

## Bead 201 (Rejected)

Date : Mon Oct 17 13:27:57 PDT 2022

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

Frame size : 10 pixels

Coordinates : -63.8  $\mu\text{m}$  (x), -72.4  $\mu\text{m}$  (y), 5.44  $\mu\text{m}$  (z)

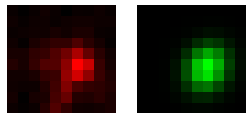
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

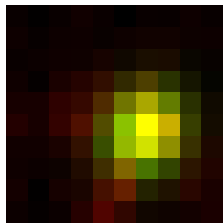
FWHM	Non corrected	Corrected	Theoretical
min	622 nm	643 nm	223 nm
max	724 nm	749 nm	223 nm
z	1.46 $\mu\text{m}$	1.47 $\mu\text{m}$	885 nm
Asymmetry	0.859		
Theta	62.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 284.942 (brightness)

B = 132.261 (background)

a = 0.328 px

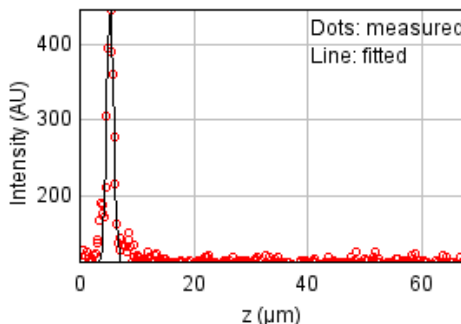
b = 0.037 px

c = 0.275 px

xc = 5.891 px

yc = 5.286 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 35351.4765

Standard deviation: 10.73086

$R^2$ : 0.93775

Parameters:

a = 114.22111

b = 446.01860

c = 5.44016

d = 0.62054

## Bead 202 (Rejected)

Date : Mon Oct 17 13:27:57 PDT 2022

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

Frame size : 10 pixels

Coordinates : 84.9  $\mu\text{m}$  (x), -94.1  $\mu\text{m}$  (y), 4.4  $\mu\text{m}$  (z)

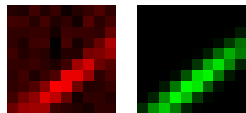
Corresponding bead : Not found

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

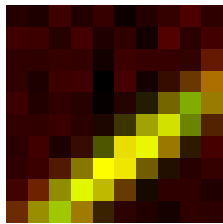
FWHM	Non corrected	Corrected	Theoretical
min	351 nm	363 nm	223 nm
max	2.45 $\mu\text{m}$	2.53 $\mu\text{m}$	223 nm
z	8.49 $\mu\text{m}$	8.52 $\mu\text{m}$	885 nm
Asymmetry	0.143		
Theta	37.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.891$



Parameters:

A = 88.284 (brightness)

B = 115.698 (background)

a = 0.417 px

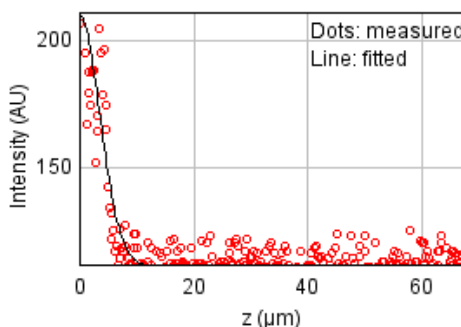
b = 0.515 px

c = 0.696 px

xc = 4.686 px

yc = 6.766 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22572.8042

Standard deviation: 8.57479

$R^2$ : 0.85387

Parameters:

a = 112.10265

b = 211.05463

c = -0.028299

d = 3.60399

## Bead 203 (Rejected)

Date : Mon Oct 17 13:27:57 PDT 2022

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

Frame size : 10 pixels

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

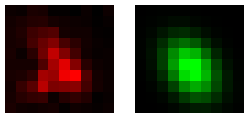
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

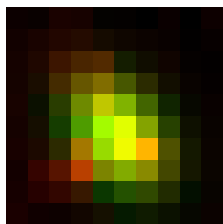
FWHM	Non corrected	Corrected	Theoretical
min	701 nm	725 nm	223 nm
max	967 nm	999 nm	223 nm
z	2.14 $\mu\text{m}$	2.15 $\mu\text{m}$	885 nm
Asymmetry	0.725		
Theta	-55.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.807$



Parameters:

A = 302.409 (brightness)

B = 124.869 (background)

a = 0.232 px

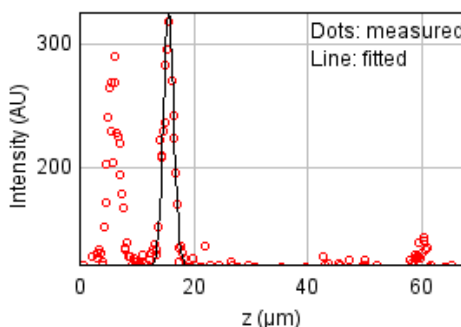
b = -0.060 px

c = 0.184 px

xc = 4.620 px

yc = 5.332 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 220516.652

Standard deviation: 26.80103

$R^2$ : 0.57156

Parameters:

a = 120.88844

b = 326.21911

c = 15.67081

d = 0.90933

## Bead 204

Date : Mon Oct 17 13:27:57 PDT 2022

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

Frame size : 10 pixels

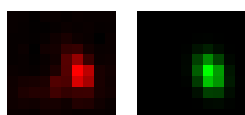
Coordinates : -59.1  $\mu\text{m}$  (x), 89.5  $\mu\text{m}$  (y), 6.51  $\mu\text{m}$  (z)

Corresponding bead : Not found

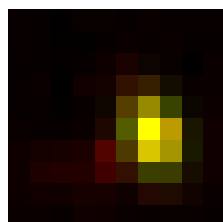
FWHM	Non corrected	Corrected	Theoretical
min	413 nm	427 nm	223 nm
max	577 nm	597 nm	223 nm
z	1.52 $\mu\text{m}$	1.53 $\mu\text{m}$	885 nm
Asymmetry	0.715		
Theta	-72.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 625.277 (brightness)

B = 128.623 (background)

a = 0.752 px

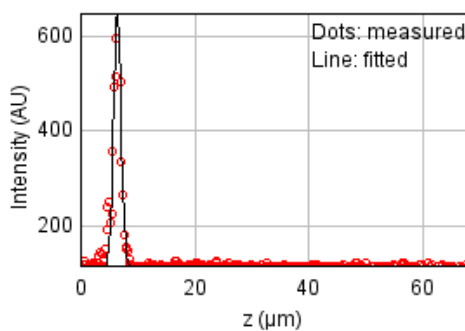
b = -0.112 px

c = 0.439 px

xc = 6.207 px

yc = 5.257 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 74866.5193

Standard deviation: 15.61617

$R^2$ : 0.95136

Parameters:

a = 113.75964

b = 652.97107

c = 6.51035

d = 0.64701

## Bead 205 (Rejected)

Date : Mon Oct 17 13:27:57 PDT 2022

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

Frame size : 10 pixels

Coordinates : -95.7  $\mu\text{m}$  (x), 82.9  $\mu\text{m}$  (y), 6.43  $\mu\text{m}$  (z)

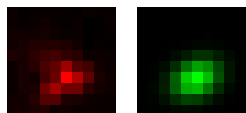
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

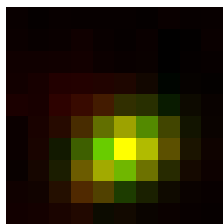
FWHM	Non corrected	Corrected	Theoretical
min	558 nm	577 nm	223 nm
max	761 nm	787 nm	223 nm
z	1.81 $\mu\text{m}$	1.82 $\mu\text{m}$	885 nm
Asymmetry	0.733		
Theta	25.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 322.578 (brightness)

B = 123.993 (background)

a = 0.269 px

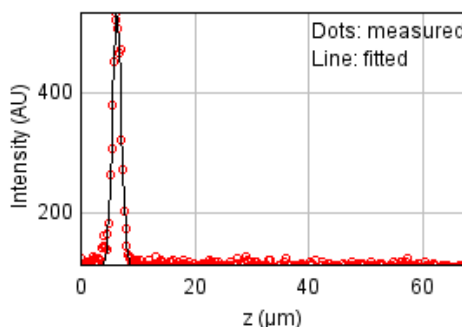
b = 0.078 px

c = 0.394 px

xc = 4.894 px

yc = 6.098 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20056.3805

Standard deviation: 8.08271

$R^2$ : 0.98125

Parameters:

a = 114.20094

b = 534.55426

c = 6.42586

d = 0.76839

## Bead 206 (Rejected)

Date : Mon Oct 17 13:27:58 PDT 2022

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

Frame size : 10 pixels

Coordinates : -7.5  $\mu\text{m}$  (x), 68.8  $\mu\text{m}$  (y), 6.04  $\mu\text{m}$  (z)

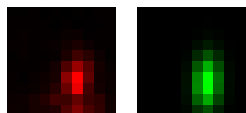
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

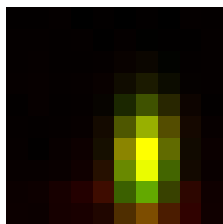
FWHM	Non corrected	Corrected	Theoretical
min	420 nm	434 nm	223 nm
max	834 nm	862 nm	223 nm
z	1.25 $\mu\text{m}$	1.26 $\mu\text{m}$	885 nm
Asymmetry	0.503		
Theta	87.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 670.652 (brightness)

B = 131.149 (background)

a = 0.761 px

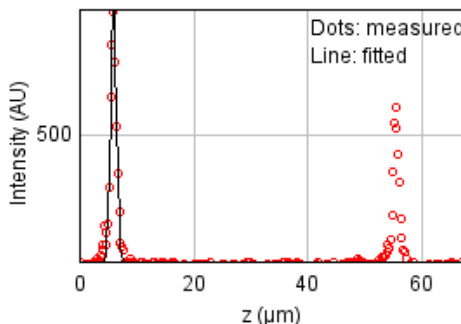
b = 0.023 px

c = 0.194 px

xc = 5.916 px

yc = 6.474 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 893101.296

Standard deviation: 53.93630

$R^2$ : 0.72445

Parameters:

a = 126.60974

b = 877.11857

c = 6.03519

d = 0.53223

## Bead 207 (Rejected)

Date : Mon Oct 17 13:27:58 PDT 2022

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

Frame size : 10 pixels

Coordinates : 103 um (x), 59.0 um (y), 9.25 um (z)

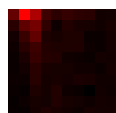
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
z	1.84 um	1.85 um	885 nm
Asymmetry	0.0		
Theta	0.0°		

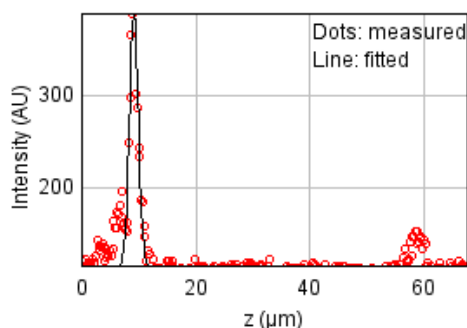
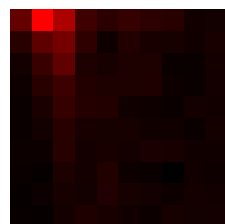
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 66485.8039

Standard deviation: 14.71619

R<sup>2</sup>: 0.87054

Parameters:

a = 115.98401

b = 388.04986

c = 9.25111

d = 0.78163

## Bead 208 (Rejected)

Date : Mon Oct 17 13:27:58 PDT 2022

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

Frame size : 10 pixels

Coordinates : -142  $\mu\text{m}$  (x), 22.7  $\mu\text{m}$  (y), 3.09  $\mu\text{m}$  (z)

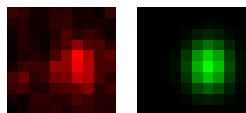
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

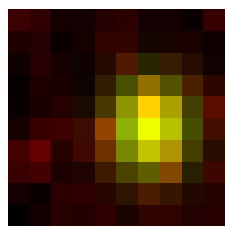
FWHM	Non corrected	Corrected	Theoretical
min	652 nm	674 nm	223 nm
max	772 nm	798 nm	223 nm
z	3.85 $\mu\text{m}$	3.87 $\mu\text{m}$	885 nm
Asymmetry	0.845		
Theta	-88.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 116.596 (brightness)

B = 122.730 (background)

a = 0.316 px

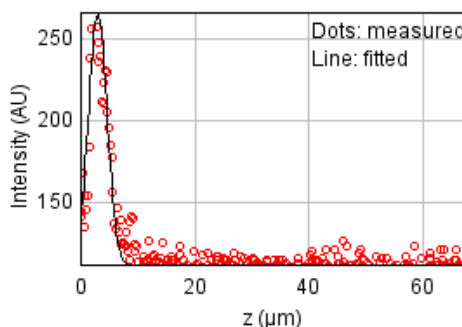
b = -0.003 px

c = 0.225 px

xc = 6.068 px

yc = 4.914 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 35374.8576

Standard deviation: 10.73441

$R^2$ : 0.89049

Parameters:

a = 111.75620

b = 266.13208

c = 3.09279

d = 1.63571



## Bead 209 (Rejected)

Date : Mon Oct 17 13:27:58 PDT 2022

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

Frame size : 10 pixels

Coordinates : -67.6  $\mu\text{m}$  (x), 12.5  $\mu\text{m}$  (y), 4.2  $\mu\text{m}$  (z)

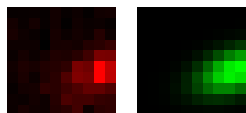
Corresponding bead : Not found

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

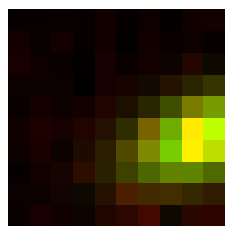
FWHM	Non corrected	Corrected	Theoretical
min	630 nm	651 nm	223 nm
max	1.22 $\mu\text{m}$	1.27 $\mu\text{m}$	223 nm
z	1.72 $\mu\text{m}$	1.72 $\mu\text{m}$	885 nm
Asymmetry	0.514		
Theta	19.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 182.072 (brightness)

B = 118.152 (background)

a = 0.117 px

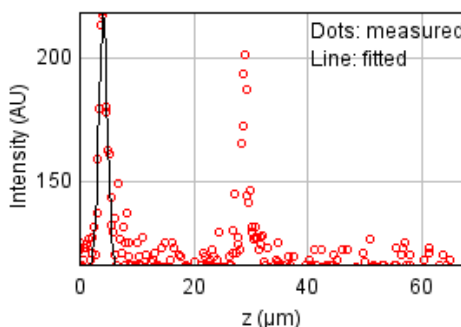
b = 0.078 px

c = 0.311 px

xc = 8.587 px

yc = 5.387 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 45301.7554

Standard deviation: 12.14754

$R^2$ : 0.56617

Parameters:

a = 116.40900

b = 218.67373

c = 4.19912

d = 0.72953

## Bead 210

Date : Mon Oct 17 13:27:59 PDT 2022

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

Frame size : 10 pixels

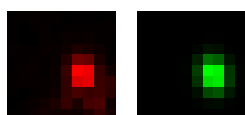
Coordinates : 30.2  $\mu\text{m}$  (x), -7.79  $\mu\text{m}$  (y), 6.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

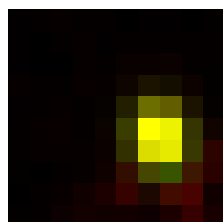
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	437 nm	223 nm
max	528 nm	546 nm	223 nm
z	1.55 $\mu\text{m}$	1.55 $\mu\text{m}$	885 nm
Asymmetry	0.801		
Theta	-77.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 858.130 (brightness)

B = 131.903 (background)

a = 0.738 px

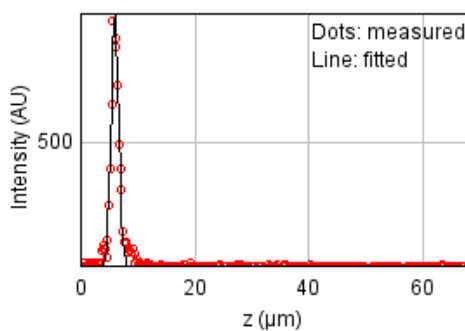
b = -0.055 px

c = 0.493 px

xc = 6.494 px

yc = 5.405 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 88298.6529

Standard deviation: 16.95930

$R^2$ : 0.97319

Parameters:

a = 114.77633

b = 906.47899

c = 6.09613

d = 0.65738

## Bead 211

Date : Mon Oct 17 13:27:59 PDT 2022

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

Frame size : 10 pixels

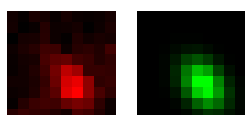
Coordinates : -133  $\mu\text{m}$  (x), -17.4  $\mu\text{m}$  (y), 6.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

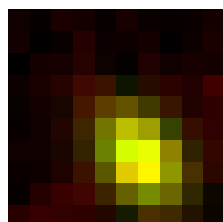
FWHM	Non corrected	Corrected	Theoretical
min	580 nm	600 nm	223 nm
max	824 nm	852 nm	223 nm
z	2.73 $\mu\text{m}$	2.74 $\mu\text{m}$	885 nm
Asymmetry	0.704		
Theta	-55.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 123.588$  (brightness)

$B = 116.784$  (background)

$a = 0.335$  px

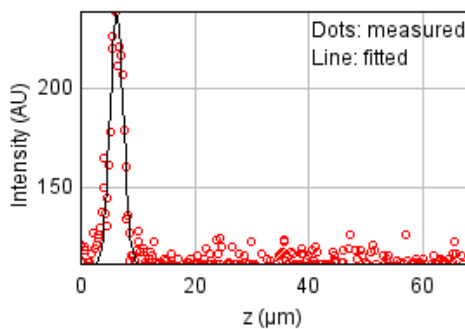
$b = -0.093$  px

$c = 0.260$  px

$x_c = 5.576$  px

$y_c = 6.275$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16523.0966

Standard deviation: 7.33629

$R^2: 0.89464$

Parameters:

$a = 111.57189$

$b = 237.99355$

$c = 6.39583$

$d = 1.15998$

## Bead 212

Date : Mon Oct 17 13:27:59 PDT 2022

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

Frame size : 10 pixels

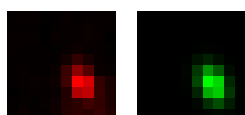
Coordinates : 43.0  $\mu\text{m}$  (x), -18.1  $\mu\text{m}$  (y), 5.73  $\mu\text{m}$  (z)

Corresponding bead : Not found

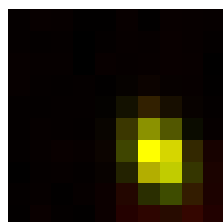
FWHM	Non corrected	Corrected	Theoretical
min	403 nm	416 nm	223 nm
max	584 nm	604 nm	223 nm
z	1.38 $\mu\text{m}$	1.39 $\mu\text{m}$	885 nm
Asymmetry	0.69		
Theta	-64.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 741.760$  (brightness)

$B = 122.458$  (background)

$a = 0.747$  px

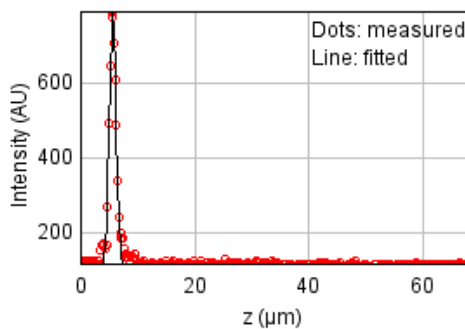
$b = -0.168$  px

$c = 0.473$  px

$x_c = 6.437$  px

$y_c = 6.250$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 47373.1389

Standard deviation: 12.42215

$R^2: 0.97780$

Parameters:

$a = 115.11677$

$b = 789.78888$

$c = 5.72798$

$d = 0.58697$

## Bead 213

Date : Mon Oct 17 13:27:59 PDT 2022

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

Frame size : 10 pixels

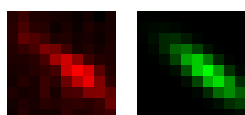
Coordinates : 92.0  $\mu\text{m}$  (x), -33.5  $\mu\text{m}$  (y), 5.06  $\mu\text{m}$  (z)

Corresponding bead : Not found

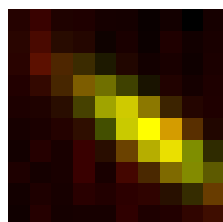
FWHM	Non corrected	Corrected	Theoretical
min	399 nm	413 nm	223 nm
max	1.34 $\mu\text{m}$	1.38 $\mu\text{m}$	223 nm
z	1.89 $\mu\text{m}$	1.9 $\mu\text{m}$	885 nm
Asymmetry	0.299		
Theta	-37.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.917$



Parameters:

$A = 163.554$  (brightness)

$B = 117.765$  (background)

