 = 342.781 (brightness)

B = 120.507 (background)

a = 0.530 px

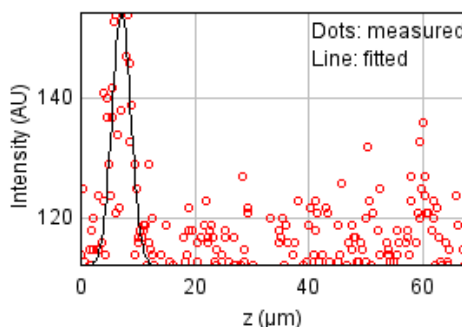
b = -0.066 px

c = 0.605 px

xc = 6.807 px

yc = 9.698 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19967.0151

Standard deviation: 8.06468

$R^2$ : 0.51853

Parameters:

a = 112.14197

b = 154.20885

c = 7.24477

d = 1.65090

## Bead 454

Date : Mon Oct 17 13:51:10 PDT 2022

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

Frame size : 12 pixels

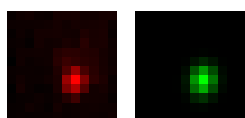
Coordinates : 85.6  $\mu\text{m}$  (x), 45.0  $\mu\text{m}$  (y), 9.75  $\mu\text{m}$  (z)

Corresponding bead : Not found

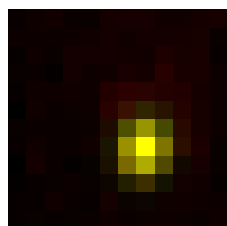
FWHM	Non corrected	Corrected	Theoretical
min	445 nm	463 nm	270 nm
max	542 nm	565 nm	270 nm
z	2.11 $\mu\text{m}$	2.11 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.82		
Theta	81.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 377.070$  (brightness)

$B = 119.707$  (background)

$a = 0.673$  px

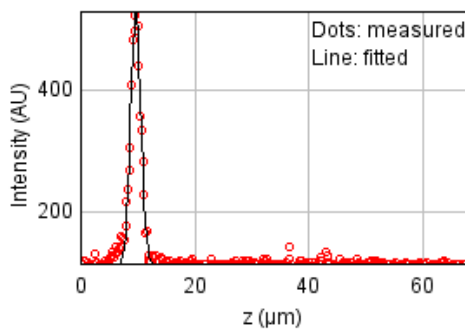
$b = 0.034$  px

$c = 0.462$  px

$x_c = 6.912$  px

$y_c = 7.080$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25514.7994

Standard deviation: 9.11647

$R^2: 0.97916$

Parameters:

$a = 113.10723$

$b = 530.86209$

$c = 9.75395$

$d = 0.89436$

## Bead 455

Date : Mon Oct 17 13:51:10 PDT 2022

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

Frame size : 12 pixels

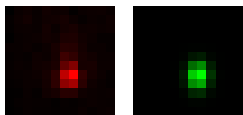
Coordinates : 19.7  $\mu\text{m}$  (x), 25.4  $\mu\text{m}$  (y), 9.52  $\mu\text{m}$  (z)

Corresponding bead : Not found

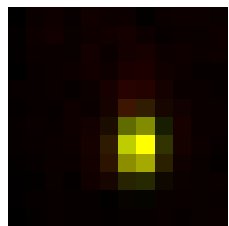
FWHM	Non corrected	Corrected	Theoretical
min	381 nm	397 nm	270 nm
max	515 nm	536 nm	270 nm
z	1.94 $\mu\text{m}$	1.95 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.741		
Theta	87.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 579.050$  (brightness)

$B = 126.280$  (background)

$a = 0.921$  px

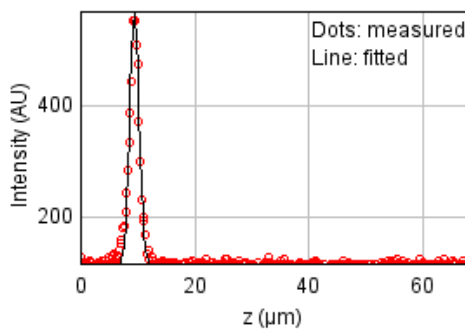
$b = 0.018$  px

$c = 0.507$  px

$x_c = 6.617$  px

$y_c = 7.107$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33101.5826

Standard deviation: 10.38377

$R^2: 0.97583$

Parameters:

$a = 114.52317$

$b = 572.98551$

$c = 9.51643$

$d = 0.82488$

## Bead 456 (Rejected)

Date : Mon Oct 17 13:51:10 PDT 2022

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

Frame size : 12 pixels

Coordinates : -146  $\mu\text{m}$  (x), 18.4  $\mu\text{m}$  (y), 8.59  $\mu\text{m}$  (z)

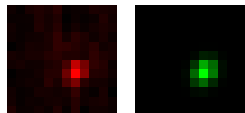
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

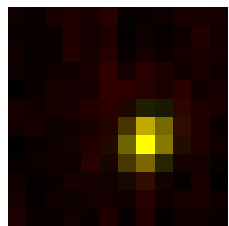
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	480 nm	500 nm	270 nm
z	2.5 $\mu\text{m}$	2.51 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.801		
Theta	61.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.889$



Parameters:

A = 198.972 (brightness)

B = 117.003 (background)

a = 0.831 px

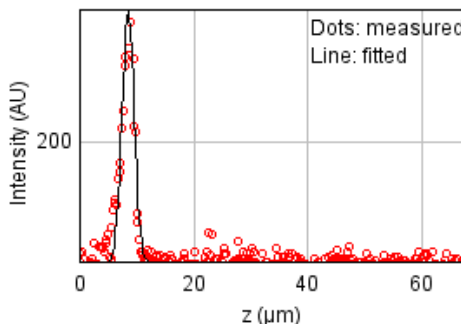
b = 0.138 px

c = 0.659 px

xc = 7.084 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: 19948.1334

Standard deviation: 8.06087

$R^2$ : 0.93315

Parameters:

a = 111.29041

b = 296.89261

c = 8.58925

d = 1.06235



## Bead 457

Date : Mon Oct 17 13:51:10 PDT 2022

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

Frame size : 12 pixels

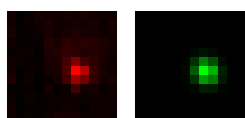
Coordinates : 105 um (x), 18.1 um (y), 9.28 um (z)

Corresponding bead : Not found

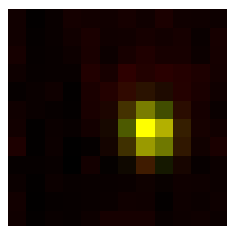
FWHM	Non corrected	Corrected	Theoretical
min	428 nm	445 nm	270 nm
max	481 nm	501 nm	270 nm
z	2.26 um	2.27 um	1.3 um
Asymmetry	0.888		
Theta	-64.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 277.730 (brightness)

B = 119.984 (background)

a = 0.705 px

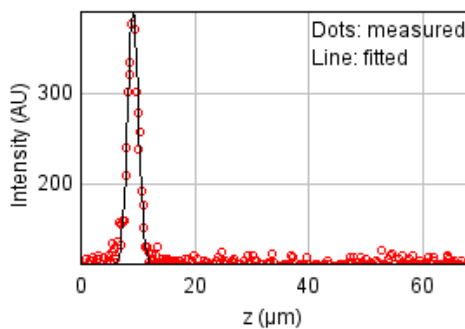
b = -0.061 px

c = 0.608 px

xc = 7.248 px

yc = 6.109 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21154.5576

Standard deviation: 8.30105

$R^2$ : 0.96418

Parameters:

a = 112.58978

b = 391.02632

c = 9.27826

d = 0.95994

## Bead 458 (Rejected)

Date : Mon Oct 17 13:51:10 PDT 2022

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

Frame size : 12 pixels

Coordinates : 124  $\mu\text{m}$  (x), -21.1  $\mu\text{m}$  (y), 5.88  $\mu\text{m}$  (z)

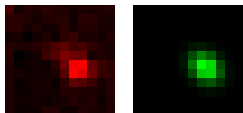
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

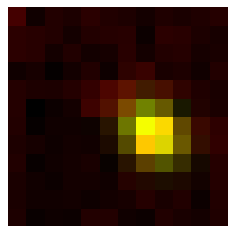
FWHM	Non corrected	Corrected	Theoretical
min	487 nm	507 nm	270 nm
max	619 nm	644 nm	270 nm
z	3.28 $\mu\text{m}$	3.29 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.787		
Theta	-46.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.879$



Parameters:

A = 167.069 (brightness)

B = 116.678 (background)

a = 0.465 px

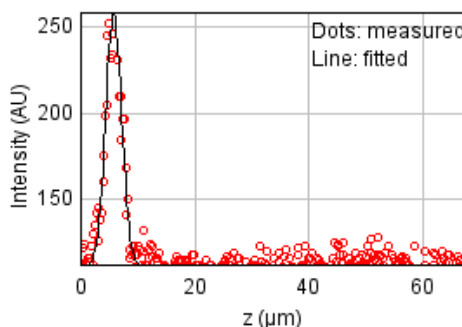
b = -0.107 px

c = 0.451 px

xc = 7.407 px

yc = 6.335 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16581.0303

Standard deviation: 7.34914

$R^2$ : 0.93129

Parameters:

a = 111.48754

b = 258.44379

c = 5.87613

d = 1.39326

## Bead 459

Date : Mon Oct 17 13:51:10 PDT 2022

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

Frame size : 12 pixels

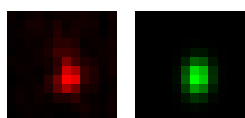
Coordinates : 63.6  $\mu\text{m}$  (x), -68.0  $\mu\text{m}$  (y), 9.42  $\mu\text{m}$  (z)

Corresponding bead : Not found

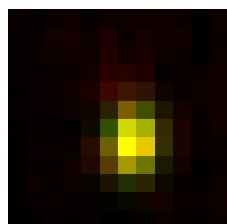
FWHM	Non corrected	Corrected	Theoretical
min	470 nm	489 nm	270 nm
max	635 nm	661 nm	270 nm
z	2.61 $\mu\text{m}$	2.62 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.74		
Theta	86.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 421.433 (brightness)

