

## Bead 3001

Date : Mon Oct 17 13:30:10 PDT 2022

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

Frame size : 10 pixels

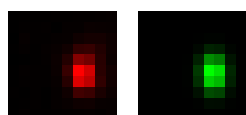
Coordinates : 78.0  $\mu\text{m}$  (x), -33.1  $\mu\text{m}$  (y), 62.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

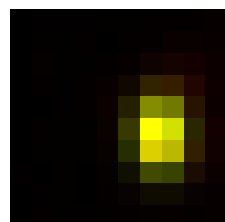
FWHM	Non corrected	Corrected	Theoretical
min	406 nm	419 nm	223 nm
max	574 nm	594 nm	223 nm
z	1.35 $\mu\text{m}$	1.35 $\mu\text{m}$	885 nm
Asymmetry	0.706		
Theta	-89.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1389.402 (brightness)

B = 125.635 (background)

a = 0.815 px

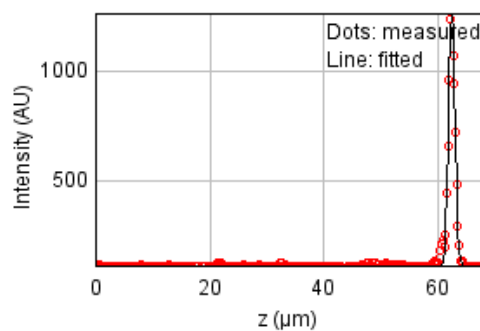
b = -0.007 px

c = 0.407 px

xc = 6.420 px

yc = 5.250 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 66523.2414

Standard deviation: 14.72033

$R^2$ : 0.98880

Parameters:

a = 114.97065

b = 1260.25134

c = 62.47869

d = 0.57269

## Bead 3002

Date : Mon Oct 17 13:30:11 PDT 2022

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

Frame size : 10 pixels

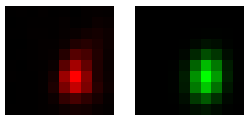
Coordinates : 11.2  $\mu\text{m}$  (x), -34.1  $\mu\text{m}$  (y), 63.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

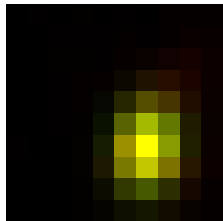
FWHM	Non corrected	Corrected	Theoretical
min	499 nm	516 nm	223 nm
max	692 nm	715 nm	223 nm
z	1.28 $\mu\text{m}$	1.28 $\mu\text{m}$	885 nm
Asymmetry	0.722		
Theta	82.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 2267.055 (brightness)

B = 144.241 (background)

a = 0.534 px

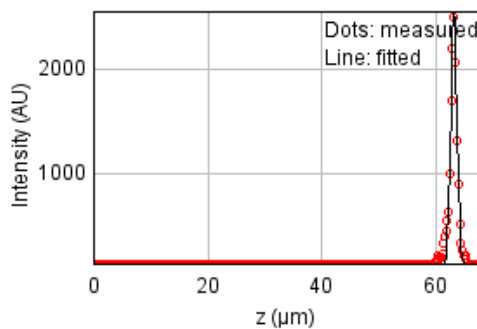
b = 0.033 px

c = 0.285 px

xc = 6.026 px

yc = 6.055 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 338149.549

Standard deviation: 33.18832

$R^2$ : 0.98697

Parameters:

a = 119.42372

b = 2573.43280

c = 63.20692

d = 0.54325

## Bead 3003

Date : Mon Oct 17 13:30:11 PDT 2022

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

Frame size : 10 pixels

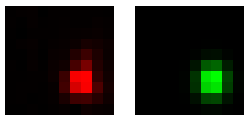
Coordinates : 81.3  $\mu\text{m}$  (x), -34.6  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