$a = 0.357$  px

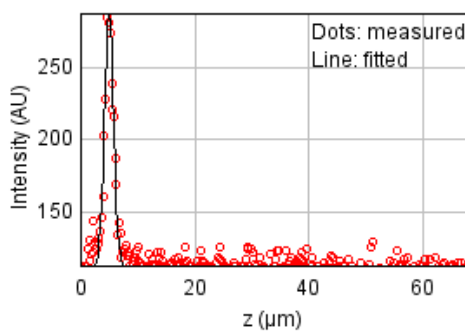
$b = -0.369$  px

$c = 0.559$  px

$x_c = 5.964$  px

$y_c = 5.140$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15895.3285

Standard deviation: 7.19558

$R^2: 0.92193$

Parameters:

$a = 112.89653$

$b = 286.97010$

$c = 5.05610$

$d = 0.80261$

## Bead 214 (Rejected)

Date : Mon Oct 17 13:28:00 PDT 2022

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

Frame size : 10 pixels

Coordinates : -144  $\mu\text{m}$  (x), -36.8  $\mu\text{m}$  (y), 4.69  $\mu\text{m}$  (z)

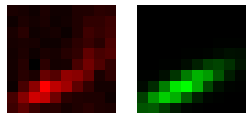
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

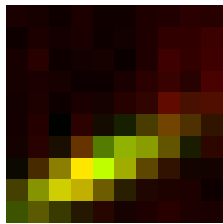
FWHM	Non corrected	Corrected	Theoretical
min	356 nm	368 nm	223 nm
max	1.39 $\mu\text{m}$	1.43 $\mu\text{m}$	223 nm
z	2.63 $\mu\text{m}$	2.64 $\mu\text{m}$	885 nm
Asymmetry	0.257		
Theta	25.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.847$



Parameters:

A = 130.266 (brightness)

B = 116.433 (background)

a = 0.249 px

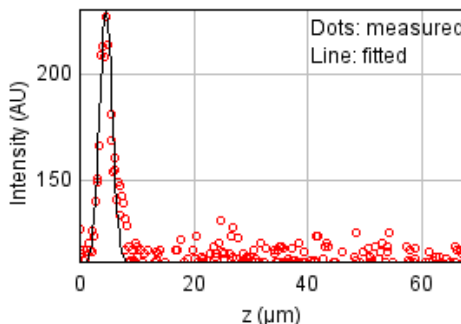
b = 0.380 px

c = 0.879 px

xc = 3.522 px

yc = 7.119 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17440.7115

Standard deviation: 7.53725

$R^2$ : 0.87586

Parameters:

a = 110.77257

b = 231.32893

c = 4.69470

d = 1.11610

## Bead 215 (Rejected)

Date : Mon Oct 17 13:28:00 PDT 2022

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

Frame size : 10 pixels

Coordinates : 105  $\mu\text{m}$  (x), -61.2  $\mu\text{m}$  (y), 4.8  $\mu\text{m}$  (z)

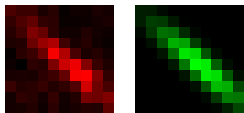
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

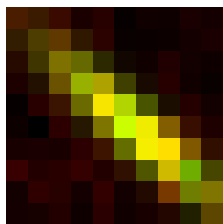
FWHM	Non corrected	Corrected	Theoretical
min	388 nm	401 nm	223 nm
max	1.84 $\mu\text{m}$	1.91 $\mu\text{m}$	223 nm
z	2.03 $\mu\text{m}$	2.04 $\mu\text{m}$	885 nm
Asymmetry	0.211		
Theta	-42.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 133.478 (brightness)

B = 117.518 (background)

a = 0.422 px

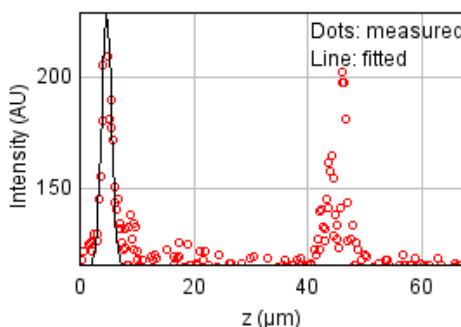
b = -0.423 px

c = 0.509 px

xc = 5.519 px

yc = 5.105 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 61048.5205

Standard deviation: 14.10160

$R^2$ : 0.58380

Parameters:

a = 115.55536

b = 229.10752

c = 4.79795

d = 0.86332

## Bead 216 (Rejected)

Date : Mon Oct 17 13:28:00 PDT 2022

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

Frame size : 10 pixels

Coordinates : -159  $\mu\text{m}$  (x), -66.8  $\mu\text{m}$  (y), 4.83  $\mu\text{m}$  (z)

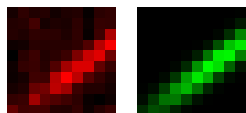
Corresponding bead : Not found

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

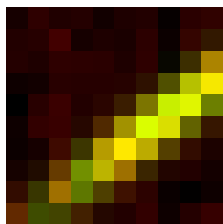
FWHM	Non corrected	Corrected	Theoretical
min	383 nm	396 nm	223 nm
max	2.44 $\mu\text{m}$	2.53 $\mu\text{m}$	223 nm
z	3.09 $\mu\text{m}$	3.11 $\mu\text{m}$	885 nm
Asymmetry	0.157		
Theta	37.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 109.554 (brightness)

B = 115.125 (background)

a = 0.347 px

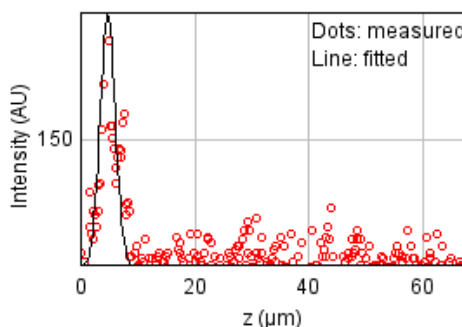
b = 0.429 px

c = 0.589 px

xc = 6.990 px

yc = 4.441 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23861.1391

Standard deviation: 8.81610

$R^2$ : 0.72329

Parameters:

a = 110.75400

b = 190.29032

c = 4.83314

d = 1.31410



## Bead 217

Date : Mon Oct 17 13:28:00 PDT 2022

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

Frame size : 10 pixels

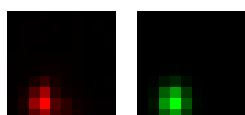
Coordinates : 32.7  $\mu\text{m}$  (x), -79.9  $\mu\text{m}$  (y), 38.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

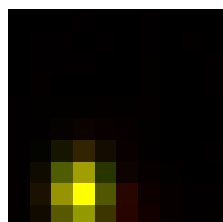
FWHM	Non corrected	Corrected	Theoretical
min	406 nm	420 nm	223 nm
max	521 nm	538 nm	223 nm
z	1.2 $\mu\text{m}$	1.21 $\mu\text{m}$	885 nm
Asymmetry	0.78		
Theta	-89.2°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1871.661$  (brightness)

$B = 126.986$  (background)

$a = 0.813$  px

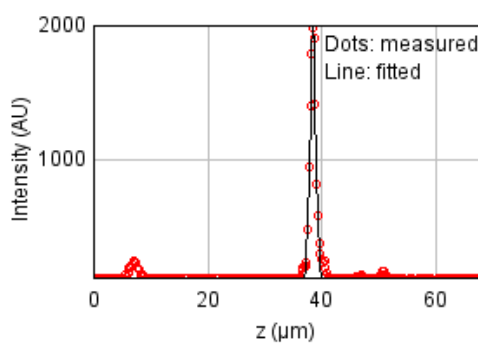
$b = -0.004$  px

$c = 0.495$  px

$x_c = 2.837$  px

$y_c = 7.985$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 266098.220

Standard deviation: 29.44095

$R^2: 0.98150$

Parameters:

$a = 124.51825$

$b = 2001.31300$

$c = 38.50789$

$d = 0.51101$

## Bead 218 (Rejected)

Date : Mon Oct 17 13:28:01 PDT 2022

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

Frame size : 10 pixels

Coordinates : 74.8  $\mu\text{m}$  (x), 78.3  $\mu\text{m}$  (y), 57.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
z	1.62 $\mu\text{m}$	1.63 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

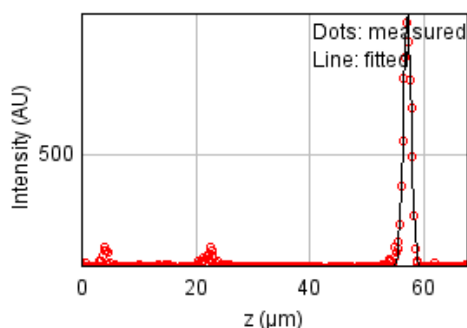
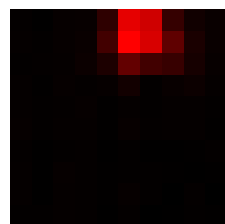
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 67030.9354

Standard deviation: 14.77639

R<sup>2</sup>: 0.98370

Parameters:

a = 116.82025

b = 986.97080

c = 57.12992

d = 0.68793

## Bead 219 (Rejected)

Date : Mon Oct 17 13:28:01 PDT 2022

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

Frame size : 10 pixels

Coordinates : -7.5  $\mu\text{m}$  (x), 68.7  $\mu\text{m}$  (y), 6.04  $\mu\text{m}$  (z)

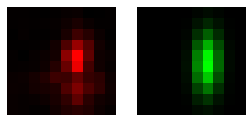
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

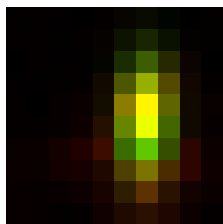
FWHM	Non corrected	Corrected	Theoretical
min	415 nm	429 nm	223 nm
max	959 nm	992 nm	223 nm
z	1.25 $\mu\text{m}$	1.26 $\mu\text{m}$	885 nm
Asymmetry	0.433		
Theta	88.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.884$



Parameters:

A = 622.313 (brightness)

B = 139.151 (background)

a = 0.778 px

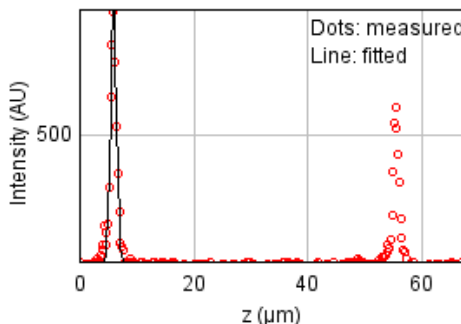
b = 0.013 px

c = 0.146 px

xc = 5.920 px

yc = 4.651 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 893101.296

Standard deviation: 53.93630

$R^2$ : 0.72445

Parameters:

a = 126.60974

b = 877.11857

c = 6.03519

d = 0.53223

## Bead 220

Date : Mon Oct 17 13:28:01 PDT 2022

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

Frame size : 10 pixels

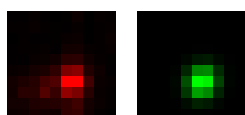
Coordinates : -71.6  $\mu\text{m}$  (x), 28.2  $\mu\text{m}$  (y), 6.69  $\mu\text{m}$  (z)

Corresponding bead : Not found

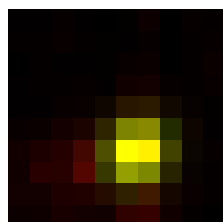
FWHM	Non corrected	Corrected	Theoretical
min	456 nm	472 nm	223 nm
max	501 nm	518 nm	223 nm
z	1.89 $\mu\text{m}$	1.9 $\mu\text{m}$	885 nm
Asymmetry	0.91		
Theta	59.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 647.119 (brightness)

B = 135.941 (background)

a = 0.616 px

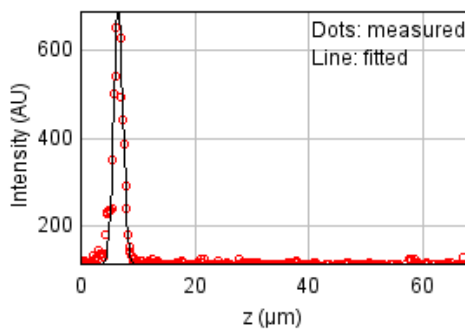
b = 0.049 px

c = 0.563 px

xc = 5.446 px

yc = 6.044 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57763.3985

Standard deviation: 13.71694

$R^2$ : 0.97293

Parameters:

a = 113.81465

b = 692.24067

c = 6.68744

d = 0.80406

## Bead 221 (Rejected)

Date : Mon Oct 17 13:28:01 PDT 2022

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

Frame size : 10 pixels

Coordinates : -102  $\mu\text{m}$  (x), 23.3  $\mu\text{m}$  (y), 7.11  $\mu\text{m}$  (z)

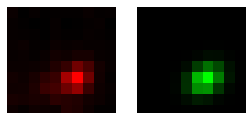
Corresponding bead : Not found

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

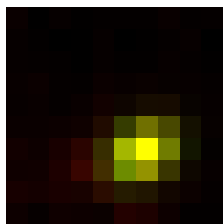
FWHM	Non corrected	Corrected	Theoretical
min	417 nm	431 nm	223 nm
max	549 nm	567 nm	223 nm
z	3.82 $\mu\text{m}$	3.84 $\mu\text{m}$	885 nm
Asymmetry	0.76		
Theta	30.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 488.825 (brightness)

B = 125.884 (background)

a = 0.529 px

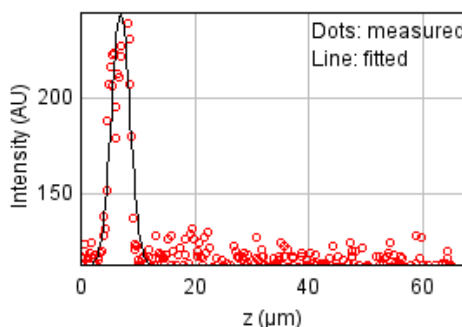
b = 0.142 px

c = 0.688 px

xc = 5.778 px

yc = 6.143 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 32404.0761

Standard deviation: 10.27379

$R^2$ : 0.86772

Parameters:

a = 112.16371

b = 245.44773

c = 7.10827

d = 1.62293

## Bead 222 (Rejected)

Date : Mon Oct 17 13:28:02 PDT 2022

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

Frame size : 10 pixels

Coordinates : -154  $\mu\text{m}$  (x), 17.7  $\mu\text{m}$  (y), 5.41  $\mu\text{m}$  (z)

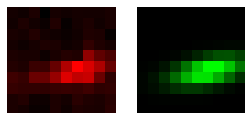
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

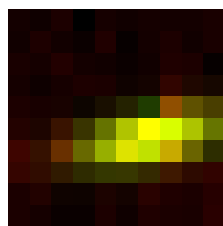
FWHM	Non corrected	Corrected	Theoretical
min	406 nm	419 nm	223 nm
max	1.14 $\mu\text{m}$	1.18 $\mu\text{m}$	223 nm
z	2.08 $\mu\text{m}$	2.09 $\mu\text{m}$	885 nm
Asymmetry	0.357		
Theta	11.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 170.313 (brightness)

B = 113.955 (background)

a = 0.132 px

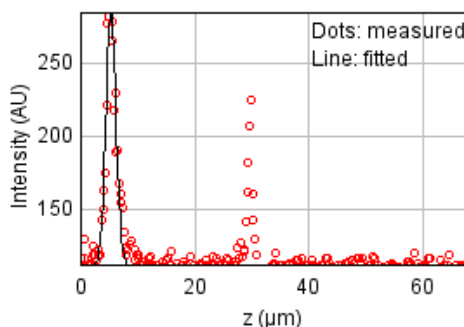
b = 0.138 px

c = 0.788 px

xc = 6.084 px

yc = 5.405 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 51865.0400

Standard deviation: 12.99775

$R^2$ : 0.79620

Parameters:

a = 112.18393

b = 284.82741

c = 5.40968

d = 0.88475

## Bead 223

Date : Mon Oct 17 13:28:02 PDT 2022

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

Frame size : 10 pixels

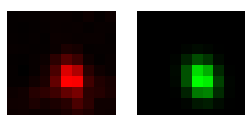
Coordinates : 7.35  $\mu\text{m}$  (x), -2.58  $\mu\text{m}$  (y), 6.91  $\mu\text{m}$  (z)

Corresponding bead : Not found

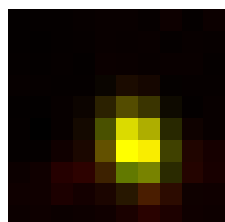
FWHM	Non corrected	Corrected	Theoretical
min	457 nm	472 nm	223 nm
max	566 nm	585 nm	223 nm
z	2.25 $\mu\text{m}$	2.26 $\mu\text{m}$	885 nm
Asymmetry	0.808		
Theta	-67.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 608.577 (brightness)

B = 127.523 (background)

a = 0.611 px

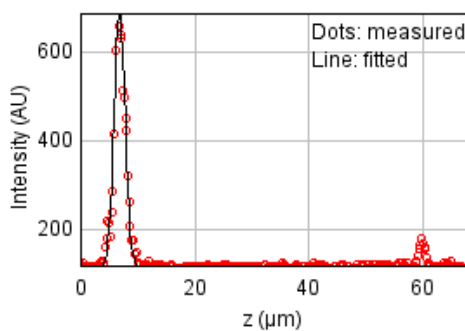
b = -0.078 px

c = 0.451 px

$x_c = 5.405$  px

$y_c = 5.741$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 88631.0352

Standard deviation: 16.99119

$R^2$ : 0.96431

Parameters:

a = 116.41080

b = 688.95525

c = 6.91317

d = 0.95448

## Bead 224

Date : Mon Oct 17 13:28:02 PDT 2022

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

Frame size : 10 pixels

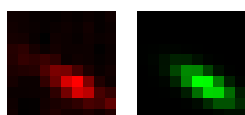
Coordinates : 98.3  $\mu\text{m}$  (x), -5.78  $\mu\text{m}$  (y), 5.85  $\mu\text{m}$  (z)

Corresponding bead : Not found

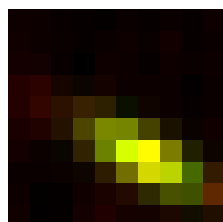
FWHM	Non corrected	Corrected	Theoretical
min	377 nm	390 nm	223 nm
max	960 nm	992 nm	223 nm
z	1.73 $\mu\text{m}$	1.74 $\mu\text{m}$	885 nm
Asymmetry	0.392		
Theta	-29.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 303.412 (brightness)

B = 121.302 (background)

a = 0.343 px

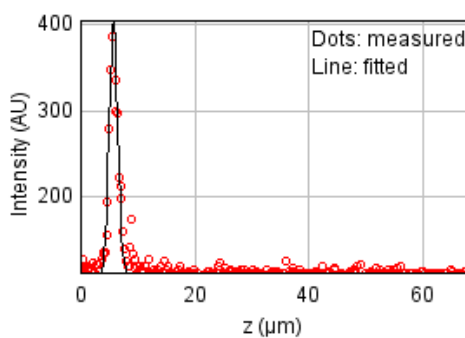
b = -0.345 px

c = 0.748 px

$x_c = 5.767$  px

$y_c = 6.287$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 26966.4106

Standard deviation: 9.37222

$R^2$ : 0.94830

Parameters:

a = 112.26422

b = 406.82337

c = 5.84981

d = 0.73585



## Bead 225

Date : Mon Oct 17 13:28:02 PDT 2022

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

Frame size : 10 pixels

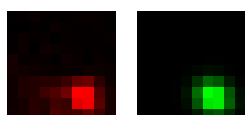
Coordinates : -83.7  $\mu\text{m}$  (x), -18.8  $\mu\text{m}$  (y), 7.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	491 nm	508 nm	223 nm
max	557 nm	575 nm	223 nm
z	2.61 $\mu\text{m}$	2.62 $\mu\text{m}$	885 nm
Asymmetry	0.883		
Theta	-34.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 385.416 (brightness)

B = 122.946 (background)

a = 0.472 px

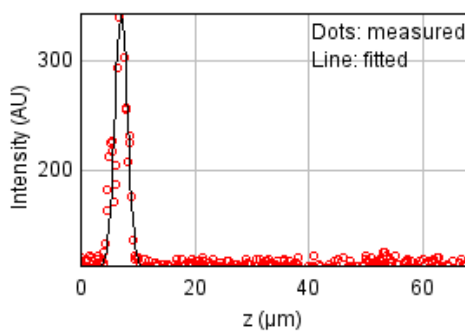
b = -0.057 px

c = 0.517 px

xc = 6.477 px

yc = 7.446 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 55955.0351

Standard deviation: 13.50052

$R^2$ : 0.88848

Parameters:

a = 113.08479

b = 343.18358

c = 7.19950

d = 1.10955

## Bead 226

Date : Mon Oct 17 13:28:03 PDT 2022

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

Frame size : 10 pixels

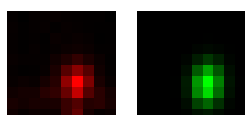
Coordinates : -18.7  $\mu\text{m}$  (x), -26.2  $\mu\text{m}$  (y), 6.82  $\mu\text{m}$  (z)