B = 124.061 (background)

a = 0.607 px

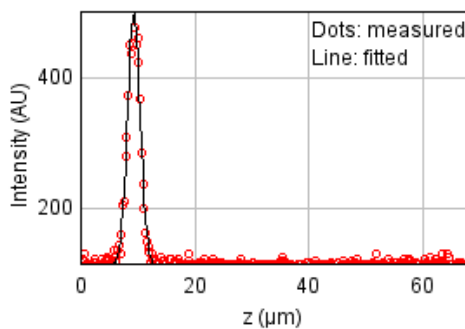
b = 0.019 px

c = 0.335 px

xc = 6.310 px

yc = 6.730 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22163.6889

Standard deviation: 8.49673

$R^2$ : 0.98303

Parameters:

a = 112.65883

b = 503.33427

c = 9.41918

d = 1.10847

## Bead 460

Date : Mon Oct 17 13:51:10 PDT 2022

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

Frame size : 12 pixels

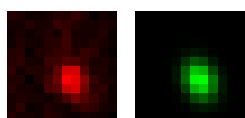
Coordinates : 152  $\mu\text{m}$  (x), -70.1  $\mu\text{m}$  (y), 8.23  $\mu\text{m}$  (z)

Corresponding bead : Not found

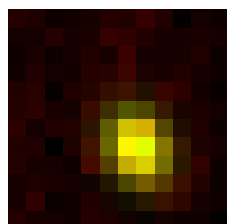
FWHM	Non corrected	Corrected	Theoretical
min	551 nm	574 nm	270 nm
max	718 nm	748 nm	270 nm
z	3.03 $\mu\text{m}$	3.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.768		
Theta	-66.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.919$



Parameters:

A = 149.309 (brightness)

B = 114.935 (background)

a = 0.412 px

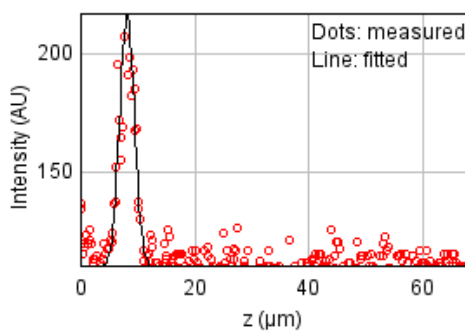
b = -0.067 px

c = 0.290 px

xc = 6.558 px

yc = 7.035 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19991.9566

Standard deviation: 8.06972

$R^2$ : 0.84726

Parameters:

a = 110.36500

b = 217.48772

c = 8.22550

d = 1.28598

## Bead 461 (Rejected)

Date : Mon Oct 17 13:51:11 PDT 2022

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

Frame size : 12 pixels

Coordinates : -106  $\mu\text{m}$  (x), 95.0  $\mu\text{m}$  (y), 58.6  $\mu\text{m}$  (z)

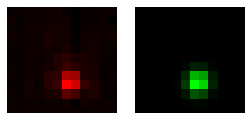
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

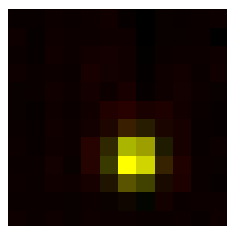
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	416 nm	270 nm
max	430 nm	447 nm	270 nm
z	1.68 $\mu\text{m}$	1.68 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.93		
Theta	75.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 590.435 (brightness)

B = 124.129 (background)

a = 0.834 px

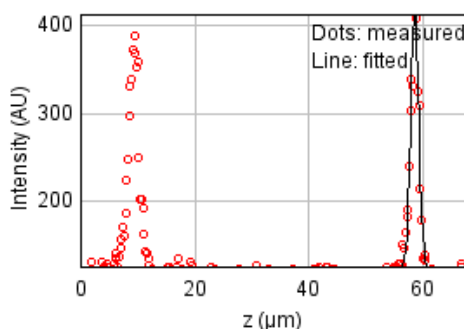
b = 0.027 px

c = 0.734 px

xc = 6.402 px

yc = 7.721 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 534354.203

Standard deviation: 41.72011

$R^2$ : 0.46428

Parameters:

a = 125.25419

b = 414.88475

c = 58.62280

d = 0.71173

## Bead 462

Date : Mon Oct 17 13:51:11 PDT 2022

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

Frame size : 12 pixels

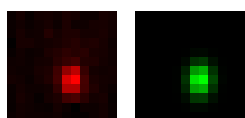
Coordinates : 102  $\mu\text{m}$  (x), 90.7  $\mu\text{m}$  (y), 9.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

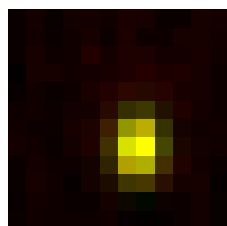
FWHM	Non corrected	Corrected	Theoretical
min	438 nm	456 nm	270 nm
max	595 nm	620 nm	270 nm
z	2.07 $\mu\text{m}$	2.08 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.736		
Theta	87.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 349.865 (brightness)

B = 120.641 (background)

a = 0.699 px

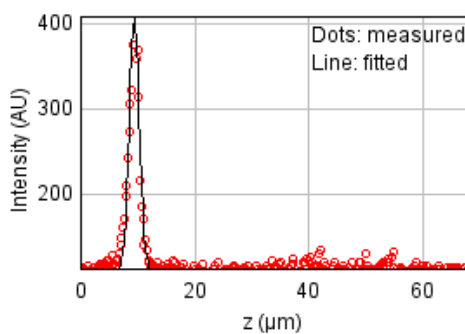
b = 0.014 px

c = 0.380 px

xc = 6.584 px

yc = 7.021 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27647.4654

Standard deviation: 9.48983

$R^2$ : 0.95512

Parameters:

a = 113.28877

b = 408.25969

c = 9.49697

d = 0.87986

## Bead 463 (Rejected)

Date : Mon Oct 17 13:51:11 PDT 2022

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

Frame size : 12 pixels

Coordinates : -50.7  $\mu\text{m}$  (x), 84.0  $\mu\text{m}$  (y), 9.03  $\mu\text{m}$  (z)

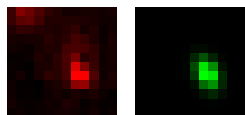
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

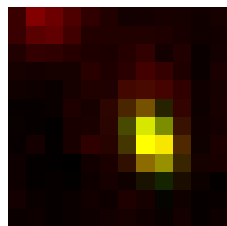
FWHM	Non corrected	Corrected	Theoretical
min	383 nm	399 nm	270 nm
max	589 nm	613 nm	270 nm
z	2.39 $\mu\text{m}$	2.4 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.65		
Theta	-65.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.736$



Parameters:

A = 236.478 (brightness)

B = 124.014 (background)

a = 0.825 px

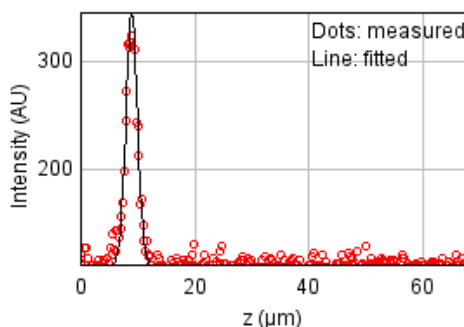
b = -0.199 px

c = 0.477 px

xc = 7.381 px

yc = 6.757 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18057.3402

Standard deviation: 7.66933

$R^2$ : 0.95814

Parameters:

a = 113.04519

b = 344.15778

c = 9.03339

d = 1.01437

## Bead 464

Date : Mon Oct 17 13:51:11 PDT 2022

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

Frame size : 12 pixels

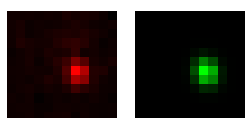
Coordinates : -83.3  $\mu\text{m}$  (x), 83.0  $\mu\text{m}$  (y), 9.25  $\mu\text{m}$  (z)

Corresponding bead : Not found

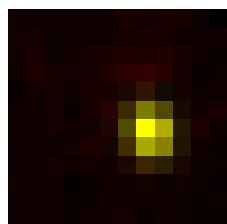
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	422 nm	270 nm
max	493 nm	514 nm	270 nm
z	1.93 $\mu\text{m}$	1.94 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.822		
Theta	-76.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 319.611$  (brightness)

$B = 119.368$  (background)

$a = 0.802$  px

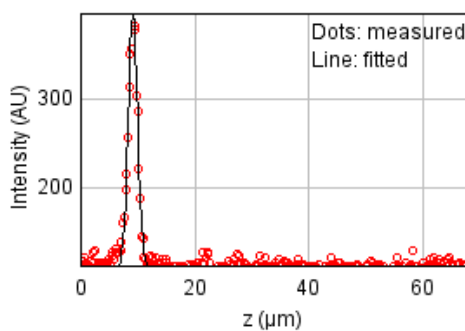
$b = -0.059$  px

$c = 0.566$  px

$x_c = 7.264$  px

$y_c = 6.170$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16945.0765

Standard deviation: 7.42938

$R^2: 0.96720$

Parameters:

$a = 113.19430$

$b = 394.15524$

$c = 9.25073$

$d = 0.82099$



## Bead 465

Date : Mon Oct 17 13:51:11 PDT 2022

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

Frame size : 12 pixels

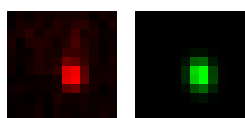
Coordinates : -32.9  $\mu\text{m}$  (x), 53.0  $\mu\text{m}$  (y), 9.01  $\mu\text{m}$  (z)

Corresponding bead : Not found

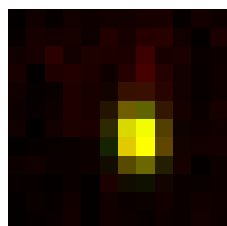
FWHM	Non corrected	Corrected	Theoretical
min	418 nm	436 nm	270 nm
max	545 nm	567 nm	270 nm
z	2.2 $\mu\text{m}$	2.21 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.768		
Theta	-82.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 287.551 (brightness)