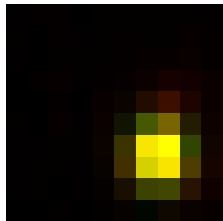
FWHM	Non corrected	Corrected	Theoretical
min	437 nm	452 nm	223 nm
max	506 nm	523 nm	223 nm
z	1.65 $\mu\text{m}$	1.66 $\mu\text{m}$	885 nm
Asymmetry	0.864		
Theta	87.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1339.683$  (brightness)

$B = 122.269$  (background)

$a = 0.703$  px

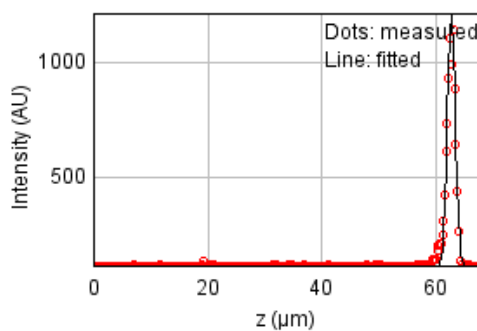
$b = 0.008$  px

$c = 0.525$  px

$x_c = 6.568$  px

$y_c = 6.396$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 168054.858

Standard deviation: 23.39679

$R^2: 0.97533$

Parameters:

$a = 112.91331$

$b = 1217.33904$

$c = 62.75992$

$d = 0.70176$

## Bead 3004

Date : Mon Oct 17 13:30:11 PDT 2022

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

Frame size : 10 pixels

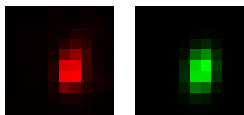
Coordinates : 81.1  $\mu\text{m}$  (x), -37.5  $\mu\text{m}$  (y), 62.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

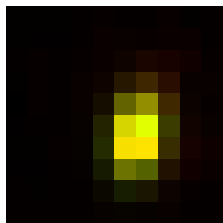
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	628 nm	649 nm	223 nm
z	1.37 $\mu\text{m}$	1.38 $\mu\text{m}$	885 nm
Asymmetry	0.64		
Theta	80.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1262.046 (brightness)

B = 127.102 (background)

a = 0.816 px

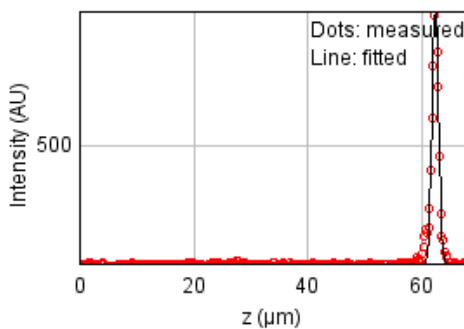
b = 0.082 px

c = 0.355 px

xc = 5.568 px

yc = 5.432 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 54378.8629

Standard deviation: 13.30901

$R^2$ : 0.98298

Parameters:

a = 114.72341

b = 946.21161

c = 62.40024

d = 0.58163

## Bead 3005

Date : Mon Oct 17 13:30:11 PDT 2022

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

Frame size : 10 pixels

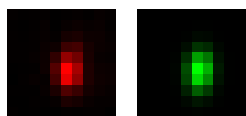
Coordinates : 81.2  $\mu\text{m}$  (x), -48.0  $\mu\text{m}$  (y), 62.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

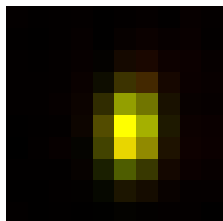
FWHM	Non corrected	Corrected	Theoretical
min	410 nm	424 nm	223 nm
max	642 nm	664 nm	223 nm
z	1.41 $\mu\text{m}$	1.42 $\mu\text{m}$	885 nm
Asymmetry	0.638		
Theta	86.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1258.831 (brightness)