Corresponding bead : Not found

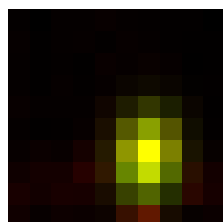
FWHM	Non corrected	Corrected	Theoretical
min	468 nm	483 nm	223 nm
max	657 nm	680 nm	223 nm
z	2.08 $\mu\text{m}$	2.09 $\mu\text{m}$	885 nm
Asymmetry	0.711		
Theta	85.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 635.528 (brightness)

B = 127.702 (background)

a = 0.612 px

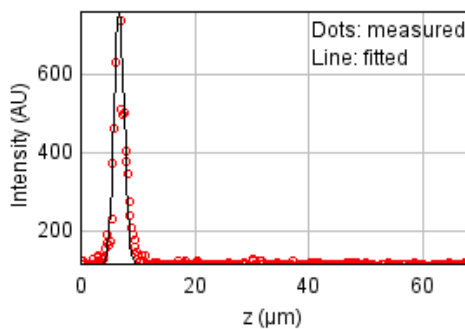
b = 0.024 px

c = 0.312 px

$x_c = 5.927$  px

$y_c = 6.257$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 138612.709

Standard deviation: 21.24870

$R^2$ : 0.95325

Parameters:

a = 114.80242

b = 759.82186

c = 6.82253

d = 0.88402

## Bead 227 (Rejected)

Date : Mon Oct 17 13:28:03 PDT 2022

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

Frame size : 10 pixels

Coordinates : -16.3  $\mu\text{m}$  (x), -53.0  $\mu\text{m}$  (y), 48.6  $\mu\text{m}$  (z)

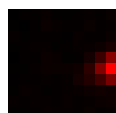
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

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

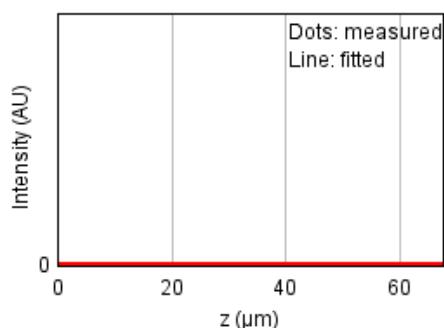
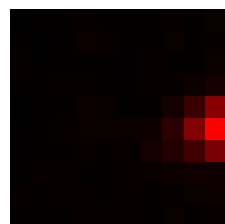
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 0.00000E0

Standard deviation: 0.00000E0

R<sup>2</sup>: 0.00000

Parameters:

a = 0.00000E0

b = 0.00000E0

c = -0.11115

d = 0.11151

## Bead 228

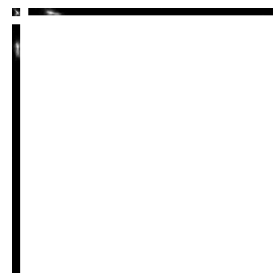
Date : Mon Oct 17 13:28:03 PDT 2022

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

Frame size : 10 pixels

Coordinates : 77.2  $\mu\text{m}$  (x), -62.7  $\mu\text{m}$  (y), 5.91  $\mu\text{m}$  (z)

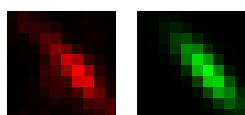
Corresponding bead : Not found



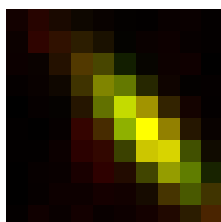
FWHM	Non corrected	Corrected	Theoretical
min	398 nm	411 nm	223 nm
max	1.29 $\mu\text{m}$	1.34 $\mu\text{m}$	223 nm
z	1.9 $\mu\text{m}$	1.91 $\mu\text{m}$	885 nm
Asymmetry	0.308		
Theta	-49.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 312.278$  (brightness)

$B = 125.327$  (background)

$a = 0.528$  px

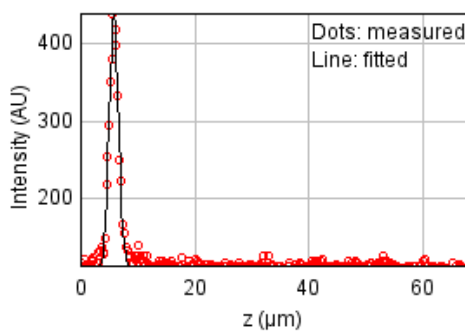
$b = -0.379$  px

$c = 0.401$  px

$x_c = 5.933$  px

$y_c = 5.118$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16320.7602

Standard deviation: 7.29123

$R^2: 0.97584$

Parameters:

$a = 112.96643$

$b = 438.20364$

$c = 5.91071$

$d = 0.80777$

## Bead 229

Date : Mon Oct 17 13:28:03 PDT 2022

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

Frame size : 10 pixels

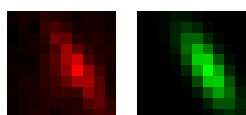
Coordinates : 61.2  $\mu\text{m}$  (x), -67.3  $\mu\text{m}$  (y), 5.83  $\mu\text{m}$  (z)

Corresponding bead : Not found

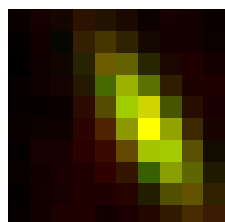
FWHM	Non corrected	Corrected	Theoretical
min	466 nm	481 nm	223 nm
max	1.29 $\mu\text{m}$	1.33 $\mu\text{m}$	223 nm
z	1.91 $\mu\text{m}$	1.91 $\mu\text{m}$	885 nm
Asymmetry	0.361		
Theta	-59.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 272.961 (brightness)

B = 122.614 (background)

a = 0.476 px

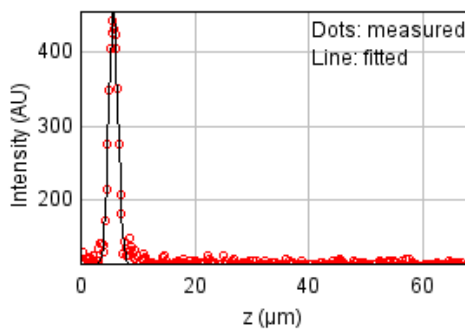
b = -0.238 px

c = 0.224 px

xc = 5.976 px

yc = 4.875 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16894.7726

Standard deviation: 7.41834

$R^2$ : 0.97765

Parameters:

a = 113.21311

b = 457.24285

c = 5.82801

d = 0.80932

## Bead 230 (Rejected)

Date : Mon Oct 17 13:28:03 PDT 2022

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

Frame size : 10 pixels

Coordinates : -113  $\mu\text{m}$  (x), -86.6  $\mu\text{m}$  (y), 4.66  $\mu\text{m}$  (z)

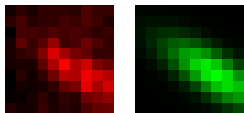
Corresponding bead : Not found

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

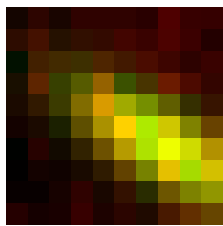
FWHM	Non corrected	Corrected	Theoretical
min	620 nm	641 nm	223 nm
max	1.75 $\mu\text{m}$	1.81 $\mu\text{m}$	223 nm
z	2.76 $\mu\text{m}$	2.78 $\mu\text{m}$	885 nm
Asymmetry	0.355		
Theta	-32.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.850$



Parameters:

A = 102.858 (brightness)

B = 118.444 (background)

a = 0.132 px

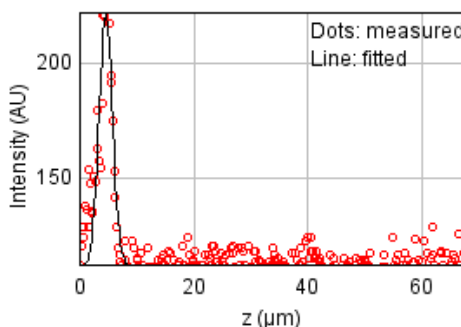
b = -0.138 px

c = 0.261 px

xc = 6.800 px

yc = 5.858 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17424.9842

Standard deviation: 7.53385

$R^2$ : 0.85857

Parameters:

a = 112.35681

b = 221.51596

c = 4.66294

d = 1.17399

## Bead 231 (Rejected)

Date : Mon Oct 17 13:28:03 PDT 2022

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

Frame size : 10 pixels

Coordinates : -144  $\mu\text{m}$  (x), 65.9  $\mu\text{m}$  (y), 4.35  $\mu\text{m}$  (z)

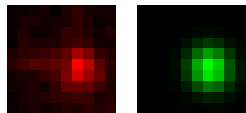
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

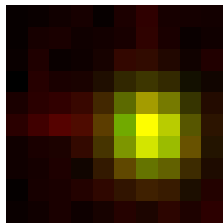
FWHM	Non corrected	Corrected	Theoretical
min	648 nm	669 nm	223 nm
max	683 nm	706 nm	223 nm
z	2.72 $\mu\text{m}$	2.74 $\mu\text{m}$	885 nm
Asymmetry	0.948		
Theta	-65.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.883$



Parameters:

A = 116.687 (brightness)

B = 112.108 (background)

a = 0.315 px

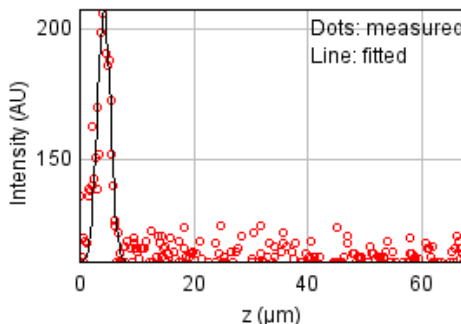
b = -0.012 px

c = 0.293 px

xc = 6.157 px

yc = 5.333 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16062.4180

Standard deviation: 7.23330

$R^2$ : 0.83629

Parameters:

a = 110.40245

b = 207.19035

c = 4.35107

d = 1.15718

## Bead 232

Date : Mon Oct 17 13:28:04 PDT 2022

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

Frame size : 10 pixels

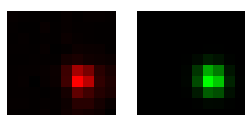
Coordinates : 70.3  $\mu\text{m}$  (x), 39.9  $\mu\text{m}$  (y), 6.53  $\mu\text{m}$  (z)

Corresponding bead : Not found

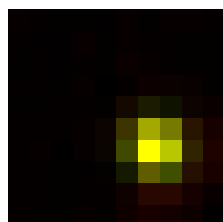
FWHM	Non corrected	Corrected	Theoretical
min	418 nm	432 nm	223 nm
max	442 nm	457 nm	223 nm
z	1.64 $\mu\text{m}$	1.64 $\mu\text{m}$	885 nm
Asymmetry	0.946		
Theta	-55.2°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 707.804$  (brightness)

$B = 121.216$  (background)

$a = 0.741$  px

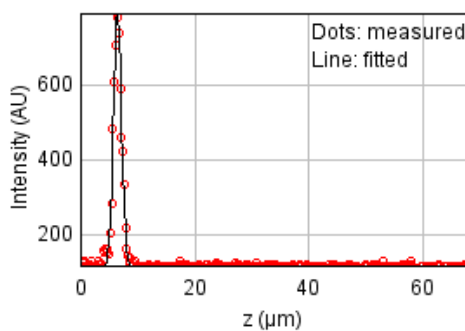
$b = -0.038$  px

$c = 0.713$  px

$x_c = 6.322$  px

$y_c = 5.807$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33114.4277

Standard deviation: 10.38579

$R^2: 0.98697$

Parameters:

$a = 113.88822$

$b = 795.87595$

$c = 6.53412$

$d = 0.69448$



## Bead 233

Date : Mon Oct 17 13:28:04 PDT 2022

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

Frame size : 10 pixels

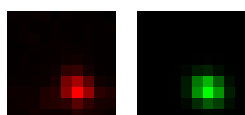
Coordinates : -223 nm (x), 28.4 um (y), 7.19 um (z)

Corresponding bead : Not found

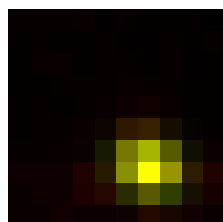
FWHM	Non corrected	Corrected	Theoretical
min	428 nm	443 nm	223 nm
max	508 nm	525 nm	223 nm
z	1.87 um	1.87 um	885 nm
Asymmetry	0.843		
Theta	-24.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 693.182 (brightness)

B = 123.210 (background)

a = 0.555 px

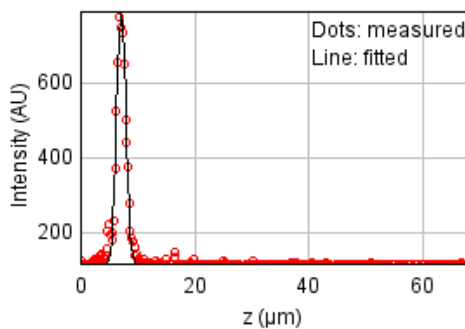
b = -0.079 px

c = 0.697 px

xc = 5.984 px

yc = 6.744 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57634.7712

Standard deviation: 13.70166

$R^2$ : 0.97998

Parameters:

a = 115.38526

b = 794.26263

c = 7.19046

d = 0.79281

## Bead 234

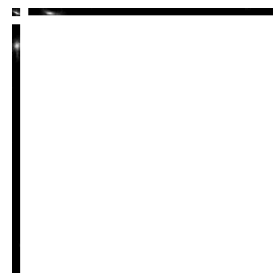
Date : Mon Oct 17 13:28:04 PDT 2022

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

Frame size : 10 pixels

Coordinates : 128  $\mu\text{m}$  (x), -10.3  $\mu\text{m}$  (y), 5.9  $\mu\text{m}$  (z)

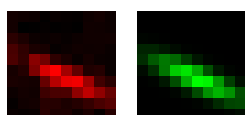
Corresponding bead : Not found



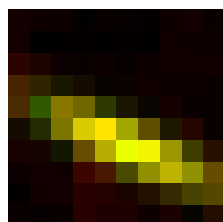
FWHM	Non corrected	Corrected	Theoretical
min	368 nm	381 nm	223 nm
max	1.53 $\mu\text{m}$	1.58 $\mu\text{m}$	223 nm
z	2.49 $\mu\text{m}$	2.5 $\mu\text{m}$	885 nm
Asymmetry	0.24		
Theta	-24.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 200.771$  (brightness)

$B = 116.172$  (background)

$a = 0.216$  px

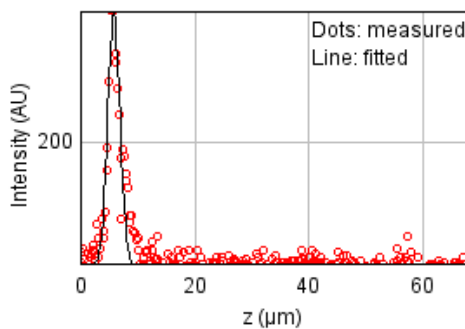
$b = -0.351$  px

$c = 0.829$  px

$x_c = 5.003$  px

$y_c = 5.760$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36394.6530

Standard deviation: 10.88804

$R^2 = 0.88246$

Parameters:

$a = 111.68194$

$b = 296.01764$

$c = 5.90125$

$d = 1.05651$

## Bead 235

Date : Mon Oct 17 13:28:04 PDT 2022

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

Frame size : 10 pixels

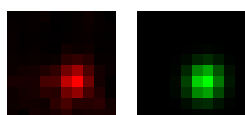
Coordinates : -50.7  $\mu\text{m}$  (x), -17.4  $\mu\text{m}$  (y), 7.54  $\mu\text{m}$  (z)

Corresponding bead : Not found

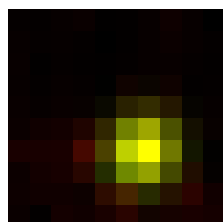
FWHM	Non corrected	Corrected	Theoretical
min	523 nm	541 nm	223 nm
max	555 nm	573 nm	223 nm
z	2.16 $\mu\text{m}$	2.17 $\mu\text{m}$	885 nm
Asymmetry	0.943		
Theta	63.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 566.650 (brightness)

B = 128.766 (background)

a = 0.480 px

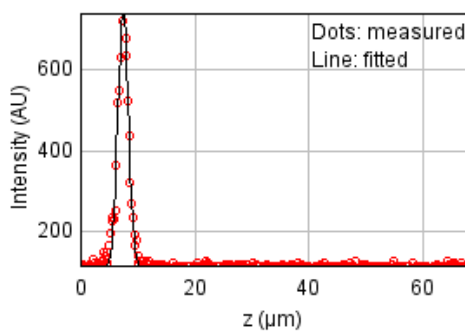
b = 0.021 px

c = 0.447 px

$x_c = 5.715$  px

$y_c = 5.998$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37028.2415

Standard deviation: 10.98240

$R^2$ : 0.98681

Parameters:

a = 113.02897

b = 740.07228

c = 7.53914

d = 0.91905

## Bead 236

Date : Mon Oct 17 13:28:04 PDT 2022

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

Frame size : 10 pixels

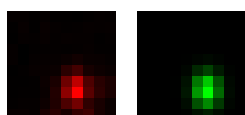
Coordinates : 37.4  $\mu\text{m}$  (x), -19.3  $\mu\text{m}$  (y), 6.84  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	435 nm	450 nm	223 nm
max	552 nm	571 nm	223 nm
z	1.65 $\mu\text{m}$	1.65 $\mu\text{m}$	885 nm
Asymmetry	0.788		
Theta	-89.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 712.762$  (brightness)

$B = 121.106$  (background)

$a = 0.708$  px

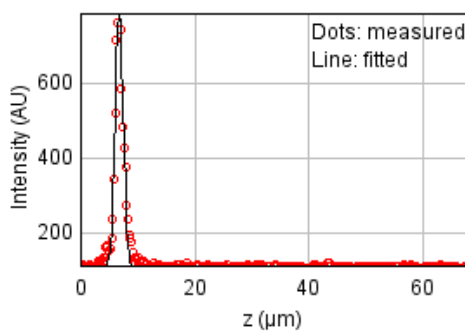
$b = -0.003$  px

$c = 0.440$  px

$x_c = 5.868$  px

$y_c = 6.779$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 72960.2943

Standard deviation: 15.41609

$R^2: 0.97123$

Parameters:

$a = 113.75097$

$b = 787.39891$

$c = 6.84301$

$d = 0.69921$

## Bead 237

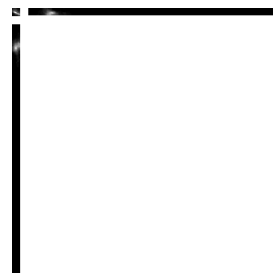
Date : Mon Oct 17 13:28:04 PDT 2022

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

Frame size : 10 pixels

Coordinates : 161  $\mu\text{m}$  (x), -58.2  $\mu\text{m}$  (y), 6.02  $\mu\text{m}$  (z)

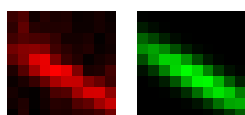
Corresponding bead : Not found



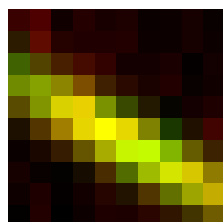
FWHM	Non corrected	Corrected	Theoretical
min	462 nm	478 nm	223 nm
max	2.66 $\mu\text{m}$	2.75 $\mu\text{m}$	223 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	885 nm
Asymmetry	0.174		
Theta	-30.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 147.496$  (brightness)

$B = 119.634$  (background)

$a = 0.171$  px

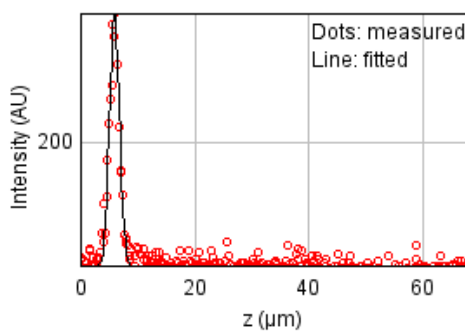
$b = -0.263$  px

$c = 0.475$  px

$x_c = 4.980$  px

$y_c = 5.628$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14766.4554

Standard deviation: 6.93536

$R^2 = 0.93784$

Parameters:

$a = 110.28934$

$b = 293.14074$

$c = 6.01683$

$d = 0.86633$

## Bead 238 (Rejected)

Date : Mon Oct 17 13:28:04 PDT 2022

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

Frame size : 10 pixels

Coordinates : -159  $\mu\text{m}$  (x), -66.7  $\mu\text{m}$  (y), 5.07  $\mu\text{m}$  (z)