B = 119.651 (background)

a = 0.762 px

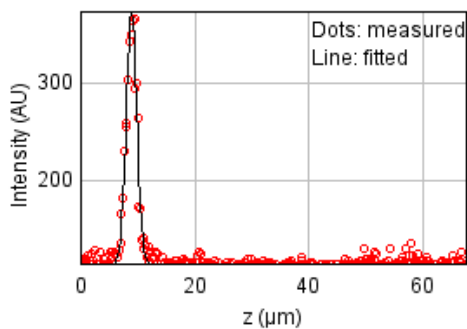
b = -0.040 px

c = 0.457 px

xc = 6.622 px

yc = 6.477 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18413.5189

Standard deviation: 7.74460

$R^2$ : 0.96341

Parameters:

a = 113.67318

b = 373.88186

c = 9.00881

d = 0.93453

## Bead 466

Date : Mon Oct 17 13:51:12 PDT 2022

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

Frame size : 12 pixels

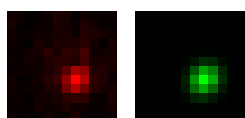
Coordinates : -119  $\mu\text{m}$  (x), 16.6  $\mu\text{m}$  (y), 9.05  $\mu\text{m}$  (z)

Corresponding bead : Not found

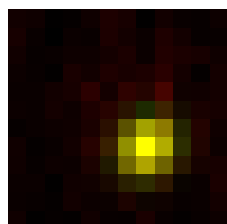
FWHM	Non corrected	Corrected	Theoretical
min	507 nm	529 nm	270 nm
max	575 nm	599 nm	270 nm
z	1.9 $\mu\text{m}$	1.9 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.882		
Theta	53.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 232.584 (brightness)

B = 120.908 (background)

a = 0.480 px

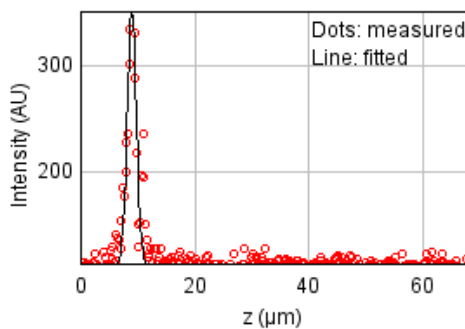
b = 0.055 px

c = 0.446 px

xc = 7.094 px

yc = 6.993 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 54127.6825

Standard deviation: 13.27824

$R^2$ : 0.86570

Parameters:

a = 113.10539

b = 350.11168

c = 9.05000

d = 0.80490

## Bead 467

Date : Mon Oct 17 13:51:12 PDT 2022

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

Frame size : 12 pixels

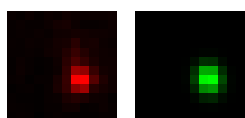
Coordinates : 13.3  $\mu\text{m}$  (x), -4.05  $\mu\text{m}$  (y), 10.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

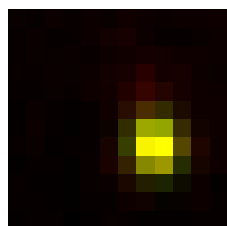
FWHM	Non corrected	Corrected	Theoretical
min	449 nm	467 nm	270 nm
max	534 nm	557 nm	270 nm
z	1.87 $\mu\text{m}$	1.88 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.839		
Theta	-81.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 667.410 (brightness)

B = 126.556 (background)

a = 0.662 px

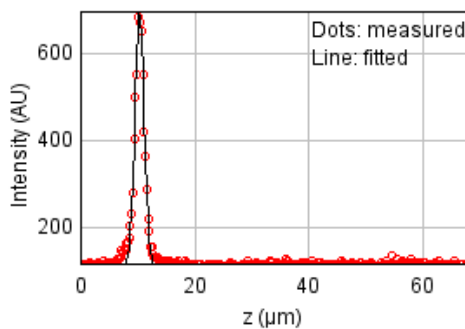
b = -0.029 px

c = 0.474 px

$x_c = 7.531$  px

$y_c = 6.925$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 26653.9366

Standard deviation: 9.31776

$R^2$ : 0.98730

Parameters:

a = 114.93892

b = 696.24679

c = 10.40794

d = 0.79414

## Bead 468

Date : Mon Oct 17 13:51:12 PDT 2022

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

Frame size : 12 pixels

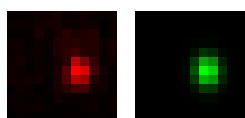
Coordinates : 60.4  $\mu\text{m}$  (x), -14.4  $\mu\text{m}$  (y), 9.97  $\mu\text{m}$  (z)

Corresponding bead : Not found

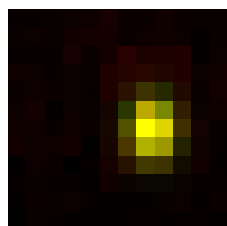
FWHM	Non corrected	Corrected	Theoretical
min	449 nm	467 nm	270 nm
max	587 nm	611 nm	270 nm
z	2.23 $\mu\text{m}$	2.23 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.764		
Theta	-87.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 407.026$  (brightness)

$B = 124.222$  (background)

$a = 0.666$  px

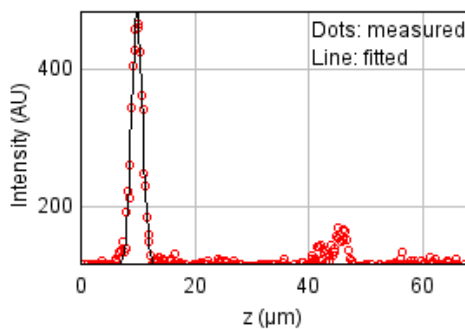
$b = -0.012$  px

$c = 0.390$  px

$x_c = 7.363$  px

$y_c = 6.050$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 41879.5796

Standard deviation: 11.67971

$R^2: 0.95878$

Parameters:

$a = 116.95082$

$b = 483.85624$

$c = 9.97161$

$d = 0.94491$

## Bead 469 (Rejected)

Date : Mon Oct 17 13:51:12 PDT 2022

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

Frame size : 12 pixels

Coordinates : 64.9  $\mu\text{m}$  (x), -39.0  $\mu\text{m}$  (y), 7.03  $\mu\text{m}$  (z)

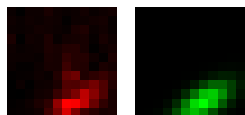
Corresponding bead : Not found

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

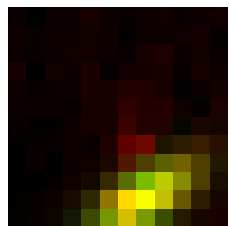
FWHM	Non corrected	Corrected	Theoretical
min	502 nm	523 nm	270 nm
max	1.11 $\mu\text{m}$	1.15 $\mu\text{m}$	270 nm
z	3.59 $\mu\text{m}$	3.6 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.453		
Theta	32.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.879$



Parameters:

A = 220.553 (brightness)

B = 122.270 (background)

a = 0.230 px

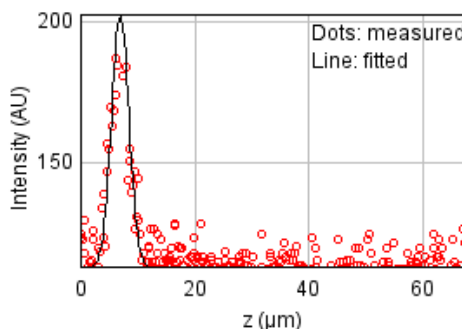
b = 0.191 px

c = 0.412 px

xc = 6.924 px

yc = 9.909 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16142.5096

Standard deviation: 7.25131

$R^2$ : 0.84774

Parameters:

a = 113.06092

b = 202.26933

c = 7.03098

d = 1.52323

## Bead 470

Date : Mon Oct 17 13:51:12 PDT 2022

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

Frame size : 12 pixels

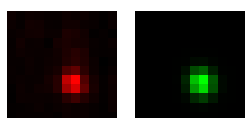
Coordinates : -50.0  $\mu\text{m}$  (x), -38.5  $\mu\text{m}$  (y), 9.78  $\mu\text{m}$  (z)

Corresponding bead : Not found

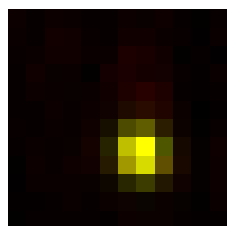
FWHM	Non corrected	Corrected	Theoretical
min	437 nm	455 nm	270 nm
max	485 nm	505 nm	270 nm
z	2.12 $\mu\text{m}$	2.13 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.9		
Theta	-72.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 487.690$  (brightness)

$B = 121.456$  (background)

$a = 0.692$  px

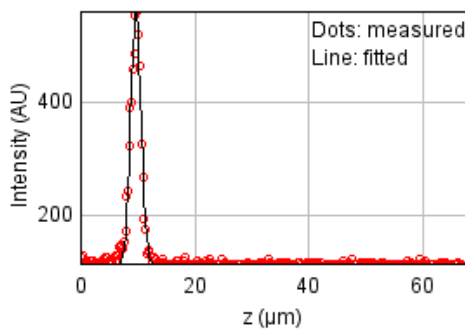
$b = -0.037$  px

$c = 0.582$  px

$x_c = 6.730$  px

$y_c = 7.350$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28616.7207

Standard deviation: 9.65474

$R^2: 0.98005$

Parameters:

$a = 112.58103$

$b = 563.34140$

$c = 9.77519$

$d = 0.90151$

## Bead 471

Date : Mon Oct 17 13:51:12 PDT 2022

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

Frame size : 12 pixels

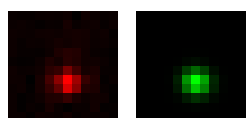
Coordinates : -51.0  $\mu\text{m}$  (x), -66.6  $\mu\text{m}$  (y), 9.26  $\mu\text{m}$  (z)

Corresponding bead : Not found

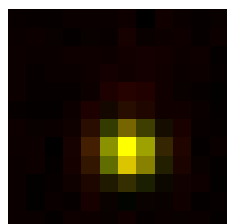
FWHM	Non corrected	Corrected	Theoretical
min	474 nm	494 nm	270 nm
max	515 nm	537 nm	270 nm
z	2.05 $\mu\text{m}$	2.06 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.92		
Theta	-9.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 374.944$  (brightness)

$B = 120.189$  (background)