B = 130.320 (background)

a = 0.797 px

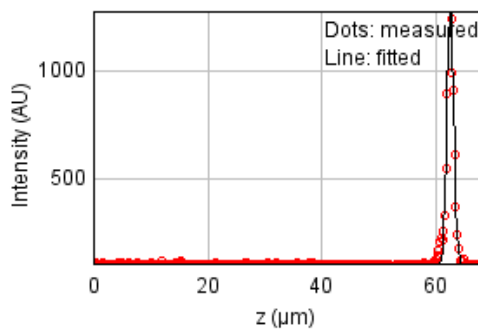
b = 0.032 px

c = 0.327 px

xc = 5.258 px

yc = 5.201 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 181844.609

Standard deviation: 24.33778

$R^2$ : 0.97246

Parameters:

a = 112.81975

b = 1284.97104

c = 62.58328

d = 0.59883

## Bead 3006

Date : Mon Oct 17 13:30:11 PDT 2022

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

Frame size : 10 pixels

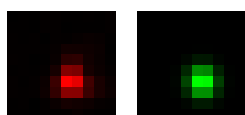
Coordinates : -71.4  $\mu\text{m}$  (x), -61.4  $\mu\text{m}$  (y), 62.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

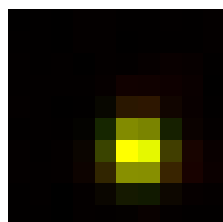
FWHM	Non corrected	Corrected	Theoretical
min	443 nm	458 nm	223 nm
max	477 nm	493 nm	223 nm
z	1.42 $\mu\text{m}$	1.42 $\mu\text{m}$	885 nm
Asymmetry	0.93		
Theta	-83.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1264.462 (brightness)

B = 122.474 (background)

a = 0.681 px

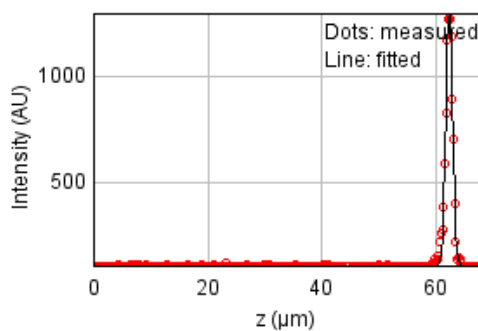
b = -0.011 px

c = 0.591 px

$x_c = 5.477$  px

$y_c = 6.024$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 50040.1692

Standard deviation: 12.76704

$R^2$ : 0.99251

Parameters:

a = 114.98346

b = 1303.28126

c = 62.38670

d = 0.60211

## Bead 3007

Date : Mon Oct 17 13:30:11 PDT 2022

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

Frame size : 10 pixels

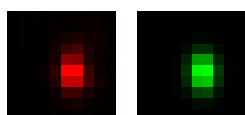
Coordinates : -16.8  $\mu\text{m}$  (x), -73.5  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

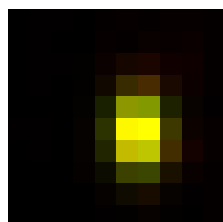
FWHM	Non corrected	Corrected	Theoretical
min	416 nm	430 nm	223 nm
max	591 nm	611 nm	223 nm
z	1.08 $\mu\text{m}$	1.08 $\mu\text{m}$	885 nm
Asymmetry	0.704		
Theta	-88.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.982$



Parameters:

A = 2028.286 (brightness)

B = 135.332 (background)

a = 0.776 px

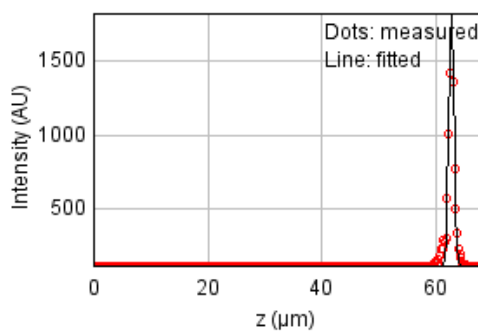
b = -0.012 px

c = 0.385 px

$x_c = 5.524$  px

$y_c = 5.152$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 142618.955

Standard deviation: 21.55358

$R^2$ : 0.98684

Parameters:

a = 116.96118

b = 1841.97315

c = 62.78144

d = 0.45710

## Bead 3008

Date : Mon Oct 17 13:30:11 PDT 2022

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

Frame size : 10 pixels

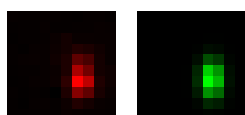
Coordinates : -140  $\mu\text{m}$  (x), 92.4  $\mu\text{m}$  (y), 62.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	357 nm	369 nm	223 nm
max	587 nm	607 nm	223 nm
z	1.22 $\mu\text{m}$	1.22 $\mu\text{m}$	885 nm
Asymmetry	0.609		
Theta	-89.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1035.397$  (brightness)

$B = 120.262$  (background)

$a = 1.051$  px

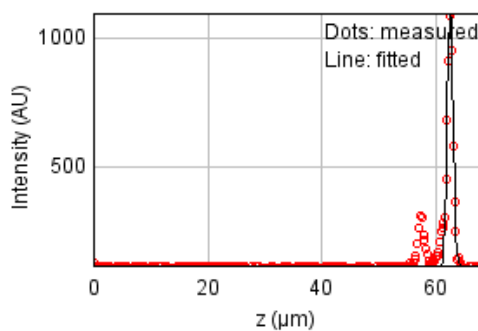
$b = -0.006$  px

$c = 0.390$  px

$x_c = 6.343$  px

$y_c = 5.780$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 284458.455

Standard deviation: 30.43969

$R^2: 0.93291$

Parameters:

$a = 119.00374$

$b = 1107.78330$

$c = 62.55886$

$d = 0.51615$



## Bead 3009

Date : Mon Oct 17 13:30:12 PDT 2022

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

Frame size : 10 pixels

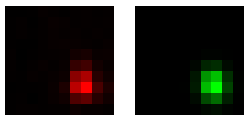
Coordinates : -99.1  $\mu\text{m}$  (x), 87.0  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

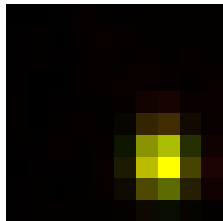
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	482 nm	498 nm	223 nm
z	1.11 $\mu\text{m}$	1.11 $\mu\text{m}$	885 nm
Asymmetry	0.834		
Theta	-83.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.982$



Parameters:

$A = 1269.353$  (brightness)

$B = 121.524$  (background)

$a = 0.827$  px

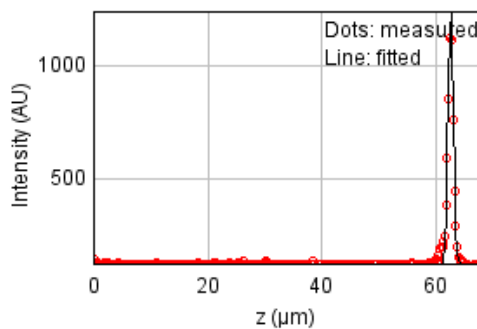
$b = -0.028$  px

$c = 0.581$  px

$x_c = 6.680$  px

$y_c = 6.737$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 54209.7763

Standard deviation: 13.28831

$R^2: 0.98875$

Parameters:

$a = 114.97157$

$b = 1248.75299$

$c = 62.65962$

$d = 0.47157$

## Bead 3010

Date : Mon Oct 17 13:30:12 PDT 2022

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

Frame size : 10 pixels

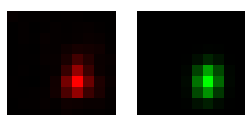
Coordinates : -112  $\mu\text{m}$  (x), 82.7  $\mu\text{m}$  (y), 62.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