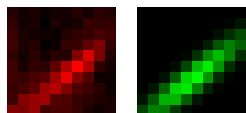
Corresponding bead : Not found

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

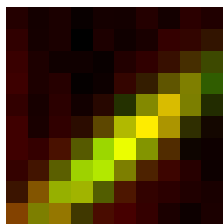
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	419 nm	223 nm
max	2.04 $\mu\text{m}$	2.11 $\mu\text{m}$	223 nm
z	1.31 $\mu\text{m}$	1.31 $\mu\text{m}$	885 nm
Asymmetry	0.198		
Theta	39.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.859$



Parameters:

A = 106.708 (brightness)

B = 116.546 (background)

a = 0.348 px

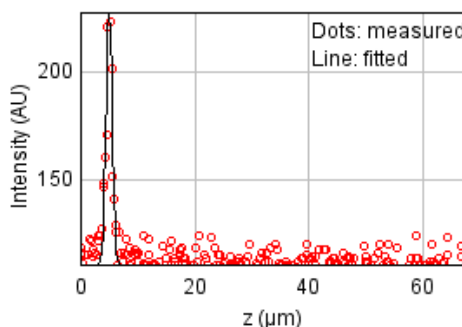
b = 0.385 px

c = 0.501 px

xc = 4.671 px

yc = 6.066 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 12677.5732

Standard deviation: 6.42612

$R^2$ : 0.82463

Parameters:

a = 110.64391

b = 227.71958

c = 5.06782

d = 0.55601

## Bead 239 (Rejected)

Date : Mon Oct 17 13:28:05 PDT 2022

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

Frame size : 10 pixels

Coordinates : -31.2  $\mu\text{m}$  (x), -70.4  $\mu\text{m}$  (y), 6.3  $\mu\text{m}$  (z)

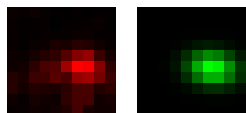
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

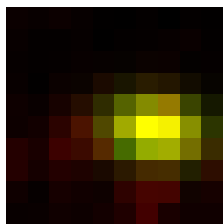
FWHM	Non corrected	Corrected	Theoretical
min	515 nm	532 nm	223 nm
max	767 nm	793 nm	223 nm
z	1.77 $\mu\text{m}$	1.78 $\mu\text{m}$	885 nm
Asymmetry	0.671		
Theta	-7.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.886$



Parameters:

A = 415.601 (brightness)

B = 134.946 (background)

a = 0.232 px

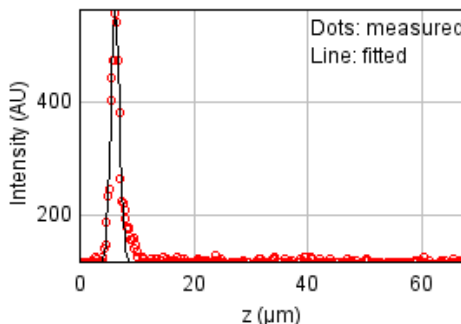
b = -0.034 px

c = 0.503 px

xc = 6.391 px

yc = 5.133 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 46914.2233

Standard deviation: 12.36184

$R^2$ : 0.96211

Parameters:

a = 115.96479

b = 568.15075

c = 6.30453

d = 0.75287

## Bead 240

Date : Mon Oct 17 13:28:05 PDT 2022

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

Frame size : 10 pixels

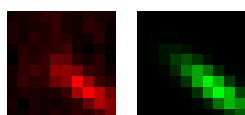
Coordinates : 136  $\mu\text{m}$  (x), -72.1  $\mu\text{m}$  (y), 5.09  $\mu\text{m}$  (z)

Corresponding bead : Not found

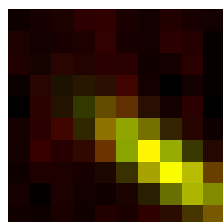
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	399 nm	223 nm
max	1.32 $\mu\text{m}$	1.37 $\mu\text{m}$	223 nm
z	1.66 $\mu\text{m}$	1.67 $\mu\text{m}$	885 nm
Asymmetry	0.291		
Theta	-37.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 104.097$  (brightness)

$B = 113.600$  (background)

$a = 0.376$  px

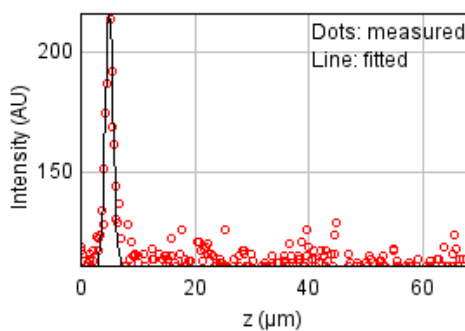
$b = -0.396$  px

$c = 0.602$  px

$x_c = 6.665$  px

$y_c = 6.597$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 10612.8064

Standard deviation: 5.87957

$R^2: 0.84821$

Parameters:

$a = 111.48691$

$b = 215.64406$

$c = 5.08610$

$d = 0.70448$



## Bead 241

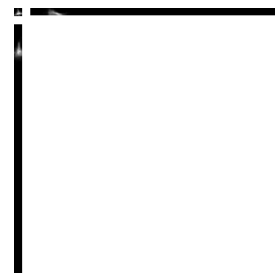
Date : Mon Oct 17 13:28:05 PDT 2022

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

Frame size : 10 pixels

Coordinates : 17.0  $\mu\text{m}$  (x), -85.8  $\mu\text{m}$  (y), 6.91  $\mu\text{m}$  (z)

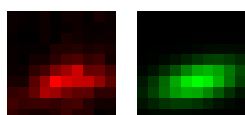
Corresponding bead : Not found



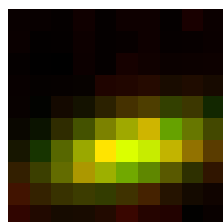
FWHM	Non corrected	Corrected	Theoretical
min	561 nm	580 nm	223 nm
max	1.31 $\mu\text{m}$	1.36 $\mu\text{m}$	223 nm
z	2.34 $\mu\text{m}$	2.35 $\mu\text{m}$	885 nm
Asymmetry	0.427		
Theta	12.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 237.383$  (brightness)

$B = 120.330$  (background)

$a = 0.095$  px

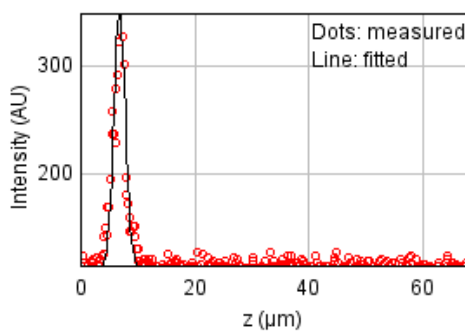
$b = 0.075$  px

$c = 0.409$  px

$x_c = 5.099$  px

$y_c = 5.984$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 48097.5490

Standard deviation: 12.51677

$R^2: 0.89838$

Parameters:

$a = 113.13410$

$b = 349.85006$

$c = 6.91315$

$d = 0.99355$

## Bead 242 (Rejected)

Date : Mon Oct 17 13:28:05 PDT 2022

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

Frame size : 10 pixels

Coordinates : -115  $\mu\text{m}$  (x), 78.2  $\mu\text{m}$  (y), 6.45  $\mu\text{m}$  (z)

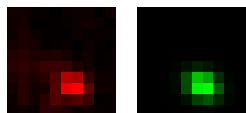
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

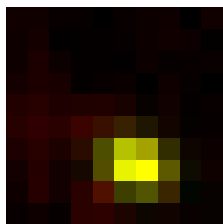
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	415 nm	223 nm
max	517 nm	534 nm	223 nm
z	2.51 $\mu\text{m}$	2.52 $\mu\text{m}$	885 nm
Asymmetry	0.777		
Theta	-22.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.898$



Parameters:

A = 370.346 (brightness)

B = 125.468 (background)

a = 0.550 px

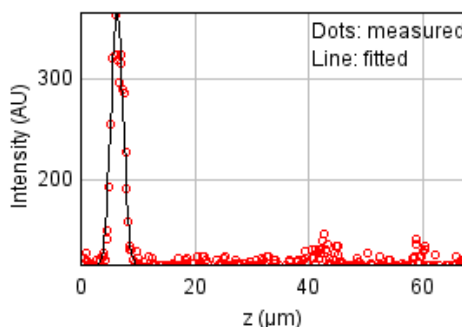
b = -0.116 px

c = 0.785 px

xc = 5.484 px

yc = 6.713 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 42249.8082

Standard deviation: 11.73122

$R^2$ : 0.92539

Parameters:

a = 113.58827

b = 367.90734

c = 6.45432

d = 1.06494

## Bead 243 (Rejected)

Date : Mon Oct 17 13:28:05 PDT 2022

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

Frame size : 10 pixels

Coordinates : -7.21  $\mu\text{m}$  (x), 68.5  $\mu\text{m}$  (y), 56.7  $\mu\text{m}$  (z)

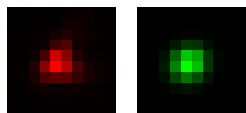
Corresponding bead : Not found

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

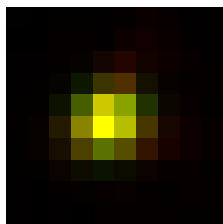
FWHM	Non corrected	Corrected	Theoretical
min	491 nm	508 nm	223 nm
max	543 nm	561 nm	223 nm
z	1.9 $\mu\text{m}$	1.91 $\mu\text{m}$	885 nm
Asymmetry	0.905		
Theta	30.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1279.544 (brightness)

B = 127.378 (background)

a = 0.481 px

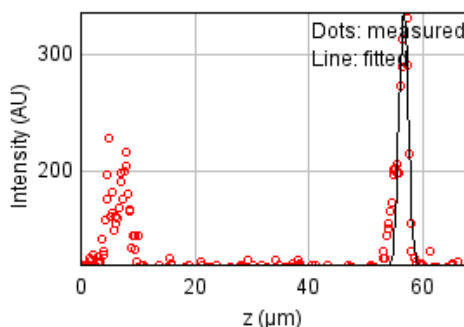
b = 0.044 px

c = 0.530 px

xc = 4.217 px

yc = 4.717 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 134829.225

Standard deviation: 20.95670

$R^2$ : 0.68098

Parameters:

a = 120.84537

b = 335.83616

c = 56.68564

d = 0.80693

## Bead 244 (Rejected)

Date : Mon Oct 17 13:28:05 PDT 2022

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

Frame size : 10 pixels

Coordinates : 150  $\mu\text{m}$  (x), 52.4  $\mu\text{m}$  (y), 6.17  $\mu\text{m}$  (z)

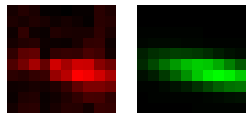
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

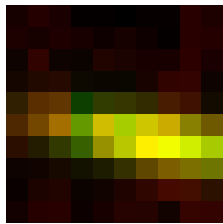
FWHM	Non corrected	Corrected	Theoretical
min	432 nm	447 nm	223 nm
max	1.78 $\mu\text{m}$	1.84 $\mu\text{m}$	223 nm
z	3.4 $\mu\text{m}$	3.41 $\mu\text{m}$	885 nm
Asymmetry	0.243		
Theta	-9.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 92.559 (brightness)

B = 113.488 (background)

a = 0.061 px

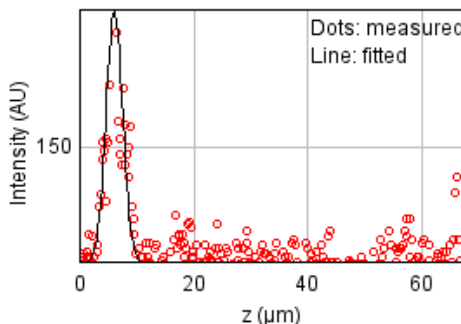
b = -0.110 px

c = 0.700 px

xc = 6.512 px

yc = 5.711 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21481.6044

Standard deviation: 8.36497

$R^2$ : 0.78398

Parameters:

a = 111.03969

b = 196.17778

c = 6.17251

d = 1.44404

## Bead 245

Date : Mon Oct 17 13:28:05 PDT 2022

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

Frame size : 10 pixels

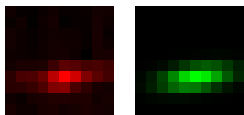
Coordinates : -157  $\mu\text{m}$  (x), 36.5  $\mu\text{m}$  (y), 5.85  $\mu\text{m}$  (z)

Corresponding bead : Not found

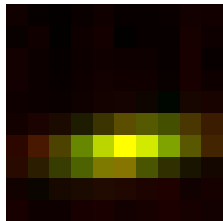
FWHM	Non corrected	Corrected	Theoretical
min	366 nm	379 nm	223 nm
max	1.06 $\mu\text{m}$	1.1 $\mu\text{m}$	223 nm
z	1.9 $\mu\text{m}$	1.9 $\mu\text{m}$	885 nm
Asymmetry	0.345		
Theta	7.6°		

### 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:

$A = 251.827$  (brightness)

$B = 115.238$  (background)

$a = 0.135$  px

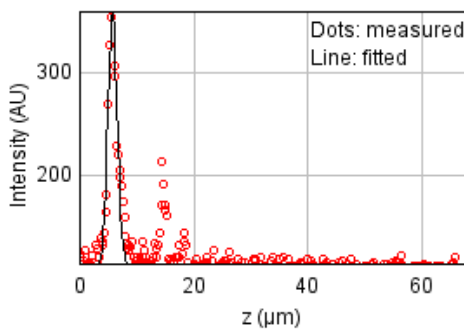
$b = 0.115$  px

$c = 0.985$  px

$x_c = 5.101$  px

$y_c = 6.089$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 67746.0175

Standard deviation: 14.85500

$R^2: 0.84773$

Parameters:

$a = 113.97393$

$b = 360.25434$

$c = 5.85373$

$d = 0.80577$

## Bead 246

Date : Mon Oct 17 13:28:06 PDT 2022

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

Frame size : 10 pixels

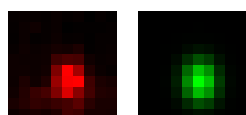
Coordinates : 4.44  $\mu\text{m}$  (x), 8.8  $\mu\text{m}$  (y), 7.32  $\mu\text{m}$  (z)

Corresponding bead : Not found

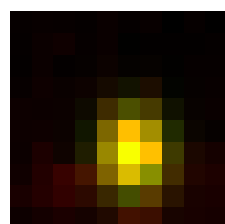
FWHM	Non corrected	Corrected	Theoretical
min	541 nm	559 nm	223 nm
max	672 nm	695 nm	223 nm
z	2.22 $\mu\text{m}$	2.23 $\mu\text{m}$	885 nm
Asymmetry	0.805		
Theta	-87.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 486.258$  (brightness)

$B = 126.215$  (background)

$a = 0.458$  px

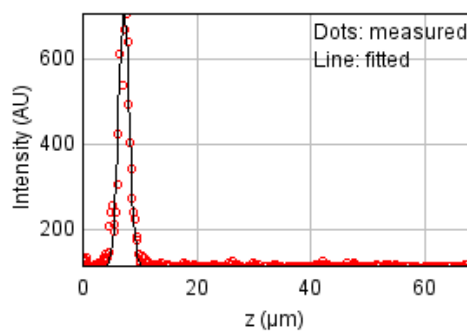
$b = -0.007$  px

$c = 0.297$  px

$x_c = 5.189$  px

$y_c = 5.991$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 120565.200

Standard deviation: 19.81718

$R^2: 0.95506$

Parameters:

$a = 114.49403$

$b = 709.62887$

$c = 7.32093$

$d = 0.94470$

## Bead 247

Date : Mon Oct 17 13:28:06 PDT 2022

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

Frame size : 10 pixels

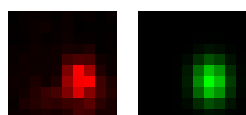
Coordinates : 4.44  $\mu\text{m}$  (x), 8.8  $\mu\text{m}$  (y), 7.32  $\mu\text{m}$  (z)

Corresponding bead : Not found

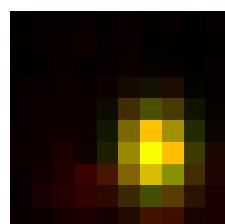
FWHM	Non corrected	Corrected	Theoretical
min	545 nm	563 nm	223 nm
max	677 nm	700 nm	223 nm
z	2.22 $\mu\text{m}$	2.23 $\mu\text{m}$	885 nm
Asymmetry	0.804		
Theta	-87.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 486.229 (brightness)

B = 124.530 (background)

a = 0.452 px

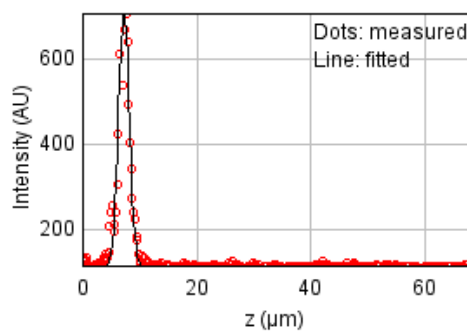
b = -0.007 px

c = 0.293 px

xc = 6.188 px

yc = 5.993 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 120565.200

Standard deviation: 19.81718

$R^2$ : 0.95506

Parameters:

a = 114.49403

b = 709.62887

c = 7.32093

d = 0.94470

## Bead 248 (Rejected)

Date : Mon Oct 17 13:28:06 PDT 2022

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

Frame size : 10 pixels

Coordinates : -2.86  $\mu\text{m}$  (x), 2.2  $\mu\text{m}$  (y), 37.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
z	1.06 $\mu\text{m}$	1.07 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

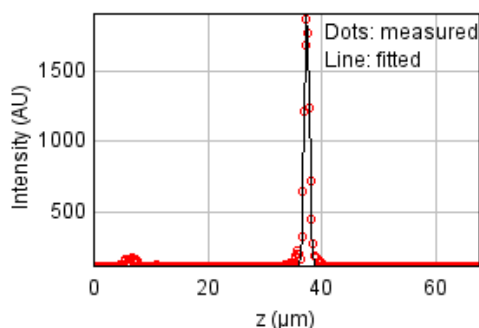
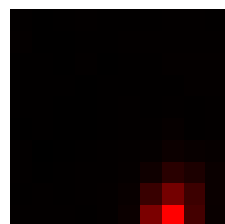
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 117864.145

Standard deviation: 19.59394

$R^2$ : 0.98971

Parameters:

$a = 119.62668$

$b = 1905.50169$

$c = 37.42095$

$d = 0.45209$



## Bead 249

Date : Mon Oct 17 13:28:06 PDT 2022

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

Frame size : 10 pixels

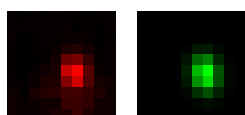
Coordinates : -7.1  $\mu\text{m}$  (x), -30.2  $\mu\text{m}$  (y), 6.59  $\mu\text{m}$  (z)

Corresponding bead : Not found

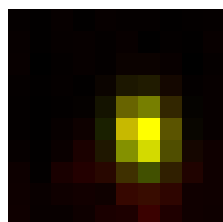
FWHM	Non corrected	Corrected	Theoretical
min	430 nm	444 nm	223 nm
max	564 nm	583 nm	223 nm
z	1.72 $\mu\text{m}$	1.73 $\mu\text{m}$	885 nm
Asymmetry	0.762		
Theta	-81.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 626.389 (brightness)

B = 128.698 (background)

a = 0.720 px

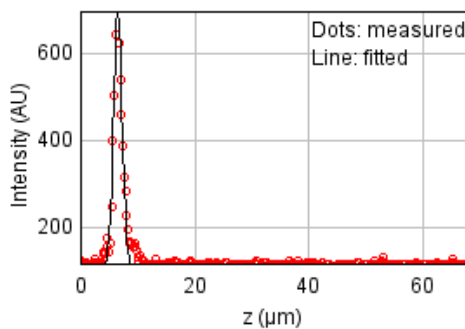
b = -0.043 px

c = 0.428 px

xc = 5.742 px

yc = 5.292 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 59823.6345

Standard deviation: 13.95941

$R^2$ : 0.96988

Parameters:

a = 113.96971

b = 696.97279

c = 6.59375

d = 0.73154

## Bead 250 (Rejected)

Date : Mon Oct 17 13:28:06 PDT 2022

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

Frame size : 10 pixels

Coordinates : -20.2  $\mu\text{m}$  (x), -37.2  $\mu\text{m}$  (y), 6.85  $\mu\text{m}$  (z)

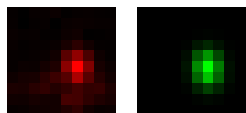
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

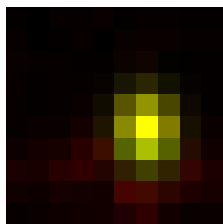
FWHM	Non corrected	Corrected	Theoretical
min	448 nm	463 nm	223 nm
max	574 nm	594 nm	223 nm
z	1.64 $\mu\text{m}$	1.65 $\mu\text{m}$	885 nm
Asymmetry	0.78		
Theta	-85.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.886$



Parameters:

A = 552.877 (brightness)