$a = 0.508$  px

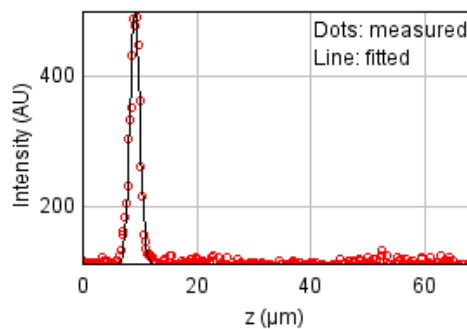
$b = -0.015$  px

$c = 0.595$  px

$x_c = 6.062$  px

$y_c = 7.284$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24284.2810

Standard deviation: 8.89392

$R^2: 0.97629$

Parameters:

$a = 113.26835$

$b = 499.59375$

$c = 9.25956$

$d = 0.87133$

## Bead 472

Date : Mon Oct 17 13:51:12 PDT 2022

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

Frame size : 12 pixels

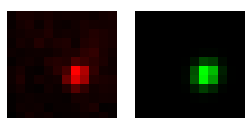
Coordinates : 118 um (x), 76.4 um (y), 9.5 um (z)

Corresponding bead : Not found

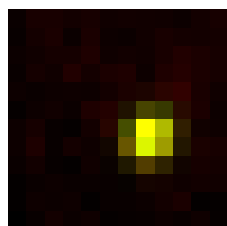
FWHM	Non corrected	Corrected	Theoretical
min	412 nm	429 nm	270 nm
max	459 nm	478 nm	270 nm
z	2.2 um	2.21 um	1.3 um
Asymmetry	0.898		
Theta	59.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 304.309 (brightness)

B = 119.809 (background)

a = 0.751 px

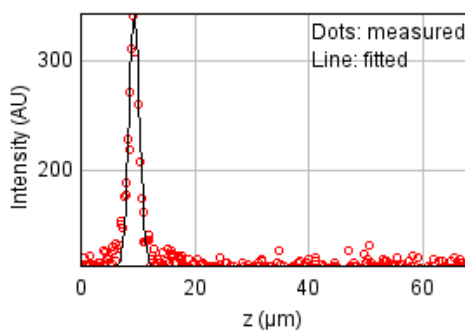
b = 0.066 px

c = 0.675 px

xc = 7.249 px

yc = 6.449 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24621.6850

Standard deviation: 8.95550

$R^2$ : 0.93885

Parameters:

a = 112.63173

b = 342.56668

c = 9.49602

d = 0.93305



## Bead 473 (Rejected)

Date : Mon Oct 17 13:51:12 PDT 2022

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

Frame size : 12 pixels

Coordinates : 7.42  $\mu\text{m}$  (x), 59.2  $\mu\text{m}$  (y), 10.5  $\mu\text{m}$  (z)

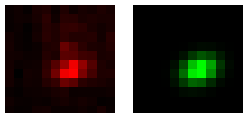
Corresponding bead : Not found

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

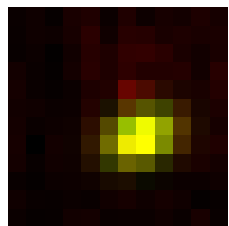
FWHM	Non corrected	Corrected	Theoretical
min	483 nm	503 nm	270 nm
max	659 nm	686 nm	270 nm
z	4.1 $\mu\text{m}$	4.12 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.733		
Theta	22.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.901$



Parameters:

A = 243.256 (brightness)

B = 123.722 (background)

a = 0.348 px

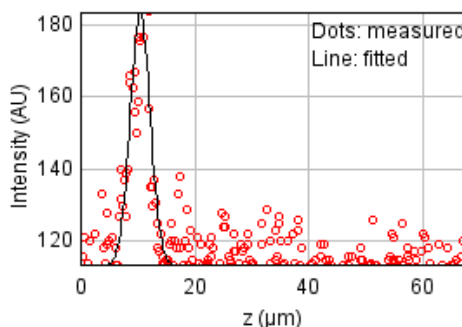
b = 0.094 px

c = 0.536 px

xc = 6.734 px

yc = 6.563 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18283.6544

Standard deviation: 7.71725

$R^2$ : 0.77498

Parameters:

a = 113.11668

b = 183.39698

c = 10.52640

d = 1.74093

## Bead 474

Date : Mon Oct 17 13:51:12 PDT 2022

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

Frame size : 12 pixels

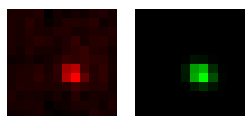
Coordinates : -153  $\mu\text{m}$  (x), 53.4  $\mu\text{m}$  (y), 9.12  $\mu\text{m}$  (z)

Corresponding bead : Not found

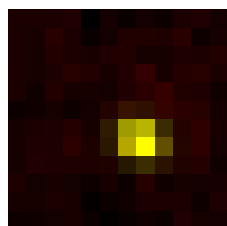
FWHM	Non corrected	Corrected	Theoretical
min	351 nm	365 nm	270 nm
max	428 nm	446 nm	270 nm
z	2.7 $\mu\text{m}$	2.71 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.819		
Theta	-22.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 189.872$  (brightness)

$B = 115.856$  (background)

$a = 0.786$  px

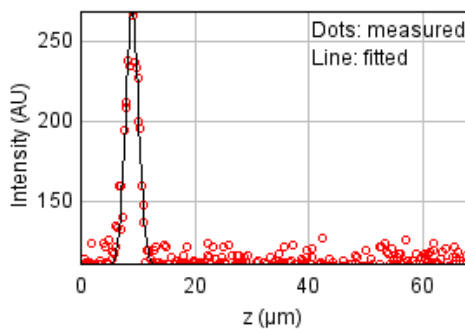
$b = -0.129$  px

$c = 1.036$  px

$x_c = 6.702$  px

$y_c = 6.629$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15608.4192

Standard deviation: 7.13034

$R^2 = 0.93276$

Parameters:

$a = 110.89323$

$b = 268.93852$

$c = 9.11554$

$d = 1.14447$

## Bead 475

Date : Mon Oct 17 13:51:13 PDT 2022

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

Frame size : 12 pixels

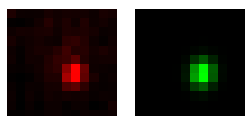
Coordinates : -37.7  $\mu\text{m}$  (x), 38.1  $\mu\text{m}$  (y), 9.24  $\mu\text{m}$  (z)

Corresponding bead : Not found

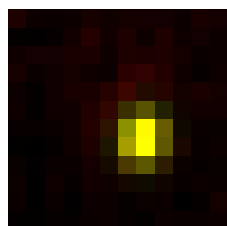
FWHM	Non corrected	Corrected	Theoretical
min	415 nm	432 nm	270 nm
max	498 nm	518 nm	270 nm
z	1.97 $\mu\text{m}$	1.97 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.834		
Theta	82.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 309.958$  (brightness)

$B = 123.231$  (background)

$a = 0.775$  px

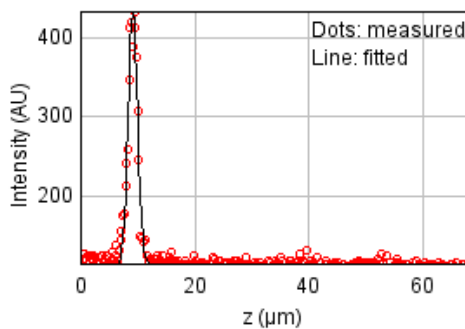
$b = 0.029$  px

$c = 0.546$  px

$x_c = 6.828$  px

$y_c = 6.524$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24981.7811

Standard deviation: 9.02075

$R^2: 0.96334$

Parameters:

$a = 113.58490$

$b = 433.04659$

$c = 9.24423$

$d = 0.83488$

## Bead 476

Date : Mon Oct 17 13:51:13 PDT 2022

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

Frame size : 12 pixels

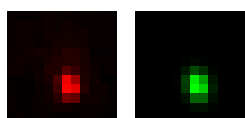
Coordinates : -41.3  $\mu\text{m}$  (x), 37.4  $\mu\text{m}$  (y), 9.91  $\mu\text{m}$  (z)

Corresponding bead : Not found

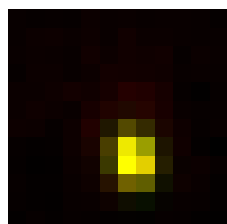
FWHM	Non corrected	Corrected	Theoretical
min	390 nm	406 nm	270 nm
max	513 nm	535 nm	270 nm
z	2.21 $\mu\text{m}$	2.22 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.76		
Theta	-75.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 676.152 (brightness)

B = 125.407 (background)

a = 0.860 px

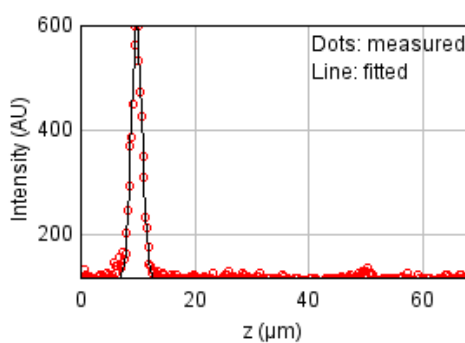
b = -0.088 px

c = 0.531 px

xc = 6.341 px

yc = 7.643 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23713.5547

Standard deviation: 8.78879

$R^2$ : 0.98631

Parameters:

a = 114.41611

b = 601.39802

c = 9.90927

d = 0.94040

## Bead 477

Date : Mon Oct 17 13:51:13 PDT 2022

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

Frame size : 12 pixels

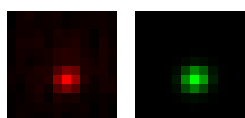
Coordinates : -161  $\mu\text{m}$  (x), 2.1  $\mu\text{m}$  (y), 9.83  $\mu\text{m}$  (z)

Corresponding bead : Not found

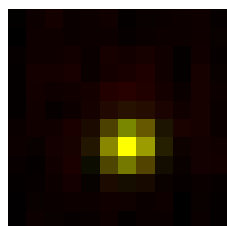
FWHM	Non corrected	Corrected	Theoretical
min	435 nm	453 nm	270 nm
max	491 nm	511 nm	270 nm
z	2.36 $\mu\text{m}$	2.36 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.887		
Theta	15.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 331.468 (brightness)