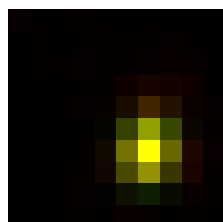
FWHM	Non corrected	Corrected	Theoretical
min	394 nm	408 nm	223 nm
max	516 nm	533 nm	223 nm
z	1.16 $\mu\text{m}$	1.16 $\mu\text{m}$	885 nm
Asymmetry	0.765		
Theta	82.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1240.728 (brightness)

B = 125.763 (background)

a = 0.856 px

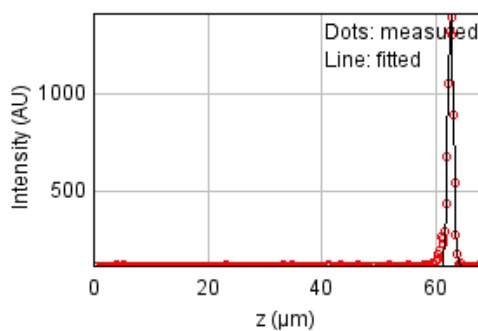
b = 0.049 px

c = 0.511 px

$x_c = 5.974$  px

$y_c = 5.956$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 89716.9015

Standard deviation: 17.09495

$R^2$ : 0.98660

Parameters:

a = 114.60453

b = 1423.30683

c = 62.64906

d = 0.49150

## Bead 3011

Date : Mon Oct 17 13:30:12 PDT 2022

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

Frame size : 10 pixels

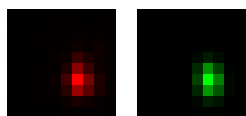
Coordinates : -77.2  $\mu\text{m}$  (x), 74.8  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

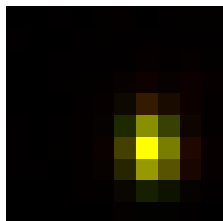
FWHM	Non corrected	Corrected	Theoretical
min	359 nm	371 nm	223 nm
max	499 nm	516 nm	223 nm
z	1.18 $\mu\text{m}$	1.18 $\mu\text{m}$	885 nm
Asymmetry	0.72		
Theta	-84.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1561.753 (brightness)

B = 128.415 (background)

a = 1.035 px

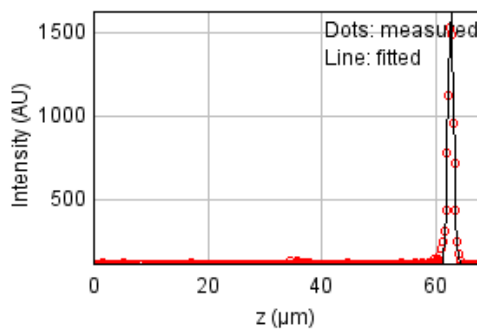
b = -0.048 px

c = 0.544 px

$x_c = 6.162$  px

$y_c = 6.043$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 86762.9800

Standard deviation: 16.81117

$R^2$ : 0.99044

Parameters:

a = 116.01562

b = 1628.54246

c = 62.67214

d = 0.50067

## Bead 3012

Date : Mon Oct 17 13:30:12 PDT 2022

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

Frame size : 10 pixels

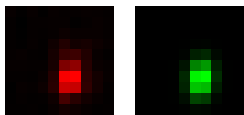
Coordinates : -131  $\mu\text{m}$  (x), 73.4  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

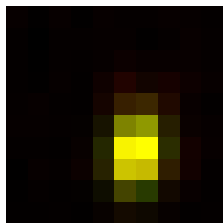
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	398 nm	223 nm
max	570 nm	589 nm	223 nm
z	1.08 $\mu\text{m}$	1.08 $\mu\text{m}$	885 nm
Asymmetry	0.676		
Theta	84.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.982$



Parameters:

A = 1059.231 (brightness)