B = 136.574 (background)

a = 0.668 px

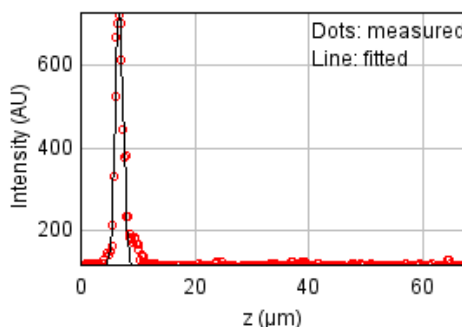
b = -0.020 px

c = 0.409 px

xc = 5.964 px

yc = 5.153 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 74687.4127

Standard deviation: 15.59748

$R^2$ : 0.96461

Parameters:

a = 115.79321

b = 728.61707

c = 6.85046

d = 0.69843

## Bead 251 (Rejected)

Date : Mon Oct 17 13:28:06 PDT 2022

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

Frame size : 10 pixels

Coordinates : 10.1  $\mu\text{m}$  (x), -41.8  $\mu\text{m}$  (y), 7.46  $\mu\text{m}$  (z)

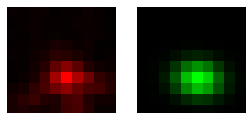
Corresponding bead : Not found

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

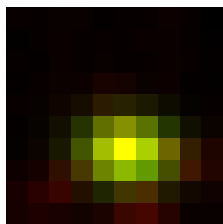
FWHM	Non corrected	Corrected	Theoretical
min	545 nm	564 nm	223 nm
max	729 nm	753 nm	223 nm
z	2.52 $\mu\text{m}$	2.53 $\mu\text{m}$	885 nm
Asymmetry	0.748		
Theta	-5.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.900$



Parameters:

A = 502.010 (brightness)

B = 126.978 (background)

a = 0.254 px

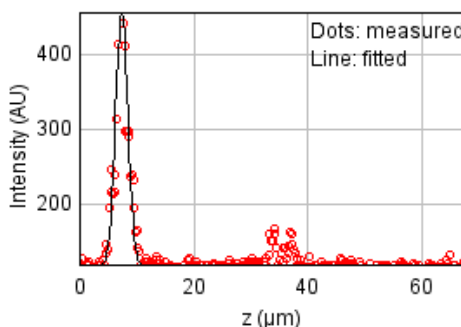
b = -0.017 px

c = 0.450 px

xc = 5.096 px

yc = 6.135 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 88041.9336

Standard deviation: 16.93463

$R^2$ : 0.91487

Parameters:

a = 116.79542

b = 457.61852

c = 7.46097

d = 1.07101

## Bead 252

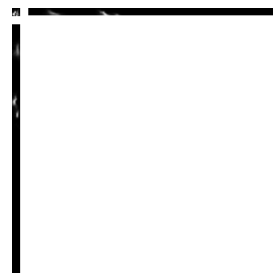
Date : Mon Oct 17 13:28:06 PDT 2022

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

Frame size : 10 pixels

Coordinates : -82.6  $\mu\text{m}$  (x), -64.0  $\mu\text{m}$  (y), 20.6  $\mu\text{m}$  (z)

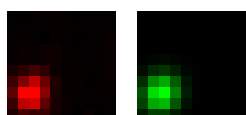
Corresponding bead : Not found



FWHM	Non corrected	Corrected	Theoretical
min	549 nm	568 nm	223 nm
max	614 nm	635 nm	223 nm
z	1.13 $\mu\text{m}$	1.13 $\mu\text{m}$	885 nm
Asymmetry	0.894		
Theta	63.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 681.804$  (brightness)

$B = 116.083$  (background)

$a = 0.426$  px

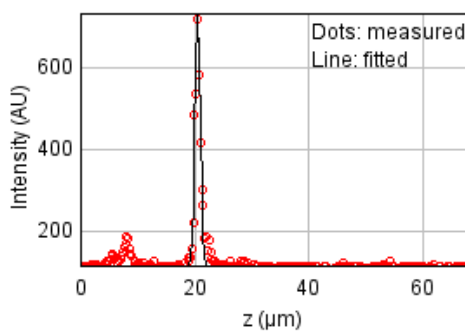
$b = 0.036$  px

$c = 0.374$  px

$x_c = 1.671$  px

$y_c = 7.090$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 84892.9016

Standard deviation: 16.62901

$R^2: 0.94565$

Parameters:

$a = 117.08615$

$b = 743.45947$

$c = 20.58304$

$d = 0.47928$

## Bead 253

Date : Mon Oct 17 13:28:06 PDT 2022

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

Frame size : 10 pixels

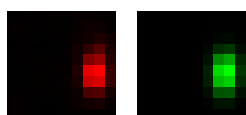
Coordinates : -47.2  $\mu\text{m}$  (x), -63.8  $\mu\text{m}$  (y), 63.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

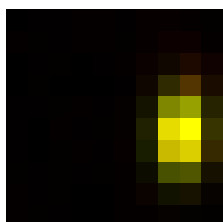
FWHM	Non corrected	Corrected	Theoretical
min	392 nm	405 nm	223 nm
max	636 nm	657 nm	223 nm
z	1.13 $\mu\text{m}$	1.13 $\mu\text{m}$	885 nm
Asymmetry	0.617		
Theta	87.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1328.463 (brightness)

B = 118.427 (background)

a = 0.872 px

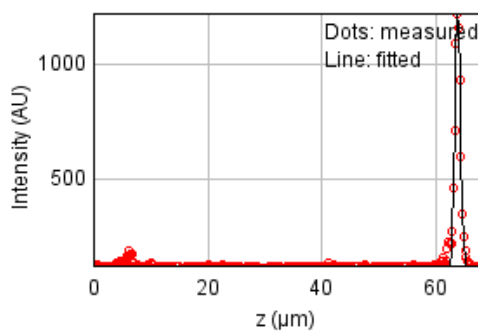
b = 0.022 px

c = 0.333 px

$x_c = 7.582$  px

$y_c = 5.209$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 79812.1196

Standard deviation: 16.12372

$R^2$ : 0.98316

Parameters:

a = 118.04277

b = 1231.61802

c = 63.85874

d = 0.47824

## Bead 254

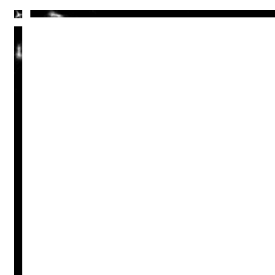
Date : Mon Oct 17 13:28:07 PDT 2022

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

Frame size : 10 pixels

Coordinates : 53.3  $\mu\text{m}$  (x), -75.0  $\mu\text{m}$  (y), 7.02  $\mu\text{m}$  (z)

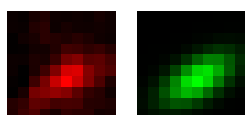
Corresponding bead : Not found



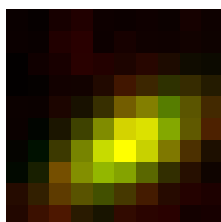
FWHM	Non corrected	Corrected	Theoretical
min	581 nm	601 nm	223 nm
max	1.17 $\mu\text{m}$	1.21 $\mu\text{m}$	223 nm
z	2.23 $\mu\text{m}$	2.24 $\mu\text{m}$	885 nm
Asymmetry	0.496		
Theta	30.9°		

### 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:

$A = 208.886$  (brightness)

$B = 122.466$  (background)

$a = 0.177$  px

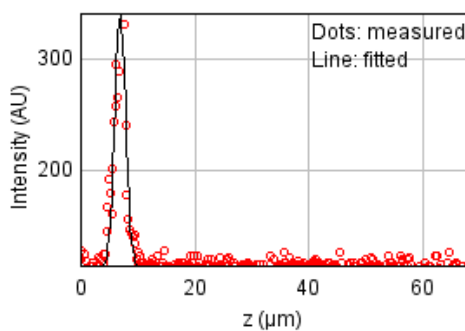
$b = 0.132$  px

$c = 0.319$  px

$x_c = 5.115$  px

$y_c = 5.751$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 34575.3793

Standard deviation: 10.61242

$R^2: 0.91592$

Parameters:

$a = 113.35272$

$b = 341.05987$

$c = 7.02032$

$d = 0.94871$

## Bead 255 (Rejected)

Date : Mon Oct 17 13:28:07 PDT 2022

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

Frame size : 10 pixels

Coordinates : -107  $\mu\text{m}$  (x), 90.7  $\mu\text{m}$  (y), 7.26  $\mu\text{m}$  (z)

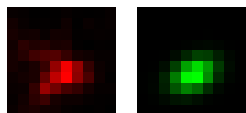
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

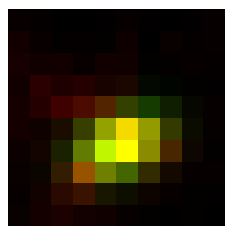
FWHM	Non corrected	Corrected	Theoretical
min	473 nm	489 nm	223 nm
max	716 nm	740 nm	223 nm
z	2.23 $\mu\text{m}$	2.24 $\mu\text{m}$	885 nm
Asymmetry	0.661		
Theta	25.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.878$



Parameters:

A = 395.730 (brightness)

B = 129.081 (background)

a = 0.325 px

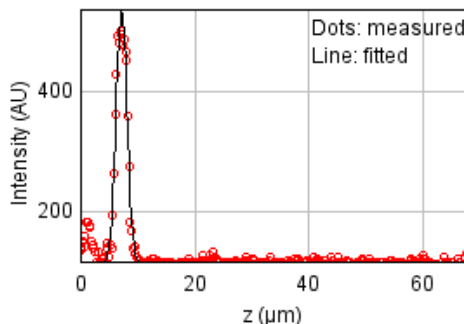
b = 0.131 px

c = 0.537 px

xc = 4.671 px

yc = 5.725 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 61466.8415

Standard deviation: 14.14983

$R^2$ : 0.95490

Parameters:

a = 114.37607

b = 538.11746

c = 7.26200

d = 0.94660

## Bead 256 (Rejected)

Date : Mon Oct 17 13:28:07 PDT 2022

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

Frame size : 10 pixels

Coordinates : -63.7  $\mu\text{m}$  (x), 31.4  $\mu\text{m}$  (y), 8.05  $\mu\text{m}$  (z)

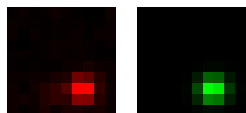
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

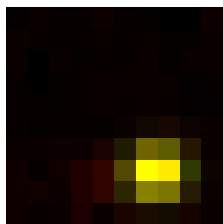
FWHM	Non corrected	Corrected	Theoretical
min	406 nm	419 nm	223 nm
max	445 nm	460 nm	223 nm
z	3.03 $\mu\text{m}$	3.04 $\mu\text{m}$	885 nm
Asymmetry	0.912		
Theta	2.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 564.956 (brightness)

B = 121.848 (background)

a = 0.678 px

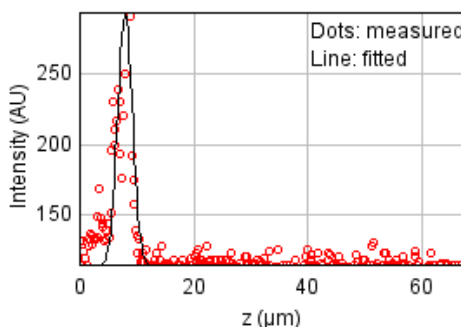
b = 0.005 px

c = 0.815 px

xc = 6.436 px

yc = 7.078 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 83083.2222

Standard deviation: 16.45082

$R^2$ : 0.79057

Parameters:

a = 114.18680

b = 294.28282

c = 8.05490

d = 1.28679



## Bead 257 (Rejected)

Date : Mon Oct 17 13:28:07 PDT 2022

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

Frame size : 10 pixels

Coordinates : -141  $\mu\text{m}$  (x), 21.7  $\mu\text{m}$  (y), 7.18  $\mu\text{m}$  (z)

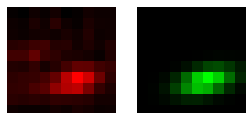
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

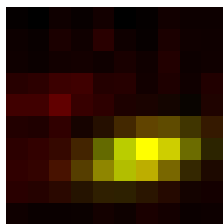
FWHM	Non corrected	Corrected	Theoretical
min	389 nm	402 nm	223 nm
max	860 nm	889 nm	223 nm
z	3.01 $\mu\text{m}$	3.02 $\mu\text{m}$	885 nm
Asymmetry	0.452		
Theta	13.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 321.191 (brightness)

B = 139.743 (background)

a = 0.218 px

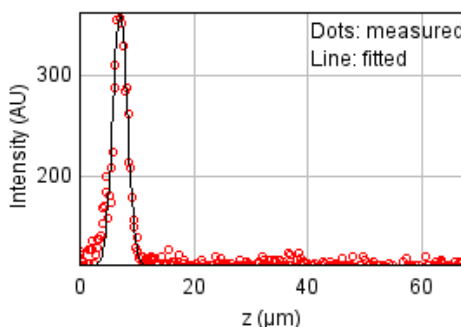
b = 0.155 px

c = 0.852 px

xc = 5.783 px

yc = 6.313 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31285.0247

Standard deviation: 10.09483

$R^2$ : 0.95065

Parameters:

a = 112.02064

b = 362.55889

c = 7.18161

d = 1.27712

## Bead 258

Date : Mon Oct 17 13:28:07 PDT 2022

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

Frame size : 10 pixels

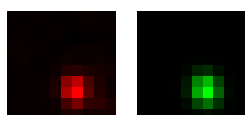
Coordinates : 69.7  $\mu\text{m}$  (x), 17.4  $\mu\text{m}$  (y), 7.74  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	433 nm	448 nm	223 nm
max	488 nm	505 nm	223 nm
z	1.72 $\mu\text{m}$	1.72 $\mu\text{m}$	885 nm
Asymmetry	0.887		
Theta	-77.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 887.260 (brightness)

B = 122.951 (background)

a = 0.708 px

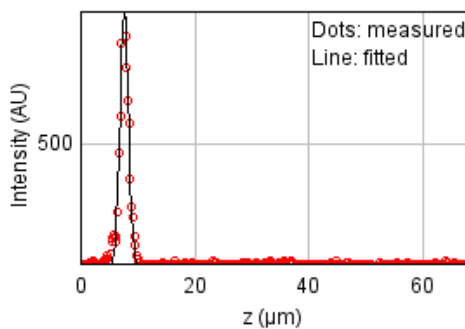
b = -0.031 px

c = 0.570 px

xc = 5.790 px

yc = 6.770 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 63282.9474

Standard deviation: 14.35735

$R^2$ : 0.98330

Parameters:

a = 114.36998

b = 926.33918

c = 7.73696

d = 0.72941

## Bead 259 (Rejected)

Date : Mon Oct 17 13:28:07 PDT 2022

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

Frame size : 10 pixels

Coordinates : 121  $\mu\text{m}$  (x), -3.52  $\mu\text{m}$  (y), 3.96  $\mu\text{m}$  (z)

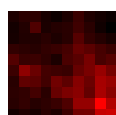
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
z	5.01 $\mu\text{m}$	5.03 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

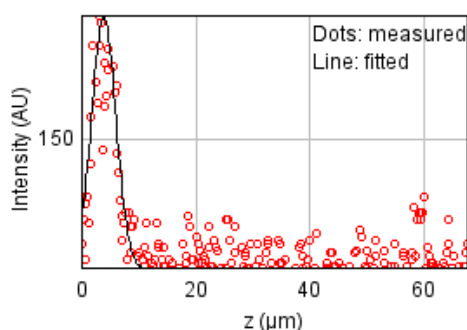
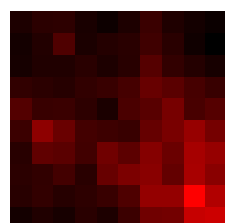
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 27158.2026

Standard deviation: 9.40549

R<sup>2</sup>: 0.76221

Parameters:

a = 111.27627

b = 186.73931

c = 3.95506

d = 2.12863

## Bead 260 (Rejected)

Date : Mon Oct 17 13:28:08 PDT 2022

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

Frame size : 10 pixels

Coordinates : 113 um (x), -4.71 um (y), 7.0 um (z)

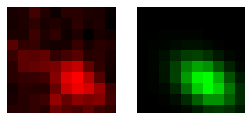
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

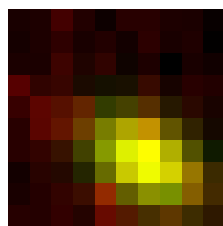
FWHM	Non corrected	Corrected	Theoretical
min	629 nm	650 nm	223 nm
max	963 nm	996 nm	223 nm
z	3.2 um	3.21 um	885 nm
Asymmetry	0.653		
Theta	-33.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.841$



Parameters:

A = 104.116 (brightness)

B = 116.088 (background)

a = 0.204 px

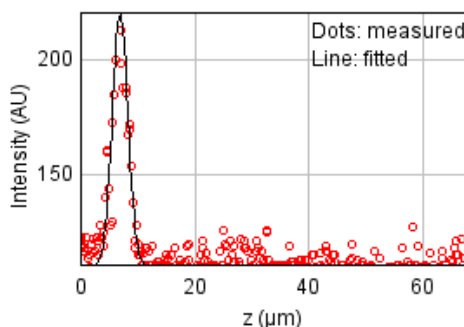
b = -0.090 px

c = 0.280 px

xc = 5.804 px

yc = 6.427 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19772.4432

Standard deviation: 8.02529

$R^2$ : 0.86206

Parameters:

a = 110.27678

b = 220.49800

c = 7.00025

d = 1.35906

## Bead 261

Date : Mon Oct 17 13:28:08 PDT 2022

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

Frame size : 10 pixels

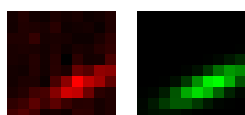
Coordinates : -144  $\mu\text{m}$  (x), -36.8  $\mu\text{m}$  (y), 4.69  $\mu\text{m}$  (z)

Corresponding bead : Not found

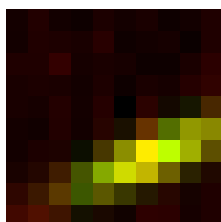
FWHM	Non corrected	Corrected	Theoretical
min	359 nm	371 nm	223 nm
max	1.35 $\mu\text{m}$	1.4 $\mu\text{m}$	223 nm
z	2.63 $\mu\text{m}$	2.64 $\mu\text{m}$	885 nm
Asymmetry	0.265		
Theta	22.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 134.595$  (brightness)

$B = 114.141$  (background)

$a = 0.218$  px

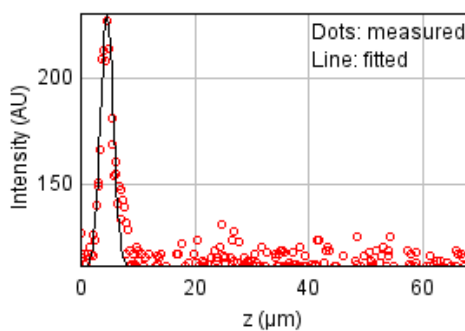
$b = 0.345$  px

$c = 0.895$  px

$x_c = 6.264$  px

$y_c = 6.250$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17440.7115

Standard deviation: 7.53725

$R^2: 0.87586$

Parameters:

$a = 110.77257$

$b = 231.32893$

$c = 4.69470$

$d = 1.11610$

## Bead 262 (Rejected)

Date : Mon Oct 17 13:28:08 PDT 2022

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

Frame size : 10 pixels

Coordinates : 162  $\mu\text{m}$  (x), -58.4  $\mu\text{m}$  (y), 5.26  $\mu\text{m}$  (z)

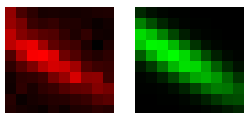
Corresponding bead : Not found

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

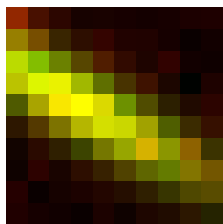
FWHM	Non corrected	Corrected	Theoretical
min	553 nm	571 nm	223 nm
max	2.71 $\mu\text{m}$	2.81 $\mu\text{m}$	223 nm
z	1.95 $\mu\text{m}$	1.96 $\mu\text{m}$	885 nm
Asymmetry	0.204		
Theta	-30.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 125.099 (brightness)

B = 115.452 (background)

a = 0.126 px

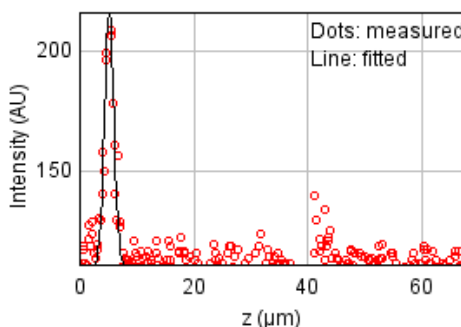
b = -0.184 px

c = 0.332 px

xc = 2.317 px

yc = 3.610 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13602.0270

Standard deviation: 6.65630

$R^2$ : 0.83899

Parameters:

a = 110.74625

b = 216.13394

c = 5.25938

d = 0.82794

## Bead 263

Date : Mon Oct 17 13:28:08 PDT 2022

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

Frame size : 10 pixels

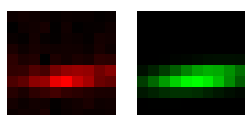
Coordinates : 140  $\mu\text{m}$  (x), 79.9  $\mu\text{m}$  (y), 6.36  $\mu\text{m}$  (z)