B = 118.977 (background)

a = 0.567 px

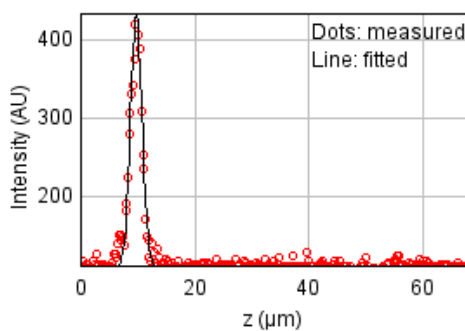
b = 0.038 px

c = 0.698 px

xc = 6.069 px

yc = 6.960 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25434.1267

Standard deviation: 9.10205

$R^2$ : 0.96921

Parameters:

a = 111.19556

b = 434.98394

c = 9.83463

d = 1.00016

## Bead 478 (Rejected)

Date : Mon Oct 17 13:51:14 PDT 2022

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

Frame size : 12 pixels

Coordinates : 35.8  $\mu\text{m}$  (x), -6.25  $\mu\text{m}$  (y), 11.1  $\mu\text{m}$  (z)

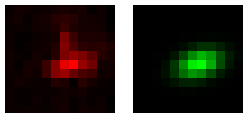
Corresponding bead : Not found

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

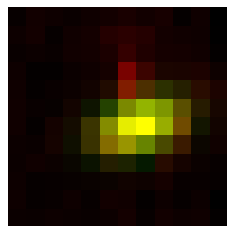
FWHM	Non corrected	Corrected	Theoretical
min	499 nm	520 nm	270 nm
max	828 nm	862 nm	270 nm
z	3.85 $\mu\text{m}$	3.86 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.603		
Theta	18.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.853$



Parameters:

A = 253.568 (brightness)

B = 120.180 (background)

a = 0.229 px

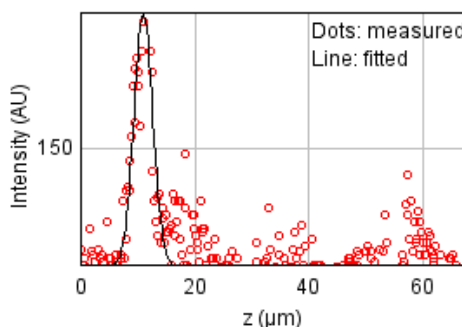
b = 0.101 px

c = 0.505 px

xc = 6.700 px

yc = 5.903 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20807.5398

Standard deviation: 8.23268

$R^2$ : 0.76194

Parameters:

a = 115.88913

b = 190.28846

c = 11.08007

d = 1.63285

## Bead 479

Date : Mon Oct 17 13:51:14 PDT 2022

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

Frame size : 12 pixels

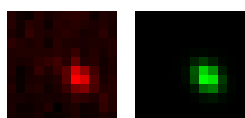
Coordinates : 134  $\mu\text{m}$  (x), -8.42  $\mu\text{m}$  (y), 9.31  $\mu\text{m}$  (z)

Corresponding bead : Not found

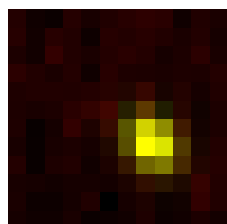
FWHM	Non corrected	Corrected	Theoretical
min	421 nm	438 nm	270 nm
max	544 nm	566 nm	270 nm
z	2.66 $\mu\text{m}$	2.67 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.774		
Theta	-53.6°		

### 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 = 191.320 (brightness)

B = 117.407 (background)

a = 0.651 px

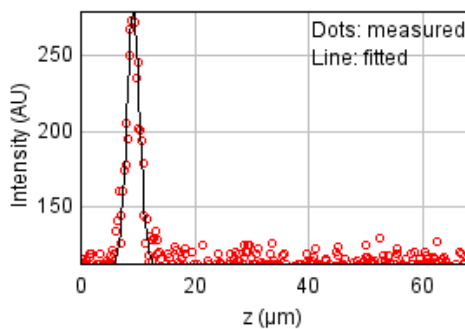
b = -0.145 px

c = 0.561 px

xc = 7.365 px

yc = 6.767 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18896.6555

Standard deviation: 7.84555

$R^2$ : 0.92671

Parameters:

a = 112.08018

b = 279.15519

c = 9.31361

d = 1.12907

## Bead 480 (Rejected)

Date : Mon Oct 17 13:51:14 PDT 2022

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

Frame size : 12 pixels

Coordinates : 159  $\mu\text{m}$  (x), -11.8  $\mu\text{m}$  (y), 6.88  $\mu\text{m}$  (z)

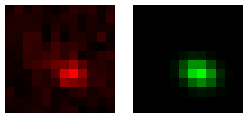
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

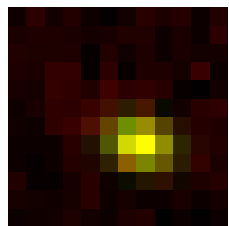
FWHM	Non corrected	Corrected	Theoretical
min	459 nm	478 nm	270 nm
max	626 nm	652 nm	270 nm
z	3.3 $\mu\text{m}$	3.32 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.733		
Theta	-17.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 114.402 (brightness)

B = 115.558 (background)

a = 0.370 px

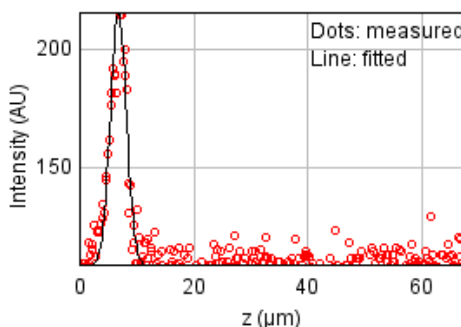
b = -0.085 px

c = 0.611 px

xc = 6.697 px

yc = 6.937 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14257.7661

Standard deviation: 6.81485

$R^2$ : 0.89247

Parameters:

a = 108.94769

b = 215.24566

c = 6.88321

d = 1.40291



## Bead 481 (Rejected)

Date : Mon Oct 17 13:51:14 PDT 2022

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

Frame size : 12 pixels

Coordinates : -26.9  $\mu\text{m}$  (x), -18.2  $\mu\text{m}$  (y), 11.0  $\mu\text{m}$  (z)

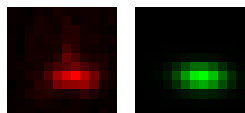
Corresponding bead : Not found

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

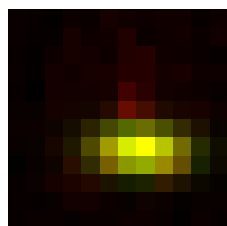
FWHM	Non corrected	Corrected	Theoretical
min	463 nm	482 nm	270 nm
max	887 nm	924 nm	270 nm
z	3.96 $\mu\text{m}$	3.97 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.522		
Theta	-2.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 314.958 (brightness)

B = 122.465 (background)

a = 0.172 px

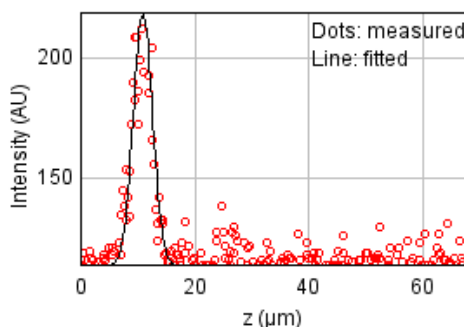
b = -0.021 px

c = 0.625 px

xc = 6.749 px

yc = 7.173 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22240.9533

Standard deviation: 8.51153

$R^2$ : 0.86071

Parameters:

a = 113.53852

b = 219.02326

c = 10.99321

d = 1.68083

## Bead 482

Date : Mon Oct 17 13:51:14 PDT 2022

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

Frame size : 12 pixels

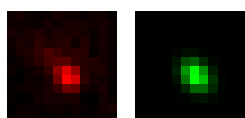
Coordinates : 130  $\mu\text{m}$  (x), -38.1  $\mu\text{m}$  (y), 9.84  $\mu\text{m}$  (z)

Corresponding bead : Not found

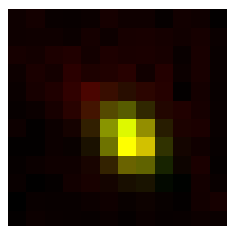
FWHM	Non corrected	Corrected	Theoretical
min	452 nm	471 nm	270 nm
max	604 nm	629 nm	270 nm
z	2.91 $\mu\text{m}$	2.93 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.748		
Theta	-50.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 298.317$  (brightness)

$B = 121.215$  (background)

$a = 0.539$  px

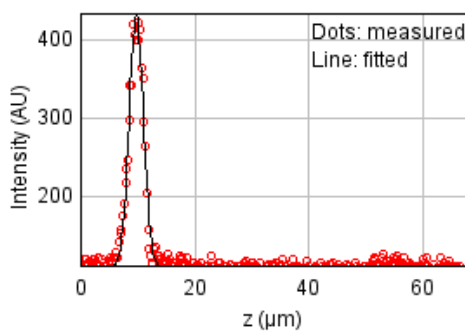
$b = -0.142$  px

$c = 0.486$  px

$x_c = 6.128$  px

$y_c = 6.560$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 26575.9113

Standard deviation: 9.30411

$R^2: 0.97320$

Parameters:

$a = 111.51915$

$b = 433.26153$

$c = 9.84177$

$d = 1.23739$

## Bead 483 (Rejected)

Date : Mon Oct 17 13:51:14 PDT 2022

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

Frame size : 12 pixels

Coordinates : 108  $\mu\text{m}$  (x), -41.0  $\mu\text{m}$  (y), 7.71  $\mu\text{m}$  (z)

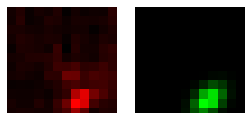
Corresponding bead : Not found

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

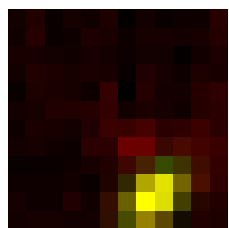
FWHM	Non corrected	Corrected	Theoretical
min	414 nm	432 nm	270 nm
max	630 nm	656 nm	270 nm
z	2.76 $\mu\text{m}$	2.77 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.658		
Theta	44.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 196.990 (brightness)