B = 122.488 (background)

a = 0.899 px

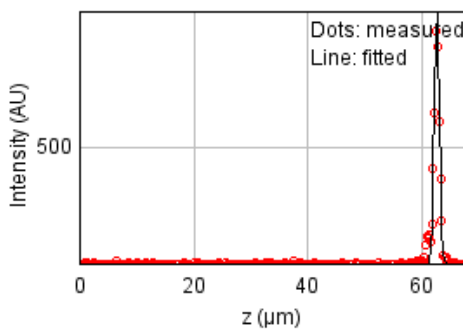
b = 0.051 px

c = 0.419 px

xc = 5.518 px

yc = 6.175 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 47524.4612

Standard deviation: 12.44198

$R^2$ : 0.98141

Parameters:

a = 112.77693

b = 946.88196

c = 62.68124

d = 0.45864

## Bead 3013

Date : Mon Oct 17 13:30:12 PDT 2022

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

Frame size : 10 pixels

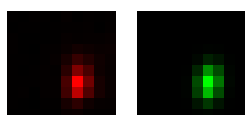
Coordinates : -84.7  $\mu\text{m}$  (x), 70.8  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

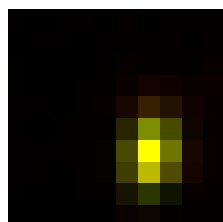
FWHM	Non corrected	Corrected	Theoretical
min	363 nm	376 nm	223 nm
max	548 nm	566 nm	223 nm
z	1.16 $\mu\text{m}$	1.16 $\mu\text{m}$	885 nm
Asymmetry	0.663		
Theta	83.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1691.513 (brightness)

B = 127.313 (background)

a = 1.009 px

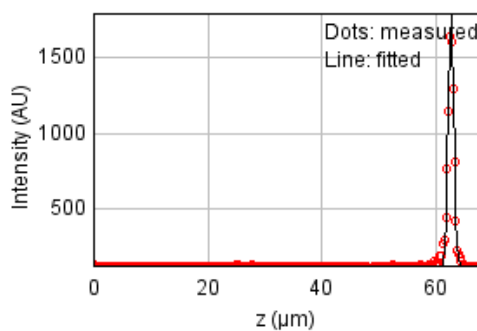
b = 0.063 px

c = 0.454 px

$x_c = 6.106$  px

$y_c = 6.132$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 84498.2759

Standard deviation: 16.59032

$R^2: 0.99230$

Parameters:

a = 115.70959

b = 1795.56384

c = 62.70987

d = 0.49182

## Bead 3014

Date : Mon Oct 17 13:30:12 PDT 2022

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

Frame size : 10 pixels

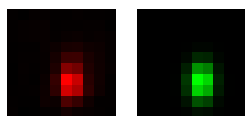
Coordinates : -132  $\mu\text{m}$  (x), 69.7  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

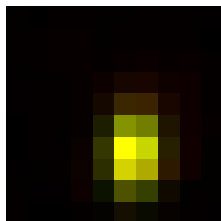
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	408 nm	223 nm
max	597 nm	617 nm	223 nm
z	1.23 $\mu\text{m}$	1.24 $\mu\text{m}$	885 nm
Asymmetry	0.662		
Theta	88.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.982$



Parameters:

A = 1292.208 (brightness)

B = 126.995 (background)

a = 0.860 px

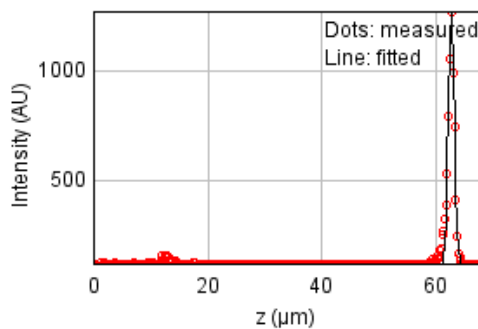
b = 0.015 px

c = 0.377 px

xc = 5.393 px

yc = 6.221 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 107031.915

Standard deviation: 18.67185

$R^2$ : 0.98104

Parameters:

a = 115.22500

b = 1276.63395

c = 62.76935

d = 0.52405

## Bead 3015

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

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

Frame size : 10 pixels

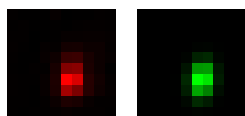
Coordinates : -60.8  $\mu\text{m}$  (x), 64.7  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