Corresponding bead : Not found

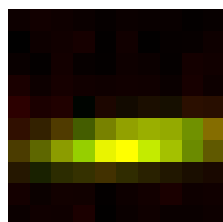
FWHM	Non corrected	Corrected	Theoretical
min	346 nm	358 nm	223 nm
max	1.57 $\mu\text{m}$	1.62 $\mu\text{m}$	223 nm
z	2.41 $\mu\text{m}$	2.42 $\mu\text{m}$	885 nm
Asymmetry	0.221		
Theta	4.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 219.423 (brightness)

B = 115.592 (background)

a = 0.061 px

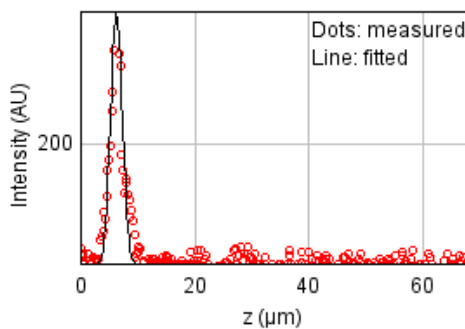
b = 0.083 px

c = 1.113 px

$x_c = 5.283$  px

$y_c = 5.686$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25474.1775

Standard deviation: 9.10921

$R^2$ : 0.91527

Parameters:

a = 110.99774

b = 298.62418

c = 6.35567

d = 1.02523

## Bead 264

Date : Mon Oct 17 13:28:08 PDT 2022

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

Frame size : 10 pixels

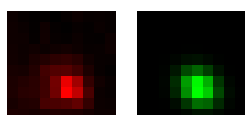
Coordinates : -89.3  $\mu\text{m}$  (x), 64.6  $\mu\text{m}$  (y), 7.32  $\mu\text{m}$  (z)

Corresponding bead : Not found

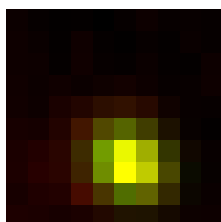
FWHM	Non corrected	Corrected	Theoretical
min	523 nm	541 nm	223 nm
max	614 nm	634 nm	223 nm
z	1.91 $\mu\text{m}$	1.91 $\mu\text{m}$	885 nm
Asymmetry	0.853		
Theta	-38.2°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 393.445$  (brightness)

$B = 124.583$  (background)

$a = 0.408$  px

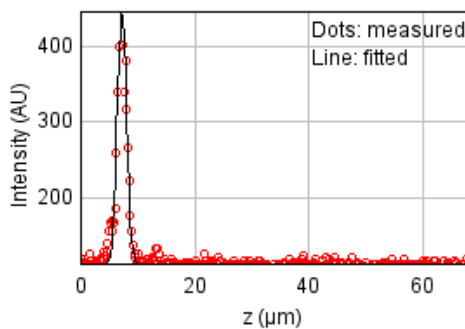
$b = -0.065$  px

$c = 0.439$  px

$x_c = 5.151$  px

$y_c = 6.555$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30260.9204

Standard deviation: 9.92823

$R^2 = 0.95816$

Parameters:

$a = 113.20378$

$b = 446.32268$

$c = 7.31751$

$d = 0.80945$



## Bead 265

Date : Mon Oct 17 13:28:08 PDT 2022

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

Frame size : 10 pixels

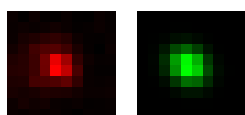
Coordinates : -89.3  $\mu\text{m}$  (x), 64.6  $\mu\text{m}$  (y), 7.32  $\mu\text{m}$  (z)

Corresponding bead : Not found

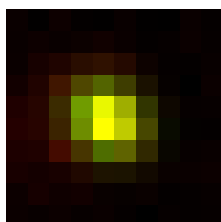
FWHM	Non corrected	Corrected	Theoretical
min	522 nm	540 nm	223 nm
max	612 nm	633 nm	223 nm
z	1.91 $\mu\text{m}$	1.91 $\mu\text{m}$	885 nm
Asymmetry	0.853		
Theta	-37.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 393.875 (brightness)

B = 124.622 (background)

a = 0.408 px

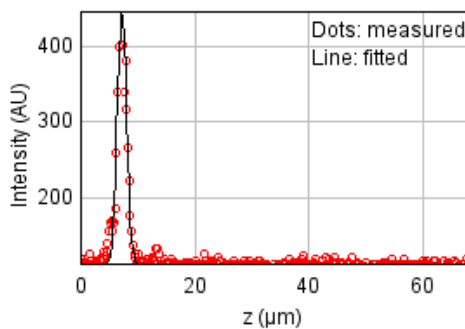
b = -0.065 px

c = 0.441 px

xc = 4.151 px

yc = 4.555 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30260.9204

Standard deviation: 9.92823

$R^2$ : 0.95816

Parameters:

a = 113.20378

b = 446.32268

c = 7.31751

d = 0.80945

## Bead 266

Date : Mon Oct 17 13:28:09 PDT 2022

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

Frame size : 10 pixels

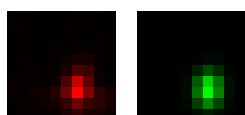
Coordinates : 21.8  $\mu\text{m}$  (x), 61.0  $\mu\text{m}$  (y), 7.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	428 nm	442 nm	223 nm
max	557 nm	576 nm	223 nm
z	1.66 $\mu\text{m}$	1.66 $\mu\text{m}$	885 nm
Asymmetry	0.768		
Theta	87.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 855.953 (brightness)

B = 133.262 (background)

a = 0.733 px

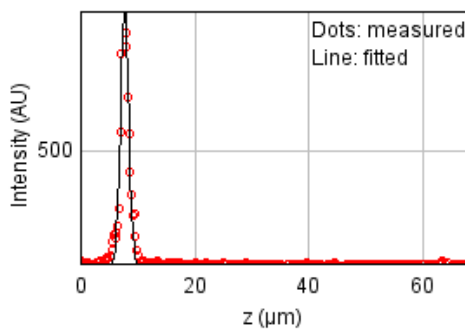
b = 0.015 px

c = 0.433 px

$x_c = 6.056$  px

$y_c = 6.731$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 108747.308

Standard deviation: 18.82089

$R^2$ : 0.97392

Parameters:

a = 115.50203

b = 978.22097

c = 7.80230

d = 0.70312

## Bead 267 (Rejected)

Date : Mon Oct 17 13:28:09 PDT 2022

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

Frame size : 10 pixels

Coordinates : 150  $\mu\text{m}$  (x), 52.5  $\mu\text{m}$  (y), 5.54  $\mu\text{m}$  (z)

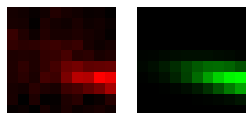
Corresponding bead : Not found

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

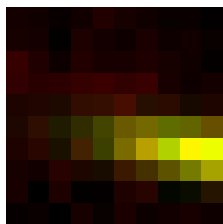
FWHM	Non corrected	Corrected	Theoretical
min	404 nm	418 nm	223 nm
max	1.8 $\mu\text{m}$	1.86 $\mu\text{m}$	223 nm
z	2.0 $\mu\text{m}$	2.01 $\mu\text{m}$	885 nm
Asymmetry	0.225		
Theta	-9.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 149.373 (brightness)

B = 115.975 (background)

a = 0.061 px

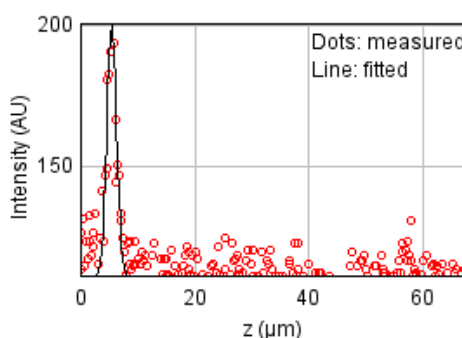
b = -0.121 px

c = 0.803 px

xc = 9.311 px

yc = 6.262 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15865.3132

Standard deviation: 7.18878

$R^2$ : 0.76631

Parameters:

a = 111.27565

b = 200.48295

c = 5.53525

d = 0.84917

## Bead 268

Date : Mon Oct 17 13:28:09 PDT 2022

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

Frame size : 10 pixels

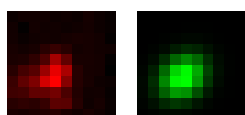
Coordinates : -63.9  $\mu\text{m}$  (x), 31.5  $\mu\text{m}$  (y), 7.23  $\mu\text{m}$  (z)

Corresponding bead : Not found

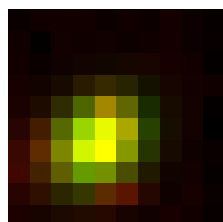
FWHM	Non corrected	Corrected	Theoretical
min	621 nm	642 nm	223 nm
max	766 nm	792 nm	223 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	885 nm
Asymmetry	0.811		
Theta	40.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 297.234 (brightness)

B = 119.121 (background)

a = 0.279 px

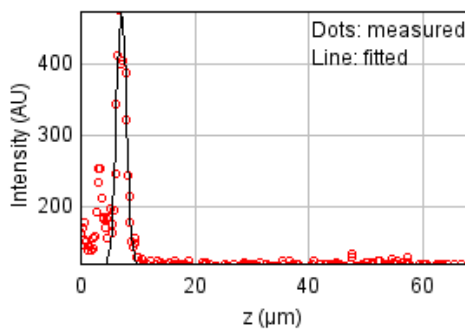
b = 0.059 px

c = 0.298 px

xc = 3.661 px

yc = 5.601 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 146261.439

Standard deviation: 21.82708

$R^2$ : 0.85333

Parameters:

a = 117.93805

b = 474.97368

c = 7.22721

d = 0.86802

## Bead 269

Date : Mon Oct 17 13:28:09 PDT 2022

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

Frame size : 10 pixels

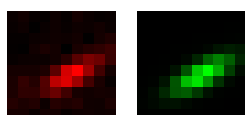
Coordinates : -130  $\mu\text{m}$  (x), -10.4  $\mu\text{m}$  (y), 6.52  $\mu\text{m}$  (z)

Corresponding bead : Not found

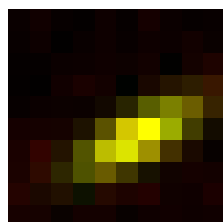
FWHM	Non corrected	Corrected	Theoretical
min	370 nm	382 nm	223 nm
max	1.01 $\mu\text{m}$	1.05 $\mu\text{m}$	223 nm
z	1.56 $\mu\text{m}$	1.56 $\mu\text{m}$	885 nm
Asymmetry	0.364		
Theta	28.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 267.749 (brightness)

B = 118.494 (background)

a = 0.321 px

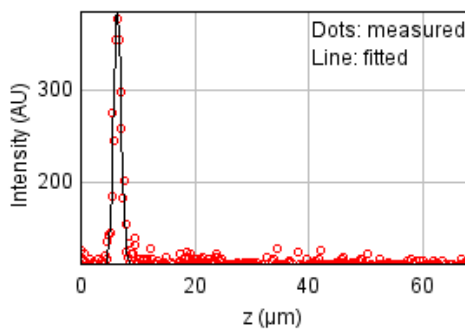
b = 0.355 px

c = 0.790 px

xc = 5.483 px

yc = 5.369 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20624.0262

Standard deviation: 8.19629

$R^2$ : 0.94980

Parameters:

a = 111.63350

b = 386.97732

c = 6.52201

d = 0.66170

## Bead 270 (Rejected)

Date : Mon Oct 17 13:28:09 PDT 2022

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

Frame size : 10 pixels

Coordinates : 139  $\mu\text{m}$  (x), -24.6  $\mu\text{m}$  (y), 6.5  $\mu\text{m}$  (z)

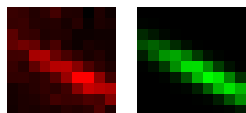
Corresponding bead : Not found

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

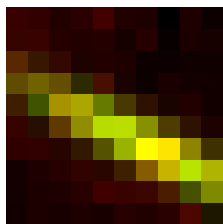
FWHM	Non corrected	Corrected	Theoretical
min	369 nm	382 nm	223 nm
max	2.27 $\mu\text{m}$	2.35 $\mu\text{m}$	223 nm
z	1.99 $\mu\text{m}$	2.0 $\mu\text{m}$	885 nm
Asymmetry	0.162		
Theta	-26.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 122.769 (brightness)

B = 116.087 (background)

a = 0.222 px

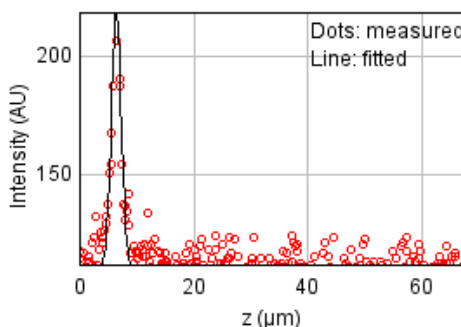
b = -0.387 px

c = 0.788 px

xc = 6.136 px

yc = 5.927 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13948.3202

Standard deviation: 6.74049

$R^2$ : 0.84361

Parameters:

a = 111.79672

b = 219.30235

c = 6.50324

d = 0.84547

## Bead 271 (Rejected)

Date : Mon Oct 17 13:28:09 PDT 2022

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

Frame size : 10 pixels

Coordinates : 10.1  $\mu\text{m}$  (x), -41.8  $\mu\text{m}$  (y), 7.46  $\mu\text{m}$  (z)

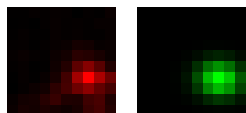
Corresponding bead : Not found

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

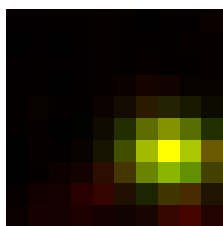
FWHM	Non corrected	Corrected	Theoretical
min	547 nm	565 nm	223 nm
max	691 nm	714 nm	223 nm
z	2.52 $\mu\text{m}$	2.53 $\mu\text{m}$	885 nm
Asymmetry	0.792		
Theta	-3.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 512.750 (brightness)

B = 126.700 (background)

a = 0.282 px

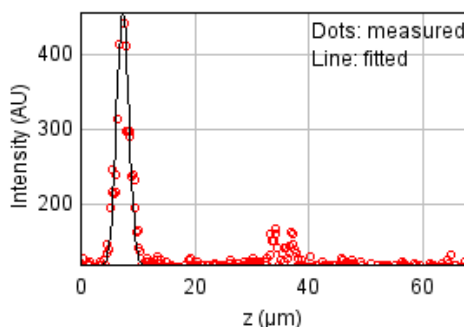
b = -0.009 px

c = 0.448 px

xc = 7.059 px

yc = 6.124 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 88041.9336

Standard deviation: 16.93463

$R^2$ : 0.91487

Parameters:

a = 116.79542

b = 457.61852

c = 7.46097

d = 1.07101

## Bead 272

Date : Mon Oct 17 13:28:09 PDT 2022

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

Frame size : 10 pixels

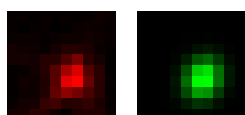
Coordinates : -98.9  $\mu\text{m}$  (x), -50.1  $\mu\text{m}$  (y), 7.14  $\mu\text{m}$  (z)

Corresponding bead : Not found

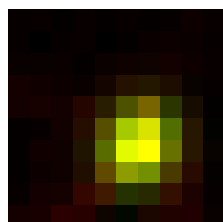
FWHM	Non corrected	Corrected	Theoretical
min	552 nm	571 nm	223 nm
max	647 nm	669 nm	223 nm
z	1.36 $\mu\text{m}$	1.36 $\mu\text{m}$	885 nm
Asymmetry	0.854		
Theta	62.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 448.444$  (brightness)

$B = 128.741$  (background)

$a = 0.415$  px

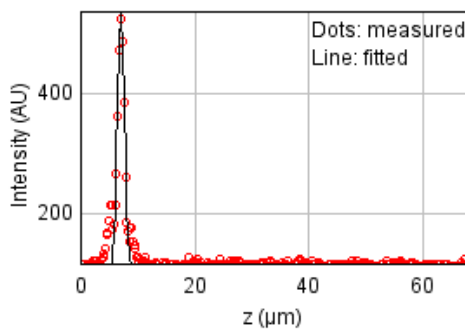
$b = 0.048$  px

$c = 0.346$  px

$x_c = 5.550$  px

$y_c = 5.735$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 59508.1658

Standard deviation: 13.92256

$R^2: 0.93291$

Parameters:

$a = 114.55005$

$b = 542.99582$

$c = 7.14474$

$d = 0.57698$



## Bead 273

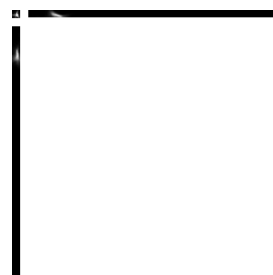
Date : Mon Oct 17 13:28:09 PDT 2022

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

Frame size : 10 pixels

Coordinates : -75.8  $\mu\text{m}$  (x), -67.9  $\mu\text{m}$  (y), 7.79  $\mu\text{m}$  (z)

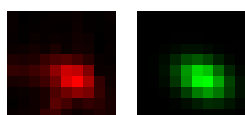
Corresponding bead : Not found



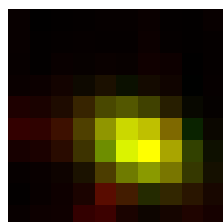
FWHM	Non corrected	Corrected	Theoretical
min	556 nm	574 nm	223 nm
max	809 nm	836 nm	223 nm
z	1.4 $\mu\text{m}$	1.41 $\mu\text{m}$	885 nm
Asymmetry	0.687		
Theta	-24.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.917$



Parameters:

$A = 660.016$  (brightness)

$B = 137.508$  (background)

$a = 0.244$  px

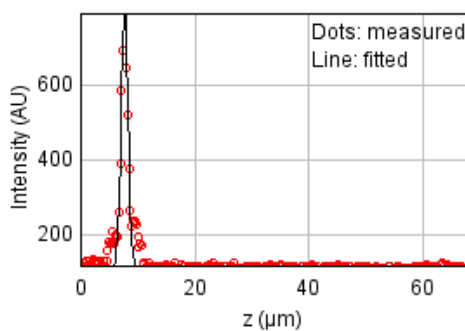
$b = -0.086$  px

$c = 0.396$  px

$x_c = 5.519$  px

$y_c = 5.757$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 126861.610

Standard deviation: 20.32806

$R^2: 0.94445$

Parameters:

$a = 116.98845$

$b = 797.63736$

$c = 7.79431$

$d = 0.59645$

## Bead 274 (Rejected)

Date : Mon Oct 17 13:28:10 PDT 2022

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

Frame size : 10 pixels

Coordinates : 14.6  $\mu\text{m}$  (x), -71.8  $\mu\text{m}$  (y), 10.7  $\mu\text{m}$  (z)

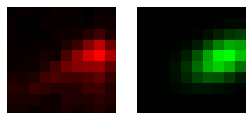
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

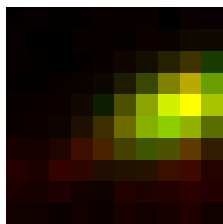
FWHM	Non corrected	Corrected	Theoretical
min	558 nm	577 nm	223 nm
max	1.05 $\mu\text{m}$	1.09 $\mu\text{m}$	223 nm
z	1.97 $\mu\text{m}$	1.98 $\mu\text{m}$	885 nm
Asymmetry	0.529		
Theta	21.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 452.308 (brightness)

B = 136.175 (background)

a = 0.163 px

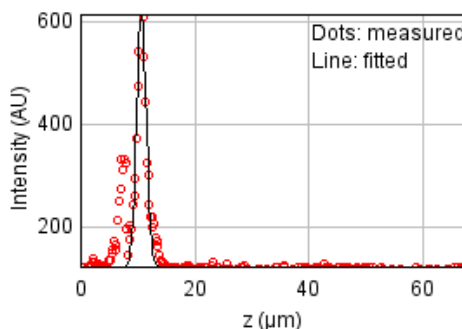
b = 0.106 px

c = 0.389 px

xc = 7.582 px

yc = 4.147 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 296916.360

Standard deviation: 31.09910

$R^2$ : 0.84113

Parameters:

a = 120.44331

b = 613.72964

c = 10.74684

d = 0.83864

## Bead 275 (Rejected)

Date : Mon Oct 17 13:28:10 PDT 2022

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

Frame size : 10 pixels

Coordinates : -12.8  $\mu\text{m}$  (x), -72.2  $\mu\text{m}$  (y), 16.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