B = 120.832 (background)

a = 0.556 px

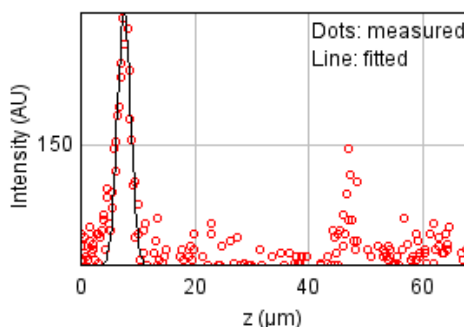
b = 0.221 px

c = 0.564 px

xc = 7.503 px

yc = 9.687 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18453.3387

Standard deviation: 7.75297

$R^2$ : 0.74126

Parameters:

a = 113.13830

b = 190.36368

c = 7.70981

d = 1.17220

## Bead 484 (Rejected)

Date : Mon Oct 17 13:51:14 PDT 2022

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

Frame size : 12 pixels

Coordinates : -89.1  $\mu\text{m}$  (x), -46.0  $\mu\text{m}$  (y), 7.23  $\mu\text{m}$  (z)

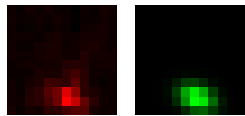
Corresponding bead : Not found

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

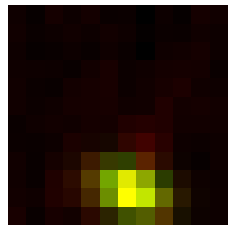
FWHM	Non corrected	Corrected	Theoretical
min	451 nm	470 nm	270 nm
max	668 nm	696 nm	270 nm
z	3.55 $\mu\text{m}$	3.56 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.675		
Theta	-20.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.908$



Parameters:

A = 296.121 (brightness)

B = 122.179 (background)

a = 0.345 px

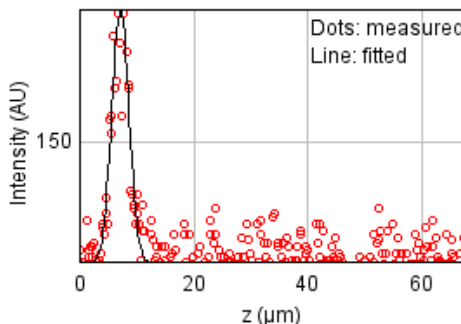
b = -0.119 px

c = 0.615 px

xc = 6.215 px

yc = 9.609 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15000.4545

Standard deviation: 6.99009

$R^2$ : 0.81818

Parameters:

a = 112.99277

b = 190.66454

c = 7.23468

d = 1.50765

## Bead 485 (Rejected)

Date : Mon Oct 17 13:51:15 PDT 2022

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

Frame size : 12 pixels

Coordinates : 92.1  $\mu\text{m}$  (x), -53.9  $\mu\text{m}$  (y), 7.42  $\mu\text{m}$  (z)

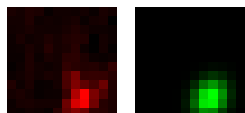
Corresponding bead : Not found

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

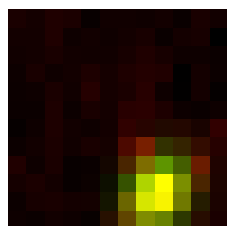
FWHM	Non corrected	Corrected	Theoretical
min	570 nm	594 nm	270 nm
max	721 nm	751 nm	270 nm
z	3.53 $\mu\text{m}$	3.54 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.791		
Theta	62.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.874$



Parameters:

A = 190.706 (brightness)

B = 118.675 (background)

a = 0.380 px

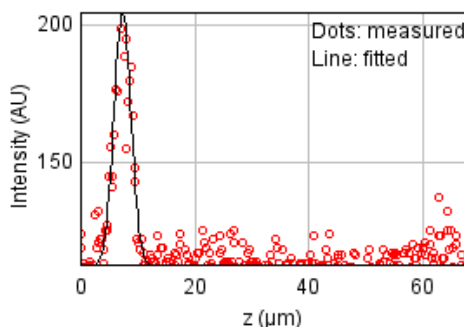
b = 0.063 px

c = 0.291 px

xc = 7.657 px

yc = 9.497 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18591.5716

Standard deviation: 7.78196

$R^2$ : 0.83605

Parameters:

a = 112.16644

b = 204.49198

c = 7.42147

d = 1.49794

## Bead 486 (Rejected)

Date : Mon Oct 17 13:51:15 PDT 2022

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

Frame size : 12 pixels

Coordinates : 18.0  $\mu\text{m}$  (x), -65.8  $\mu\text{m}$  (y), 6.42  $\mu\text{m}$  (z)

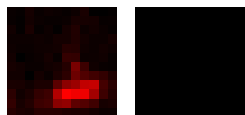
Corresponding bead : Not found

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

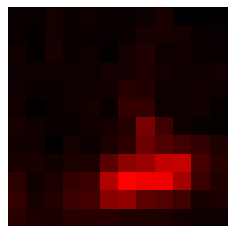
FWHM	Non corrected	Corrected	Theoretical
min	2.24 $\mu\text{m}$	2.33 $\mu\text{m}$	270 nm
max	3.63 $\mu\text{m}$	3.78 $\mu\text{m}$	270 nm
z	3.68 $\mu\text{m}$	3.7 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.617		
Theta	0.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.305$



Parameters:

A = -78.913 (brightness)

B = 203.536 (background)

a = -0.006 px

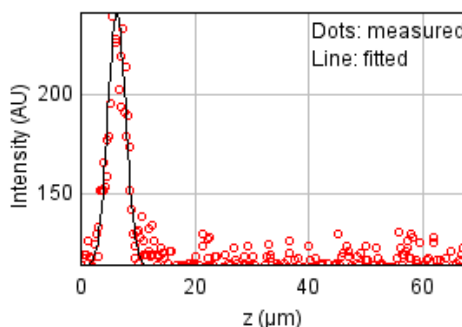
b = 0.012 px

c = 0.023 px

xc = 5.032 px

yc = 1.549 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23793.9962

Standard deviation: 8.80369

$R^2$ : 0.88584

Parameters:

a = 114.26869

b = 240.63829

c = 6.41740

d = 1.56288

## Bead 487 (Rejected)

Date : Mon Oct 17 13:51:15 PDT 2022

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

Frame size : 12 pixels

Coordinates : 18.4  $\mu\text{m}$  (x), -67.4  $\mu\text{m}$  (y), 7.03  $\mu\text{m}$  (z)

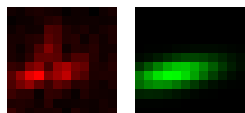
Corresponding bead : Not found

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

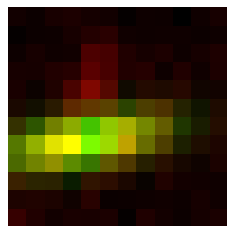
FWHM	Non corrected	Corrected	Theoretical
min	508 nm	529 nm	270 nm
max	1.59 $\mu\text{m}$	1.65 $\mu\text{m}$	270 nm
z	2.53 $\mu\text{m}$	2.54 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.32		
Theta	9.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.749$



Parameters:

$A = 159.393$  (brightness)

$B = 127.043$  (background)

$a = 0.067$  px

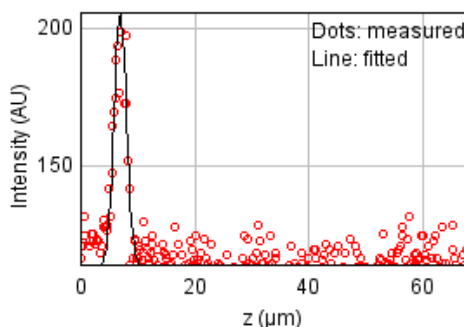
$b = 0.079$  px

$c = 0.505$  px

$xc = 3.621$  px

$yc = 6.805$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17607.7697

Standard deviation: 7.57326

$R^2: 0.79534$

Parameters:

$a = 114.00598$

$b = 205.60949$

$c = 7.02834$

$d = 1.07229$

## Bead 488 (Rejected)

Date : Mon Oct 17 13:51:15 PDT 2022

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

Frame size : 12 pixels

Coordinates : 35.6  $\mu\text{m}$  (x), 60.5  $\mu\text{m}$  (y), 6.98  $\mu\text{m}$  (z)

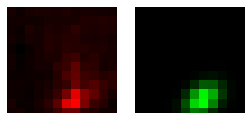
Corresponding bead : Not found

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

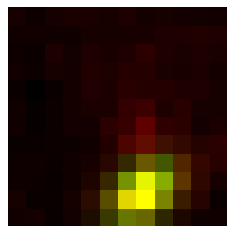
FWHM	Non corrected	Corrected	Theoretical
min	468 nm	487 nm	270 nm
max	682 nm	710 nm	270 nm
z	3.04 $\mu\text{m}$	3.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.686		
Theta	39.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.854$



Parameters:

$A = 279.205$  (brightness)

$B = 124.774$  (background)

$a = 0.420$  px

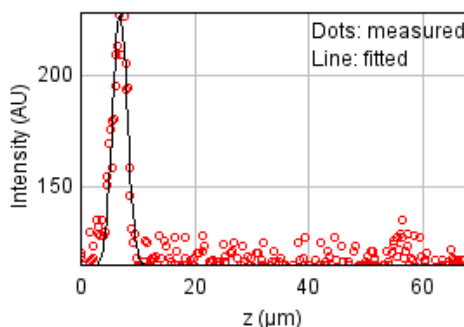
$b = 0.159$  px

$c = 0.481$  px

$x_c = 6.863$  px

$y_c = 9.592$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17633.4660

Standard deviation: 7.57879

$R^2: 0.87762$

Parameters:

$a = 114.29162$

$b = 228.50455$

$c = 6.98314$

$d = 1.29037$



## Bead 489

Date : Mon Oct 17 13:51:15 PDT 2022

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

Frame size : 12 pixels

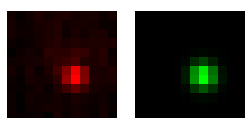
Coordinates : 121  $\mu\text{m}$  (x), 55.4  $\mu\text{m}$  (y), 9.97  $\mu\text{m}$  (z)

Corresponding bead : Not found

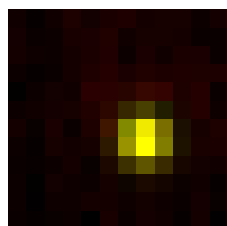
FWHM	Non corrected	Corrected	Theoretical
min	457 nm	476 nm	270 nm
max	474 nm	494 nm	270 nm
z	2.27 $\mu\text{m}$	2.28 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.964		
Theta	-69.2°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 292.822$  (brightness)

$B = 120.330$  (background)

$a = 0.636$  px

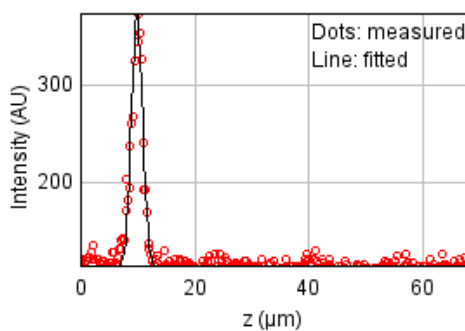
$b = -0.015$  px

$c = 0.603$  px

$x_c = 6.924$  px

$y_c = 6.572$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22510.2308

Standard deviation: 8.56290

$R^2: 0.95695$

Parameters:

$a = 113.45385$

$b = 373.69630$

$c = 9.97153$

$d = 0.96596$

## Bead 490 (Rejected)

Date : Mon Oct 17 13:51:15 PDT 2022

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

Frame size : 12 pixels

Coordinates : 37.4  $\mu\text{m}$  (x), 36.6  $\mu\text{m}$  (y), 11.7  $\mu\text{m}$  (z)

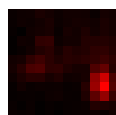
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	2.23 $\mu\text{m}$	2.24 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

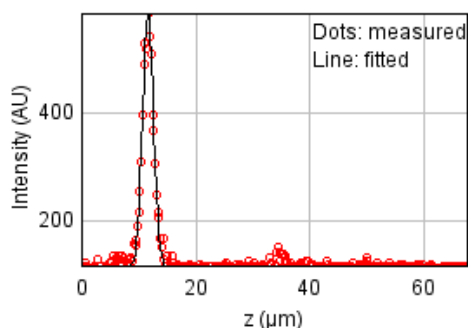
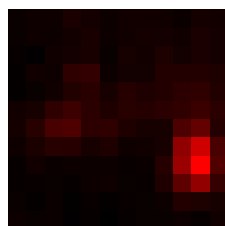
### XY profile & fitting parameters :

(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: 30809.4841

Standard deviation: 10.01782

$R^2$ : 0.98131

Parameters:

$a = 115.06947$

$b = 587.39861$

$c = 11.72863$

$d = 0.94686$

## Bead 491

Date : Mon Oct 17 13:51:16 PDT 2022

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

Frame size : 12 pixels

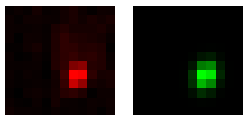
Coordinates : 85.7  $\mu\text{m}$  (x), 24.7  $\mu\text{m}$  (y), 10.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

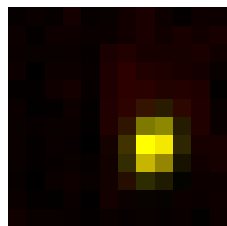
FWHM	Non corrected	Corrected	Theoretical
min	389 nm	406 nm	270 nm
max	513 nm	535 nm	270 nm
z	2.43 $\mu\text{m}$	2.44 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.759		
Theta	73.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.929$



Parameters:

$A = 447.274$  (brightness)

$B = 123.955$  (background)

$a = 0.855$  px

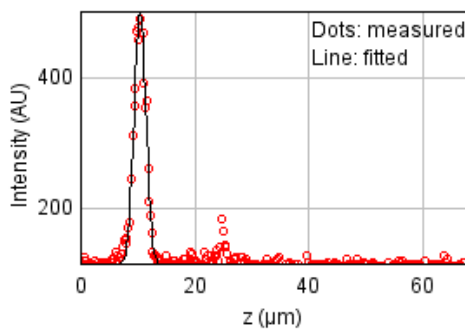
$b = 0.102$  px

$c = 0.539$  px

$x_c = 7.431$  px

$y_c = 7.104$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37245.7038

Standard deviation: 11.01460

$R^2: 0.96931$

Parameters:

$a = 114.95958$

$b = 501.86230$

$c = 10.49120$

$d = 1.03089$

## Bead 492

Date : Mon Oct 17 13:51:16 PDT 2022

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

Frame size : 12 pixels

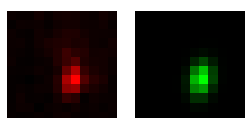
Coordinates : 27.2  $\mu\text{m}$  (x), 16.8  $\mu\text{m}$  (y), 9.94  $\mu\text{m}$  (z)

Corresponding bead : Not found

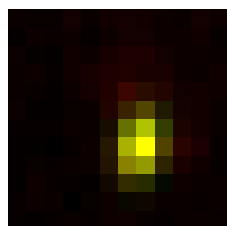
FWHM	Non corrected	Corrected	Theoretical
min	393 nm	410 nm	270 nm
max	604 nm	629 nm	270 nm
z	1.96 $\mu\text{m}$	1.96 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.651		
Theta	79.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 421.284 (brightness)

B = 121.016 (background)

a = 0.852 px

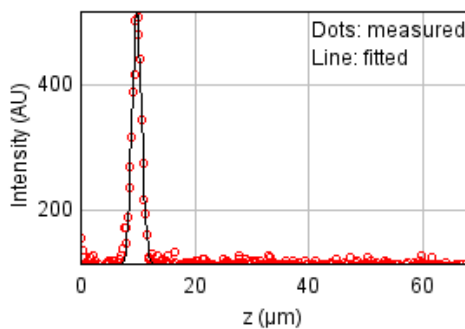
b = 0.087 px

c = 0.384 px

xc = 6.720 px

yc = 6.917 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23682.4354

Standard deviation: 8.78302

$R^2$ : 0.97788

Parameters:

a = 113.96034

b = 518.30863

c = 9.94000

d = 0.83073

## Bead 493 (Rejected)

Date : Mon Oct 17 13:51:16 PDT 2022

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

Frame size : 12 pixels

Coordinates : -4.24  $\mu\text{m}$  (x), 5.12  $\mu\text{m}$  (y), 6.47  $\mu\text{m}$  (z)

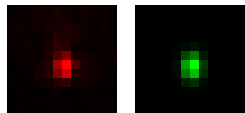
Corresponding bead : Not found

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

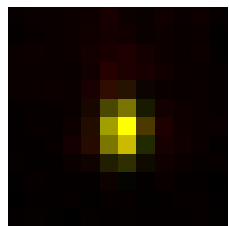
FWHM	Non corrected	Corrected	Theoretical
min	369 nm	384 nm	270 nm
max	497 nm	518 nm	270 nm
z	3.84 $\mu\text{m}$	3.86 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.741		
Theta	89.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 609.568 (brightness)

B = 125.518 (background)

a = 0.988 px

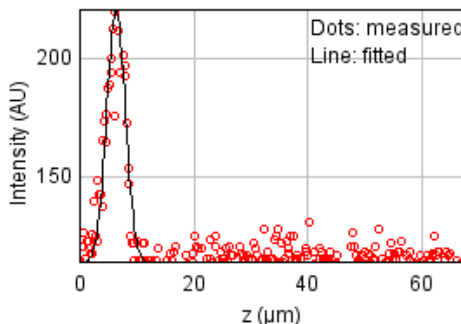
b = 0.006 px

c = 0.543 px

xc = 5.737 px

yc = 6.217 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16787.2664

Standard deviation: 7.39470

$R^2$ : 0.89062

Parameters:

a = 113.92404

b = 220.53324

c = 6.46887

d = 1.63207

## Bead 494 (Rejected)

Date : Mon Oct 17 13:51:16 PDT 2022

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

Frame size : 12 pixels

Coordinates : -5.99  $\mu\text{m}$  (x), -2.36  $\mu\text{m}$  (y), 10.9  $\mu\text{m}$  (z)

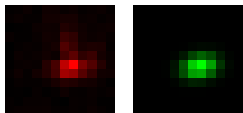
Corresponding bead : Not found

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

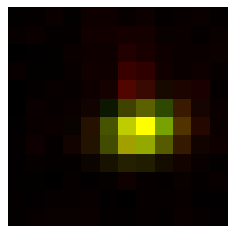
FWHM	Non corrected	Corrected	Theoretical
min	436 nm	455 nm	270 nm
max	647 nm	673 nm	270 nm
z	4.0 $\mu\text{m}$	4.01 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.675		
Theta	12.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.897$



Parameters:

A = 302.667 (brightness)

B = 121.575 (background)

a = 0.338 px

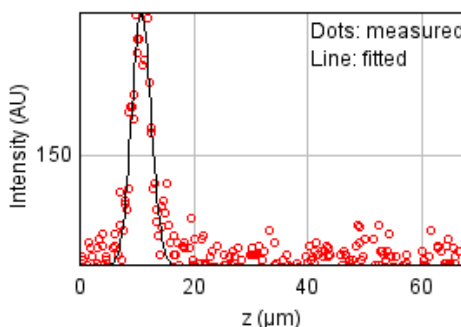
b = 0.079 px

c = 0.688 px

xc = 6.769 px

yc = 6.227 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14744.5836

Standard deviation: 6.93022

$R^2$ : 0.86146

Parameters:

a = 112.91304

b = 198.69225

c = 10.90922

d = 1.69723

## Bead 495 (Rejected)

Date : Mon Oct 17 13:51:16 PDT 2022

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

Frame size : 12 pixels

Coordinates : 74.0  $\mu\text{m}$  (x), -5.36  $\mu\text{m}$  (y), 10.5  $\mu\text{m}$  (z)