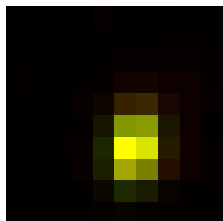
FWHM	Non corrected	Corrected	Theoretical
min	365 nm	377 nm	223 nm
max	533 nm	551 nm	223 nm
z	1.29 $\mu\text{m}$	1.29 $\mu\text{m}$	885 nm
Asymmetry	0.684		
Theta	82.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1557.444$  (brightness)

$B = 127.546$  (background)

$a = 0.998$  px

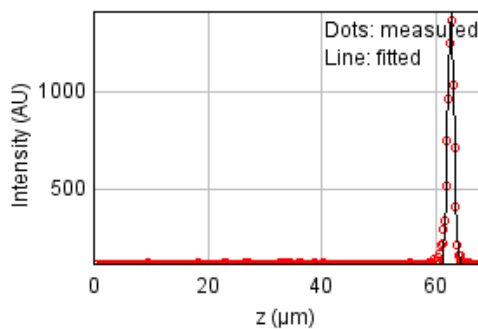
$b = 0.071$  px

$c = 0.481$  px

$x_c = 5.443$  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: 83123.8401

Standard deviation: 16.45484

$R^2: 0.98860$

Parameters:

$a = 114.25147$

$b = 1412.42367$

$c = 62.69255$

$d = 0.54672$

## Bead 3016

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

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

Frame size : 10 pixels

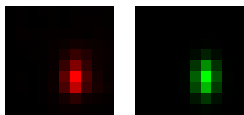
Coordinates : -101  $\mu\text{m}$  (x), 58.9  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

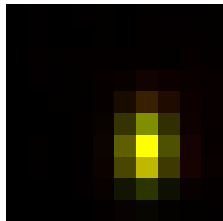
FWHM	Non corrected	Corrected	Theoretical
min	354 nm	366 nm	223 nm
max	542 nm	560 nm	223 nm
z	1.09 $\mu\text{m}$	1.1 $\mu\text{m}$	885 nm
Asymmetry	0.654		
Theta	88.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.982$



Parameters:

A = 1801.670 (brightness)

B = 133.094 (background)

a = 1.069 px

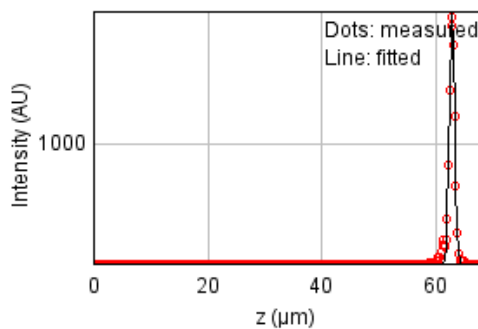
b = 0.016 px

c = 0.457 px

$x_c = 5.963$  px

$y_c = 6.139$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 99203.0956

Standard deviation: 17.97602

$R^2$ : 0.99226

Parameters:

a = 115.13709

b = 1983.10598

c = 62.87984

d = 0.46378



## Bead 3017 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : -91.9  $\mu\text{m}$  (x), 59.0  $\mu\text{m}$  (y), 61.5  $\mu\text{m}$  (z)

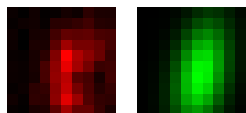
Corresponding bead : Not found

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

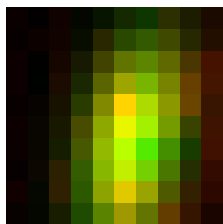
FWHM	Non corrected	Corrected	Theoretical
min	800 nm	827 nm	223 nm
max	1.68 $\mu\text{m}$	1.74 $\mu\text{m}$	223 nm
z	1.49 $\mu\text{m}$	1.5 $\mu\text{m}$	885 nm
Asymmetry	0.477		
Theta	79.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.867$