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

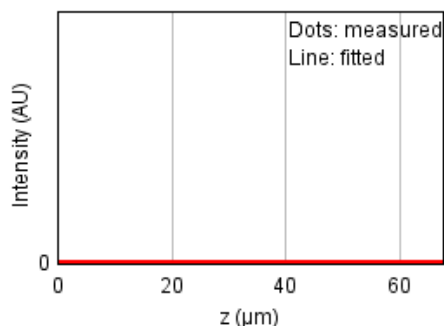
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 0.00000E0

Standard deviation: 0.00000E0

R<sup>2</sup>: 0.00000

Parameters:

a = 0.00000E0

b = 0.00000E0

c = -0.11115

d = 0.11151

## Bead 276 (Rejected)

Date : Mon Oct 17 13:28:10 PDT 2022

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

Frame size : 10 pixels

Coordinates : -98.6  $\mu\text{m}$  (x), 81.0  $\mu\text{m}$  (y), 7.83  $\mu\text{m}$  (z)

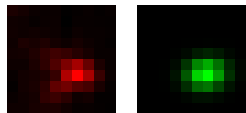
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

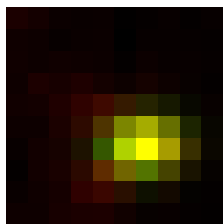
FWHM	Non corrected	Corrected	Theoretical
min	475 nm	491 nm	223 nm
max	626 nm	648 nm	223 nm
z	2.13 $\mu\text{m}$	2.14 $\mu\text{m}$	885 nm
Asymmetry	0.758		
Theta	6.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.898$



Parameters:

A = 449.884 (brightness)

B = 131.640 (background)

a = 0.345 px

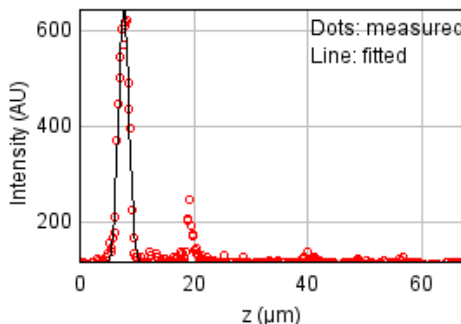
b = 0.027 px

c = 0.592 px

xc = 5.795 px

yc = 5.842 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 99047.6237

Standard deviation: 17.96192

$R^2$ : 0.95160

Parameters:

a = 114.97392

b = 644.68121

c = 7.82832

d = 0.90418

## Bead 277

Date : Mon Oct 17 13:28:10 PDT 2022

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

Frame size : 10 pixels

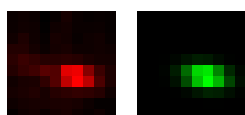
Coordinates : -140  $\mu\text{m}$  (x), 69.4  $\mu\text{m}$  (y), 6.87  $\mu\text{m}$  (z)

Corresponding bead : Not found

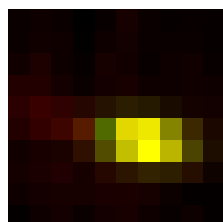
FWHM	Non corrected	Corrected	Theoretical
min	355 nm	367 nm	223 nm
max	668 nm	691 nm	223 nm
z	2.23 $\mu\text{m}$	2.24 $\mu\text{m}$	885 nm
Asymmetry	0.532		
Theta	-8.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 392.099 (brightness)

B = 123.851 (background)

a = 0.317 px

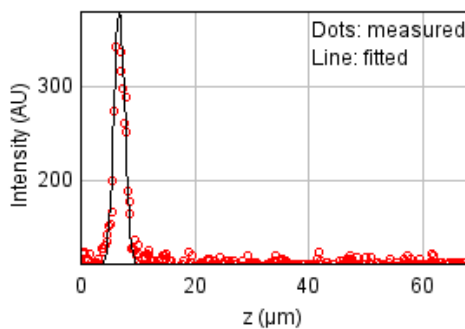
b = -0.109 px

c = 1.046 px

xc = 5.792 px

yc = 5.526 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27824.7766

Standard deviation: 9.52021

$R^2$ : 0.94975

Parameters:

a = 111.60893

b = 380.69529

c = 6.86646

d = 0.94864

## Bead 278

Date : Mon Oct 17 13:28:10 PDT 2022

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

Frame size : 10 pixels

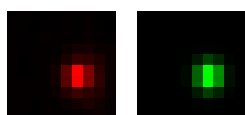
Coordinates : 56.1  $\mu\text{m}$  (x), 60.6  $\mu\text{m}$  (y), 7.91  $\mu\text{m}$  (z)

Corresponding bead : Not found

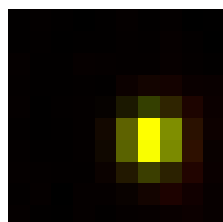
FWHM	Non corrected	Corrected	Theoretical
min	416 nm	430 nm	223 nm
max	437 nm	452 nm	223 nm
z	1.54 $\mu\text{m}$	1.55 $\mu\text{m}$	885 nm
Asymmetry	0.952		
Theta	83.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1114.515$  (brightness)

$B = 129.314$  (background)

$a = 0.774$  px

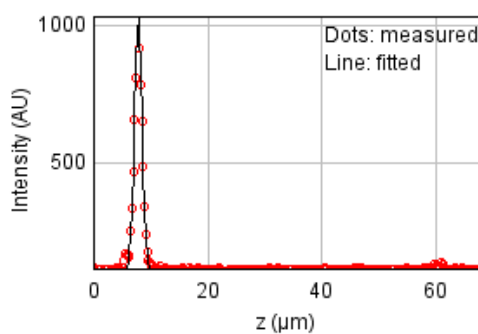
$b = 0.008$  px

$c = 0.703$  px

$x_c = 6.113$  px

$y_c = 5.494$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 41424.3188

Standard deviation: 11.61605

$R^2: 0.99044$

Parameters:

$a = 115.44779$

$b = 1034.20012$

$c = 7.90662$

$d = 0.65371$

## Bead 279

Date : Mon Oct 17 13:28:10 PDT 2022

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

Frame size : 10 pixels

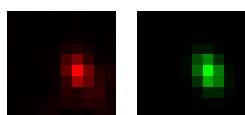
Coordinates : 41.8  $\mu\text{m}$  (x), -912 nm (y), 7.78  $\mu\text{m}$  (z)

Corresponding bead : Not found

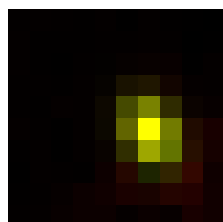
FWHM	Non corrected	Corrected	Theoretical
min	382 nm	395 nm	223 nm
max	539 nm	557 nm	223 nm
z	1.64 $\mu\text{m}$	1.65 $\mu\text{m}$	885 nm
Asymmetry	0.708		
Theta	-63.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 881.833 (brightness)

B = 132.414 (background)

a = 0.830 px

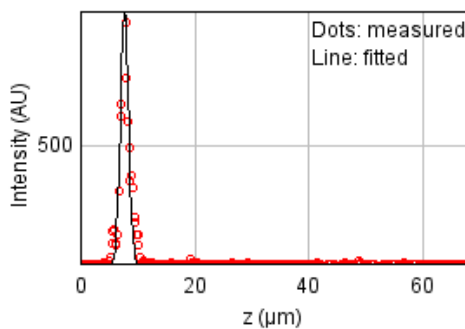
b = -0.182 px

c = 0.552 px

xc = 6.092 px

yc = 5.146 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 233196.222

Standard deviation: 27.56078

$R^2$ : 0.93977

Parameters:

a = 115.90842

b = 936.52683

c = 7.77868

d = 0.69596

## Bead 280 (Rejected)

Date : Mon Oct 17 13:28:11 PDT 2022

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

Frame size : 10 pixels

Coordinates : -56.5  $\mu\text{m}$  (x), -47.2  $\mu\text{m}$  (y), 7.92  $\mu\text{m}$  (z)

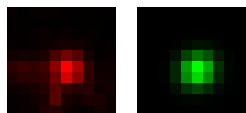
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

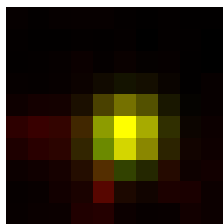
FWHM	Non corrected	Corrected	Theoretical
min	513 nm	530 nm	223 nm
max	557 nm	576 nm	223 nm
z	2.08 $\mu\text{m}$	2.09 $\mu\text{m}$	885 nm
Asymmetry	0.92		
Theta	25.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.898$



Parameters:

A = 619.995 (brightness)

B = 136.035 (background)

a = 0.447 px

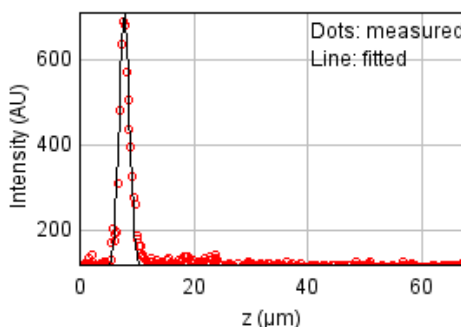
b = 0.030 px

c = 0.496 px

xc = 5.031 px

yc = 5.318 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 114159.868

Standard deviation: 19.28357

$R^2$ : 0.95445

Parameters:

a = 116.17849

b = 710.10164

c = 7.92211

d = 0.88252



## Bead 281

Date : Mon Oct 17 13:28:11 PDT 2022

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

Frame size : 10 pixels

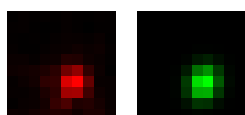
Coordinates : -89.0  $\mu\text{m}$  (x), -48.0  $\mu\text{m}$  (y), 7.41  $\mu\text{m}$  (z)

Corresponding bead : Not found

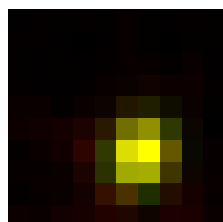
FWHM	Non corrected	Corrected	Theoretical
min	462 nm	478 nm	223 nm
max	543 nm	561 nm	223 nm
z	1.5 $\mu\text{m}$	1.5 $\mu\text{m}$	885 nm
Asymmetry	0.851		
Theta	68.9°		

### 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 = 690.660 (brightness)

B = 128.811 (background)

a = 0.606 px

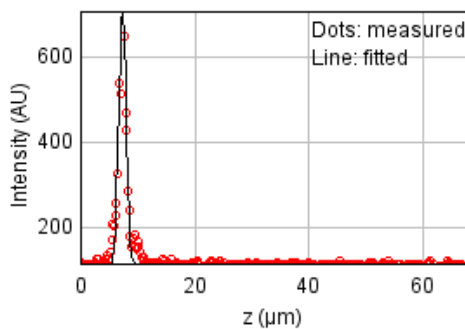
b = 0.058 px

c = 0.477 px

xc = 5.603 px

yc = 6.147 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 71939.5384

Standard deviation: 15.30787

$R^2$ : 0.96041

Parameters:

a = 113.73065

b = 707.72037

c = 7.41005

d = 0.63506

## Bead 282

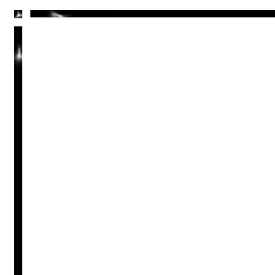
Date : Mon Oct 17 13:28:11 PDT 2022

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

Frame size : 10 pixels

Coordinates : 28.5  $\mu\text{m}$  (x), -77.8  $\mu\text{m}$  (y), 8.0  $\mu\text{m}$  (z)

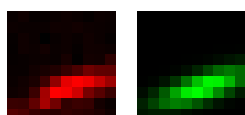
Corresponding bead : Not found



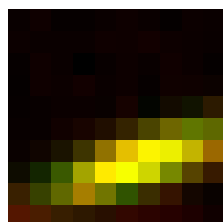
FWHM	Non corrected	Corrected	Theoretical
min	415 nm	429 nm	223 nm
max	1.46 $\mu\text{m}$	1.51 $\mu\text{m}$	223 nm
z	1.84 $\mu\text{m}$	1.85 $\mu\text{m}$	885 nm
Asymmetry	0.283		
Theta	18.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 280.399 (brightness)

B = 116.296 (background)

a = 0.133 px

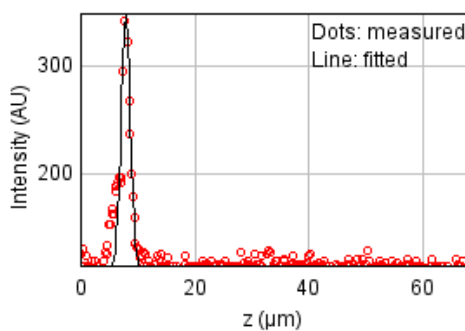
b = 0.214 px

c = 0.708 px

xc = 5.572 px

yc = 6.533 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 38405.9562

Standard deviation: 11.18485

$R^2$ : 0.89779

Parameters:

a = 114.07434

b = 350.26476

c = 7.99643

d = 0.78262

## Bead 283 (Rejected)

Date : Mon Oct 17 13:28:11 PDT 2022

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

Frame size : 10 pixels

Coordinates : 120  $\mu\text{m}$  (x), -82.5  $\mu\text{m}$  (y), 6.81  $\mu\text{m}$  (z)

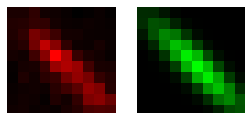
Corresponding bead : Not found

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

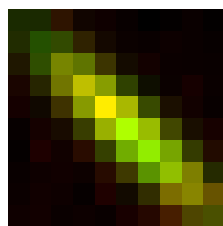
FWHM	Non corrected	Corrected	Theoretical
min	452 nm	467 nm	223 nm
max	1.94 $\mu\text{m}$	2.0 $\mu\text{m}$	223 nm
z	1.52 $\mu\text{m}$	1.52 $\mu\text{m}$	885 nm
Asymmetry	0.233		
Theta	-44.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 187.006 (brightness)

B = 114.875 (background)

a = 0.338 px

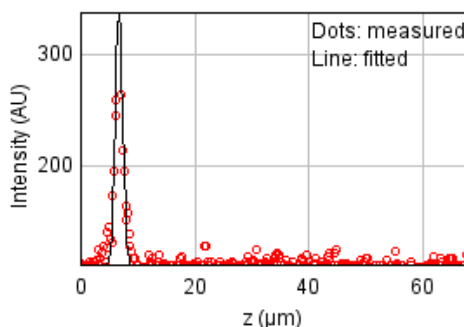
b = -0.310 px

c = 0.354 px

xc = 5.039 px

yc = 4.987 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18587.1746

Standard deviation: 7.78104

$R^2$ : 0.93240

Parameters:

a = 111.54735

b = 337.64356

c = 6.80684

d = 0.64416

## Bead 284

Date : Mon Oct 17 13:28:11 PDT 2022

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

Frame size : 10 pixels

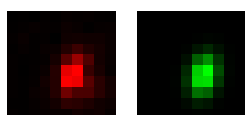
Coordinates : 35.6  $\mu\text{m}$  (x), 60.8  $\mu\text{m}$  (y), 7.49  $\mu\text{m}$  (z)

Corresponding bead : Not found

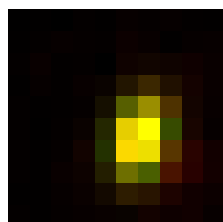
FWHM	Non corrected	Corrected	Theoretical
min	425 nm	439 nm	223 nm
max	630 nm	651 nm	223 nm
z	1.35 $\mu\text{m}$	1.36 $\mu\text{m}$	885 nm
Asymmetry	0.674		
Theta	76.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 683.743 (brightness)

B = 124.004 (background)

a = 0.722 px

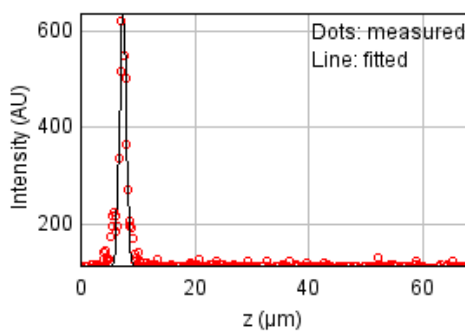
b = 0.093 px

c = 0.361 px

xc = 5.597 px

yc = 5.417 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 77170.2301

Standard deviation: 15.85462

$R^2$ : 0.94024

Parameters:

a = 114.98630

b = 634.85269

c = 7.48807

d = 0.57489

## Bead 285

Date : Mon Oct 17 13:28:11 PDT 2022

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

Frame size : 10 pixels

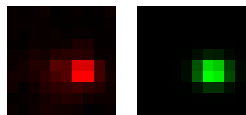
Coordinates : -83.5  $\mu\text{m}$  (x), 60.6  $\mu\text{m}$  (y), 8.29  $\mu\text{m}$  (z)

Corresponding bead : Not found

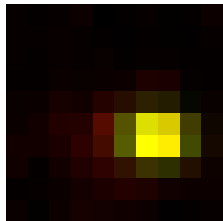
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	399 nm	223 nm
max	497 nm	513 nm	223 nm
z	2.35 $\mu\text{m}$	2.36 $\mu\text{m}$	885 nm
Asymmetry	0.778		
Theta	-2.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 595.690 (brightness)

B = 129.191 (background)

a = 0.545 px

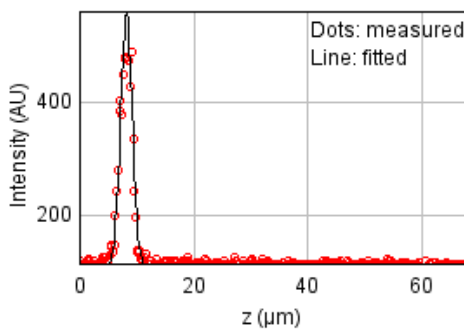
b = -0.015 px

c = 0.899 px

xc = 6.420 px

yc = 5.583 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 67148.1119

Standard deviation: 14.78930

$R^2$ : 0.95785

Parameters:

a = 112.75833

b = 560.61709

c = 8.29157

d = 0.99621

## Bead 286

Date : Mon Oct 17 13:28:11 PDT 2022

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

Frame size : 10 pixels

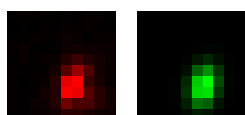
Coordinates : 35.6  $\mu\text{m}$  (x), 60.8  $\mu\text{m}$  (y), 7.49  $\mu\text{m}$  (z)

Corresponding bead : Not found

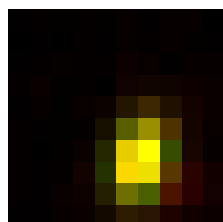
FWHM	Non corrected	Corrected	Theoretical
min	427 nm	441 nm	223 nm
max	633 nm	654 nm	223 nm
z	1.35 $\mu\text{m}$	1.36 $\mu\text{m}$	885 nm
Asymmetry	0.674		
Theta	76.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 683.313 (brightness)

B = 122.523 (background)

a = 0.714 px

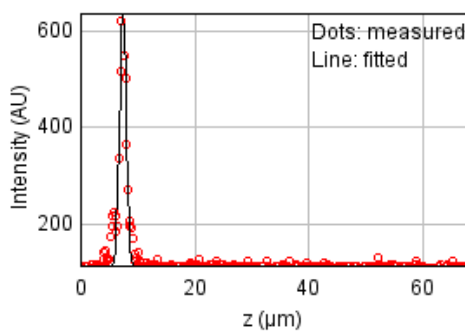
b = 0.092 px

c = 0.358 px

xc = 5.598 px

yc = 6.417 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 77170.2301

Standard deviation: 15.85462

$R^2$ : 0.94024

Parameters:

a = 114.98630

b = 634.85269

c = 7.48807

d = 0.57489

## Bead 287 (Rejected)

Date : Mon Oct 17 13:28:12 PDT 2022

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

Frame size : 10 pixels

Coordinates : 103 um (x), 59.6 um (y), 7.38 um (z)

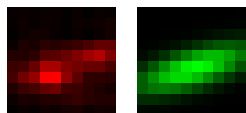
Corresponding bead : Not found

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

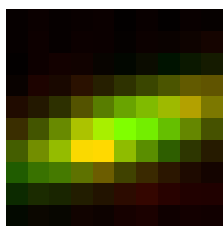
FWHM	Non corrected	Corrected	Theoretical
min	575 nm	595 nm	223 nm
max	1.87 um	1.93 um	223 nm
z	3.3 um	3.31 um	885 nm
Asymmetry	0.307		
Theta	17.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.828$



Parameters:

A = 310.209 (brightness)