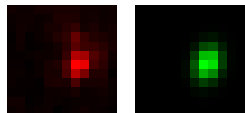
Corresponding bead : Not found

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

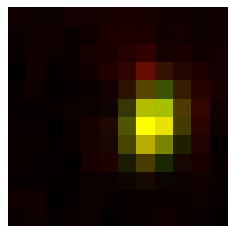
FWHM	Non corrected	Corrected	Theoretical
min	465 nm	485 nm	270 nm
max	641 nm	668 nm	270 nm
z	4.1 $\mu\text{m}$	4.12 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.726		
Theta	75.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 337.741 (brightness)

B = 120.505 (background)

a = 0.602 px

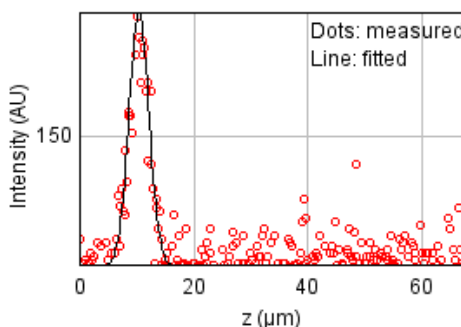
b = 0.070 px

c = 0.344 px

xc = 7.412 px

yc = 5.853 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15932.4887

Standard deviation: 7.20398

$R^2$ : 0.81272

Parameters:

a = 112.25342

b = 185.89035

c = 10.48207

d = 1.74129

## Bead 496 (Rejected)

Date : Mon Oct 17 13:51:16 PDT 2022

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

Frame size : 12 pixels

Coordinates : -89.9  $\mu\text{m}$  (x), -7.92  $\mu\text{m}$  (y), 10.9  $\mu\text{m}$  (z)

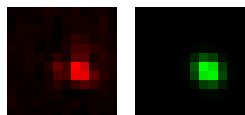
Corresponding bead : Not found

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

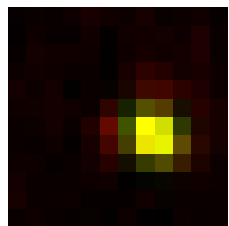
FWHM	Non corrected	Corrected	Theoretical
min	432 nm	449 nm	270 nm
max	504 nm	525 nm	270 nm
z	3.65 $\mu\text{m}$	3.67 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.857		
Theta	-43.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 335.445 (brightness)

B = 121.362 (background)

a = 0.621 px

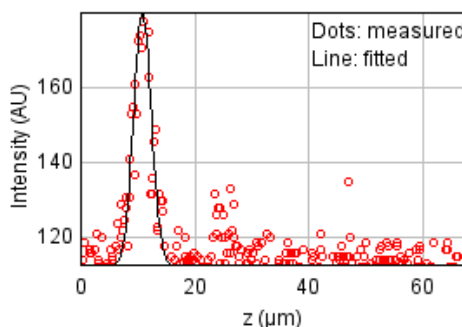
b = -0.096 px

c = 0.628 px

xc = 7.469 px

yc = 6.487 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13756.0861

Standard deviation: 6.69389

$R^2$ : 0.79215

Parameters:

a = 112.49406

b = 180.07936

c = 10.92436

d = 1.55032



## Bead 497 (Rejected)

Date : Mon Oct 17 13:51:16 PDT 2022

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

Frame size : 12 pixels

Coordinates : 29.8  $\mu\text{m}$  (x), -15.9  $\mu\text{m}$  (y), 7.45  $\mu\text{m}$  (z)

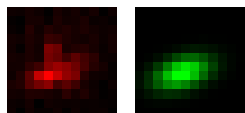
Corresponding bead : Not found

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

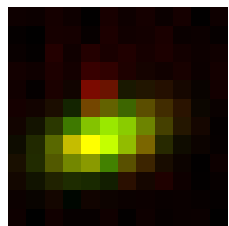
FWHM	Non corrected	Corrected	Theoretical
min	569 nm	592 nm	270 nm
max	1.05 $\mu\text{m}$	1.09 $\mu\text{m}$	270 nm
z	3.89 $\mu\text{m}$	3.91 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.542		
Theta	18.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.837$



Parameters:

A = 184.735 (brightness)

B = 120.675 (background)

a = 0.150 px

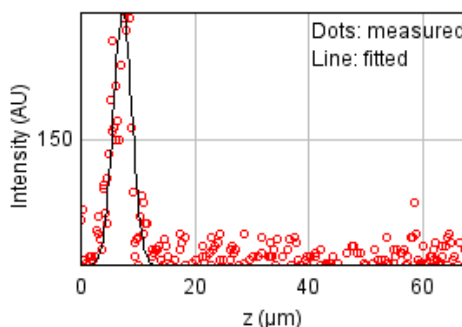
b = 0.087 px

c = 0.387 px

xc = 4.665 px

yc = 6.693 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18141.1911

Standard deviation: 7.68712

$R^2$ : 0.78441

Parameters:

a = 113.37467

b = 187.06172

c = 7.45150

d = 1.65156

## Bead 498 (Rejected)

Date : Mon Oct 17 13:51:16 PDT 2022

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

Frame size : 12 pixels

Coordinates : 162  $\mu\text{m}$  (x), -27.0  $\mu\text{m}$  (y), 6.41  $\mu\text{m}$  (z)

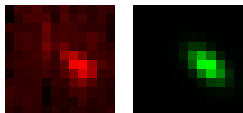
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	420 nm	437 nm	270 nm
max	741 nm	771 nm	270 nm
z	5.14 $\mu\text{m}$	5.16 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.567		
Theta	-42.7°		

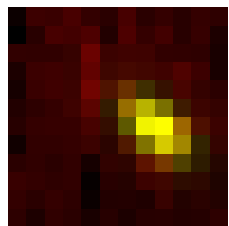
### XY profile & fitting parameters :

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



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

$R^2 = 0.810$



Parameters:

A = 144.918 (brightness)

B = 118.486 (background)

a = 0.483 px

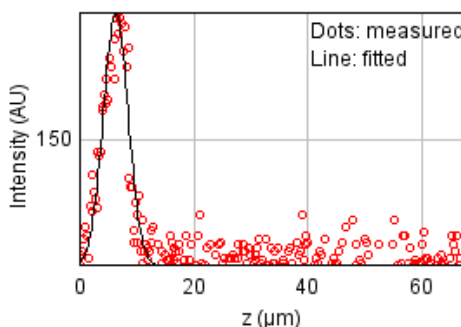
b = -0.258 px

c = 0.524 px

xc = 7.590 px

yc = 6.078 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14237.9367

Standard deviation: 6.81011

$R^2$ : 0.88061

Parameters:

a = 109.19987

b = 191.27218

c = 6.40534

d = 2.18406

## Bead 499 (Rejected)

Date : Mon Oct 17 13:51:17 PDT 2022

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

Frame size : 12 pixels

Coordinates : 93.1  $\mu\text{m}$  (x), -37.4  $\mu\text{m}$  (y), 11.1  $\mu\text{m}$  (z)

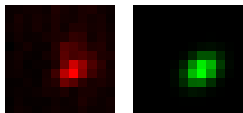
Corresponding bead : Not found

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

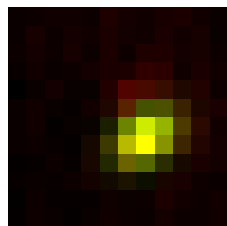
FWHM	Non corrected	Corrected	Theoretical
min	474 nm	493 nm	270 nm
max	647 nm	674 nm	270 nm
z	3.93 $\mu\text{m}$	3.95 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.732		
Theta	38.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 295.672 (brightness)

B = 120.750 (background)

a = 0.427 px

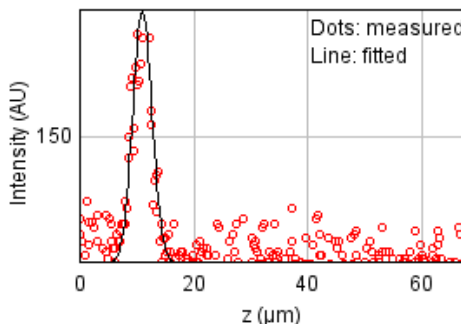
b = 0.135 px

c = 0.492 px

xc = 6.997 px

yc = 6.579 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14105.8615

Standard deviation: 6.77845

$R^2$ : 0.83168

Parameters:

a = 112.58180

b = 187.91077

c = 11.08363

d = 1.67055

## Bead 500 (Rejected)

Date : Mon Oct 17 13:51:17 PDT 2022

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

Frame size : 12 pixels

Coordinates : -120  $\mu\text{m}$  (x), -45.0  $\mu\text{m}$  (y), 10.2  $\mu\text{m}$  (z)

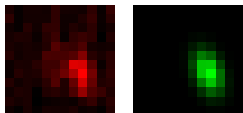
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

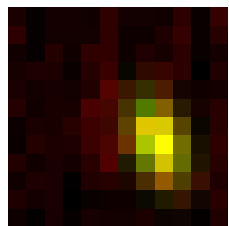
FWHM	Non corrected	Corrected	Theoretical
min	481 nm	501 nm	270 nm
max	805 nm	838 nm	270 nm
z	3.75 $\mu\text{m}$	3.77 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.597		
Theta	-70.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.825$



Parameters:

A = 125.095 (brightness)

B = 116.587 (background)

a = 0.539 px

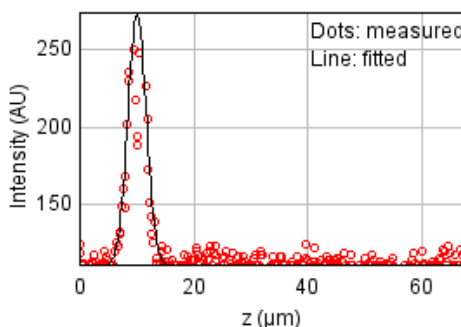
b = -0.117 px

c = 0.248 px

xc = 7.687 px

yc = 6.822 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 45608.1676

Standard deviation: 12.18855

$R^2$ : 0.87203

Parameters:

a = 110.93178

b = 273.42289

c = 10.15045

d = 1.59395