B = 126.210 (background)

a = 0.070 px

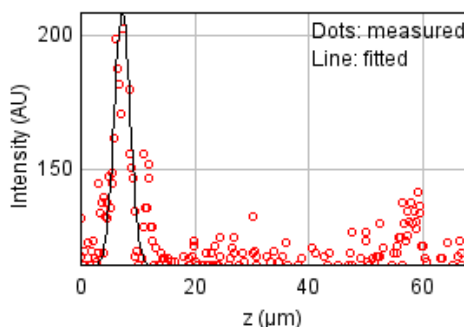
b = 0.103 px

c = 0.374 px

xc = 4.727 px

yc = 5.168 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 34925.5019

Standard deviation: 10.66601

$R^2$ : 0.72611

Parameters:

a = 114.38882

b = 208.50643

c = 7.38242

d = 1.39995

## Bead 288

Date : Mon Oct 17 13:28:12 PDT 2022

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

Frame size : 10 pixels

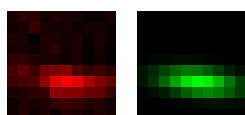
Coordinates : 128  $\mu\text{m}$  (x), 51.9  $\mu\text{m}$  (y), 6.55  $\mu\text{m}$  (z)

Corresponding bead : Not found

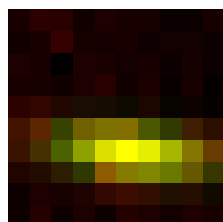
FWHM	Non corrected	Corrected	Theoretical
min	411 nm	425 nm	223 nm
max	1.23 $\mu\text{m}$	1.27 $\mu\text{m}$	223 nm
z	2.63 $\mu\text{m}$	2.64 $\mu\text{m}$	885 nm
Asymmetry	0.333		
Theta	-6.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 128.319$  (brightness)

$B = 112.624$  (background)

$a = 0.097$  px

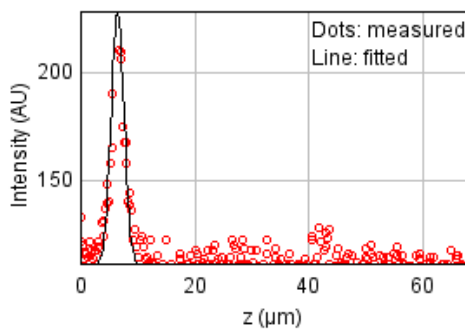
$b = -0.078$  px

$c = 0.787$  px

$x_c = 5.188$  px

$y_c = 6.052$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14945.8657

Standard deviation: 6.97736

$R^2: 0.88617$

Parameters:

$a = 111.46817$

$b = 228.61666$

$c = 6.55092$

$d = 1.11765$



## Bead 289

Date : Mon Oct 17 13:28:12 PDT 2022

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

Frame size : 10 pixels

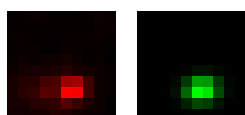
Coordinates : -89.7  $\mu\text{m}$  (x), 46.3  $\mu\text{m}$  (y), 8.61  $\mu\text{m}$  (z)

Corresponding bead : Not found

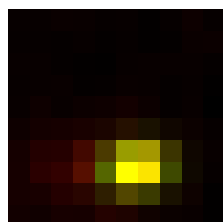
FWHM	Non corrected	Corrected	Theoretical
min	387 nm	400 nm	223 nm
max	513 nm	530 nm	223 nm
z	1.72 $\mu\text{m}$	1.72 $\mu\text{m}$	885 nm
Asymmetry	0.755		
Theta	6.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 723.133$  (brightness)

$B = 133.879$  (background)

$a = 0.515$  px

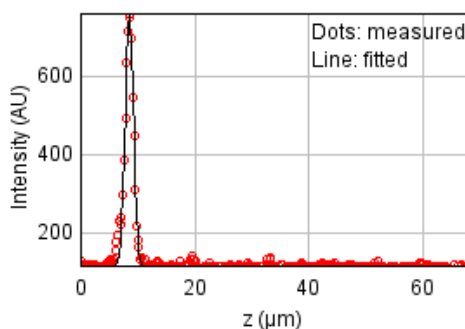
$b = 0.041$  px

$c = 0.891$  px

$x_c = 5.410$  px

$y_c = 6.756$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 43953.8892

Standard deviation: 11.96546

$R^2: 0.98159$

Parameters:

$a = 114.92876$

$b = 758.91150$

$c = 8.61360$

$d = 0.72927$

## Bead 290

Date : Mon Oct 17 13:28:12 PDT 2022

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

Frame size : 10 pixels

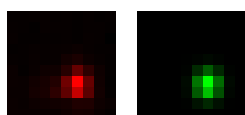
Coordinates : -55.2  $\mu\text{m}$  (x), 35.4  $\mu\text{m}$  (y), 8.49  $\mu\text{m}$  (z)

Corresponding bead : Not found

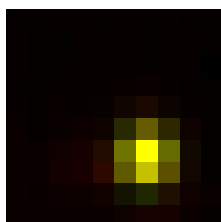
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	453 nm	468 nm	223 nm
z	1.66 $\mu\text{m}$	1.67 $\mu\text{m}$	885 nm
Asymmetry	0.889		
Theta	88.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1009.861 (brightness)

B = 129.290 (background)

a = 0.830 px

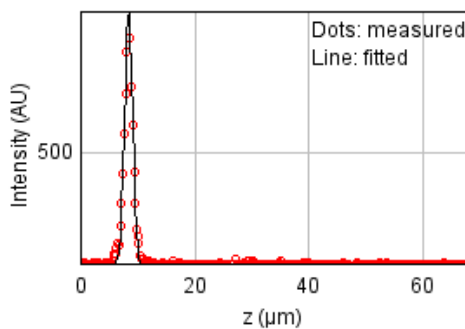
b = 0.006 px

c = 0.655 px

xc = 5.973 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: 43548.4770

Standard deviation: 11.91015

$R^2$ : 0.98992

Parameters:

a = 114.55010

b = 998.02800

c = 8.48921

d = 0.70629

## Bead 291 (Rejected)

Date : Mon Oct 17 13:28:12 PDT 2022

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

Frame size : 10 pixels

Coordinates : -63.9  $\mu\text{m}$  (x), 31.6  $\mu\text{m}$  (y), 7.23  $\mu\text{m}$  (z)

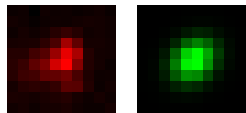
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

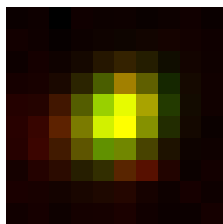
FWHM	Non corrected	Corrected	Theoretical
min	589 nm	609 nm	223 nm
max	730 nm	755 nm	223 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	885 nm
Asymmetry	0.807		
Theta	41.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 299.963 (brightness)

B = 125.329 (background)

a = 0.311 px

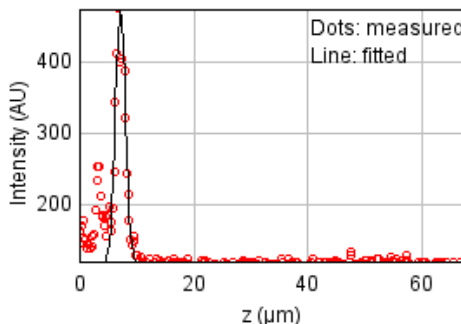
b = 0.067 px

c = 0.328 px

xc = 4.680 px

yc = 4.589 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 146261.439

Standard deviation: 21.82708

$R^2$ : 0.85333

Parameters:

a = 117.93805

b = 474.97368

c = 7.22721

d = 0.86802

## Bead 292 (Rejected)

Date : Mon Oct 17 13:28:12 PDT 2022

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

Frame size : 10 pixels

Coordinates : -85.4  $\mu\text{m}$  (x), 16.9  $\mu\text{m}$  (y), 7.84  $\mu\text{m}$  (z)

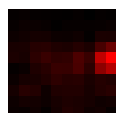
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
z	1.76 $\mu\text{m}$	1.77 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

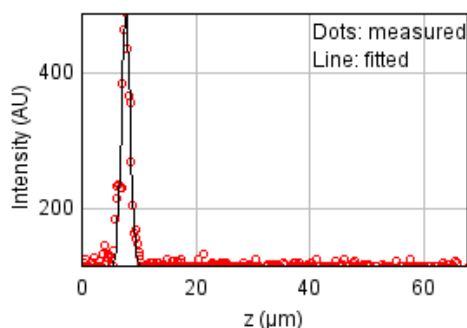
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 49760.0328

Standard deviation: 12.73125

R<sup>2</sup>: 0.94325

Parameters:

a = 113.42303

b = 491.56542

c = 7.83904

d = 0.74707

## Bead 293 (Rejected)

Date : Mon Oct 17 13:28:12 PDT 2022

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

Frame size : 10 pixels

Coordinates : -59.5  $\mu\text{m}$  (x), 5.66  $\mu\text{m}$  (y), 9.1  $\mu\text{m}$  (z)

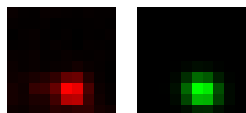
Corresponding bead : Not found

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

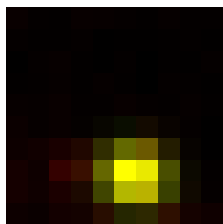
FWHM	Non corrected	Corrected	Theoretical
min	464 nm	480 nm	223 nm
max	523 nm	541 nm	223 nm
z	4.07 $\mu\text{m}$	4.09 $\mu\text{m}$	885 nm
Asymmetry	0.887		
Theta	-14.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 642.057 (brightness)

B = 121.681 (background)

a = 0.498 px

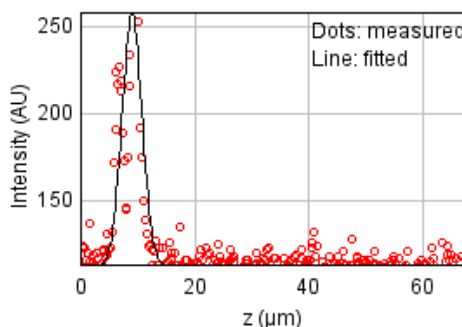
b = -0.033 px

c = 0.614 px

xc = 5.423 px

yc = 7.250 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 81789.4663

Standard deviation: 16.32223

$R^2$ : 0.76757

Parameters:

a = 112.62691

b = 258.65271

c = 9.10230

d = 1.72854

## Bead 294 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : -59.6  $\mu\text{m}$  (x), 5.88  $\mu\text{m}$  (y), 7.83  $\mu\text{m}$  (z)

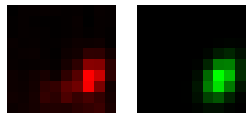
Corresponding bead : Not found

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

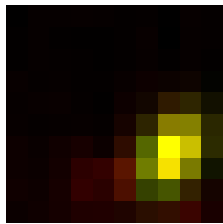
FWHM	Non corrected	Corrected	Theoretical
min	439 nm	454 nm	223 nm
max	638 nm	660 nm	223 nm
z	3.17 $\mu\text{m}$	3.19 $\mu\text{m}$	885 nm
Asymmetry	0.687		
Theta	59.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 682.699 (brightness)

B = 134.992 (background)

a = 0.602 px

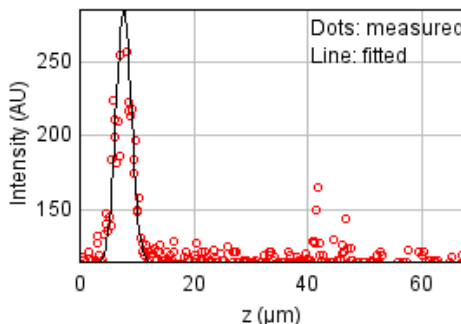
b = 0.161 px

c = 0.424 px

xc = 7.182 px

yc = 6.281 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 45097.2748

Standard deviation: 12.12009

$R^2$ : 0.86978

Parameters:

a = 113.77849

b = 286.51119

c = 7.83294

d = 1.34813

## Bead 295

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

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

Frame size : 10 pixels

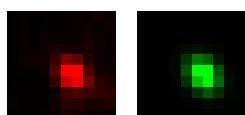
Coordinates : 79.3  $\mu\text{m}$  (x), 2.56  $\mu\text{m}$  (y), 7.63  $\mu\text{m}$  (z)

Corresponding bead : Not found

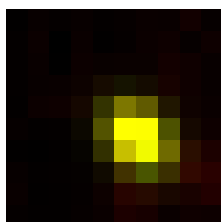
FWHM	Non corrected	Corrected	Theoretical
min	444 nm	459 nm	223 nm
max	573 nm	592 nm	223 nm
z	1.74 $\mu\text{m}$	1.75 $\mu\text{m}$	885 nm
Asymmetry	0.775		
Theta	-49.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 561.210 (brightness)

B = 122.684 (background)

a = 0.563 px

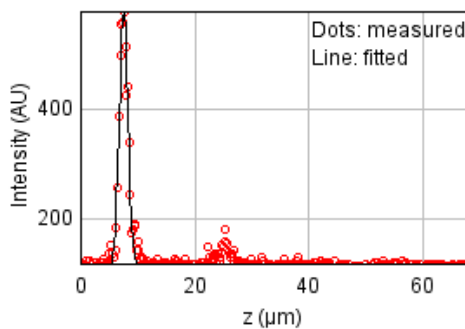
b = -0.134 px

c = 0.526 px

$x_c = 5.587$  px

$y_c = 5.377$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 55398.2993

Standard deviation: 13.43319

$R^2$ : 0.95731

Parameters:

a = 115.74163

b = 581.29851

c = 7.63071

d = 0.74005

## Bead 296 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : 78.0  $\mu\text{m}$  (x), 2.79  $\mu\text{m}$  (y), 25.2  $\mu\text{m}$  (z)

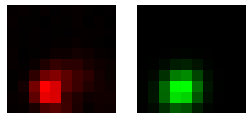
Corresponding bead : Not found

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

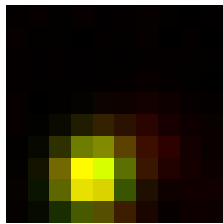
FWHM	Non corrected	Corrected	Theoretical
min	541 nm	560 nm	223 nm
max	603 nm	623 nm	223 nm
z	1.5 $\mu\text{m}$	1.5 $\mu\text{m}$	885 nm
Asymmetry	0.898		
Theta	51.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.950$



Parameters:

A = 934.684 (brightness)

B = 136.243 (background)

a = 0.424 px

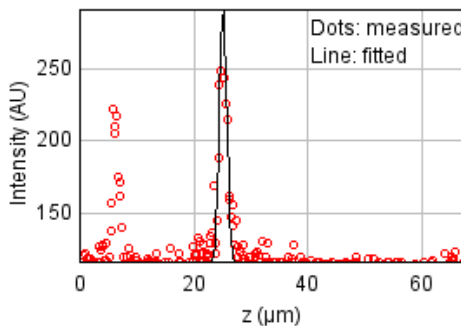
b = 0.043 px

c = 0.403 px

xc = 3.496 px

yc = 7.314 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 76958.0550

Standard deviation: 15.83280

$R^2$ : 0.66621

Parameters:

a = 115.83889

b = 291.98602

c = 25.22988

d = 0.63559



## Bead 297 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : -71.5  $\mu\text{m}$  (x), -14.7  $\mu\text{m}$  (y), 16.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	223 nm
max	0	0	223 nm
z	1.9 $\mu\text{m}$	1.91 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

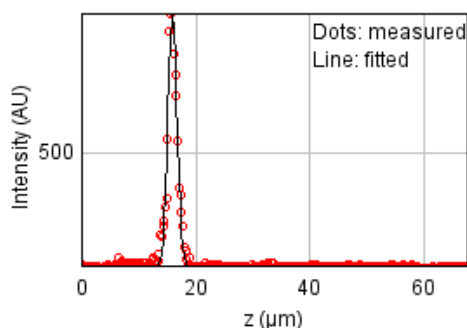
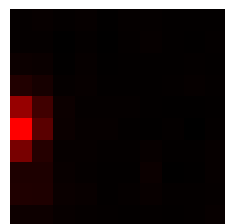
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 119201.361

Standard deviation: 19.70477

R<sup>2</sup>: 0.97472

Parameters:

a = 116.31975

b = 974.54633

c = 15.99237

d = 0.80887

## Bead 298

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

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

Frame size : 10 pixels

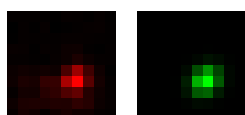
Coordinates : -64.1  $\mu\text{m}$  (x), -17.1  $\mu\text{m}$  (y), 7.55  $\mu\text{m}$  (z)

Corresponding bead : Not found

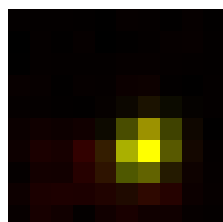
FWHM	Non corrected	Corrected	Theoretical
min	393 nm	406 nm	223 nm
max	472 nm	488 nm	223 nm
z	3.05 $\mu\text{m}$	3.06 $\mu\text{m}$	885 nm
Asymmetry	0.833		
Theta	40.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 505.751 (brightness)

B = 126.675 (background)

a = 0.714 px

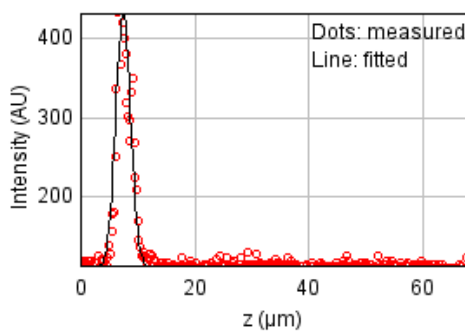
b = 0.131 px

c = 0.757 px

xc = 5.777 px

yc = 5.908 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 127262.918

Standard deviation: 20.36019

$R^2$ : 0.88630

Parameters:

a = 112.61574

b = 432.01954

c = 7.54601

d = 1.29461

## Bead 299 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : 106  $\mu\text{m}$  (x), 85.9  $\mu\text{m}$  (y), 7.71  $\mu\text{m}$  (z)

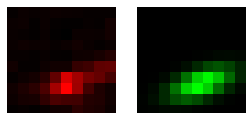
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

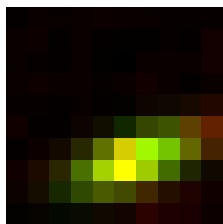
FWHM	Non corrected	Corrected	Theoretical
min	410 nm	424 nm	223 nm
max	979 nm	1.01 $\mu\text{m}$	223 nm
z	2.05 $\mu\text{m}$	2.05 $\mu\text{m}$	885 nm
Asymmetry	0.419		
Theta	19.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.892$



Parameters:

A = 336.359 (brightness)

B = 123.730 (background)

a = 0.210 px

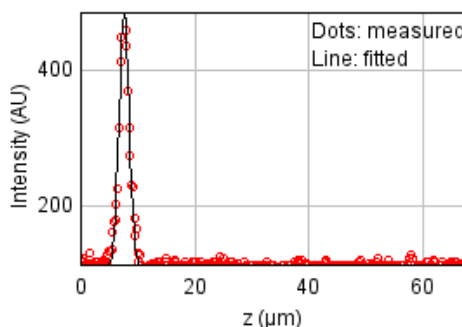
b = 0.204 px

c = 0.729 px

xc = 5.431 px

yc = 6.524 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22148.0570

Standard deviation: 8.49373

$R^2$ : 0.97674

Parameters:

a = 112.48257

b = 485.48961

c = 7.71282

d = 0.86904

## Bead 300

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

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

Frame size : 10 pixels

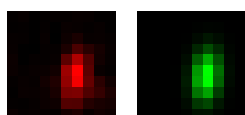
Coordinates : 31.4  $\mu\text{m}$  (x), 74.9  $\mu\text{m}$  (y), 7.86  $\mu\text{m}$  (z)

Corresponding bead : Not found

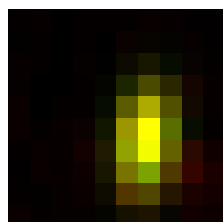
FWHM	Non corrected	Corrected	Theoretical
min	440 nm	454 nm	223 nm
max	810 nm	837 nm	223 nm
z	1.25 $\mu\text{m}$	1.26 $\mu\text{m}$	885 nm
Asymmetry	0.543		
Theta	84.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 643.306 (brightness)

B = 120.090 (background)

a = 0.690 px

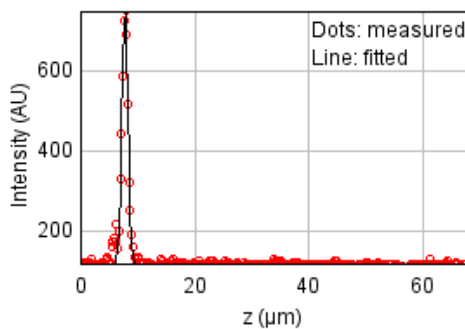
b = 0.046 px

c = 0.209 px

$x_c = 5.850$  px

$y_c = 5.496$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 40495.1029

Standard deviation: 11.48503

$R^2$ : 0.97664

Parameters:

a = 115.21808

b = 753.04076

c = 7.85733

d = 0.53127