Parameters:

A = 227.491 (brightness)

B = 124.125 (background)

a = 0.204 px

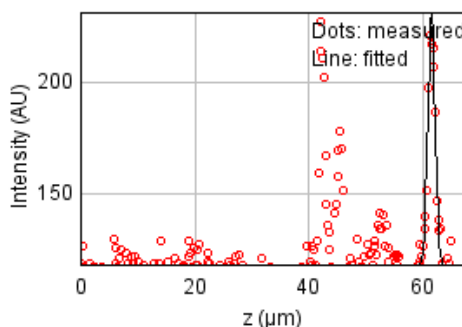
b = 0.029 px

c = 0.053 px

xc = 5.341 px

yc = 5.677 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 76075.3239

Standard deviation: 15.74174

$R^2$ : 0.45853

Parameters:

a = 117.79404

b = 232.08976

c = 61.54692

d = 0.63308

## Bead 3018

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

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

Frame size : 10 pixels

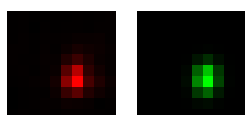
Coordinates : -66.7  $\mu\text{m}$  (x), 58.8  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	367 nm	380 nm	223 nm
max	469 nm	485 nm	223 nm
z	1.09 $\mu\text{m}$	1.09 $\mu\text{m}$	885 nm
Asymmetry	0.783		
Theta	84.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1617.943 (brightness)

B = 130.331 (background)

a = 0.991 px

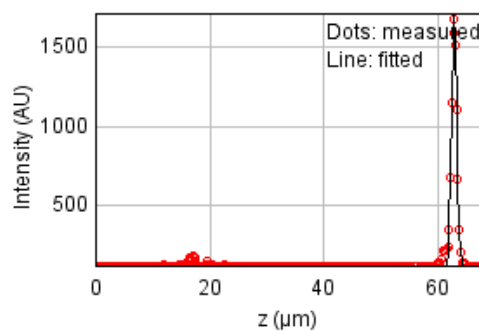
b = 0.036 px

c = 0.614 px

$x_c = 5.838$  px

$y_c = 5.731$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 85540.7898

Standard deviation: 16.69235

$R^2$ : 0.99085

Parameters:

a = 117.35892

b = 1715.13608

c = 62.90934

d = 0.46150

## Bead 3019

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

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

Frame size : 10 pixels

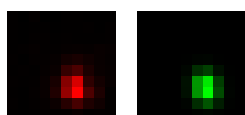
Coordinates : -155  $\mu\text{m}$  (x), 56.4  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

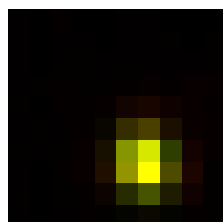
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	399 nm	223 nm
max	476 nm	492 nm	223 nm
z	1.19 $\mu\text{m}$	1.19 $\mu\text{m}$	885 nm
Asymmetry	0.812		
Theta	-79.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1649.768 (brightness)

B = 127.312 (background)

a = 0.888 px

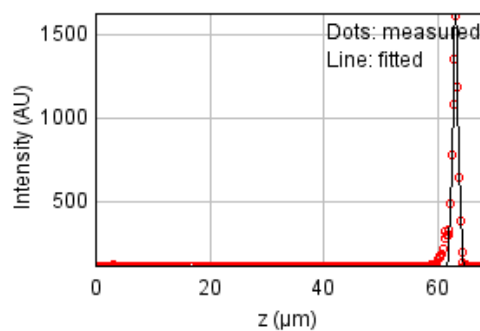
b = -0.055 px

c = 0.602 px

xc = 5.781 px

yc = 6.561 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 253792.330

Standard deviation: 28.75213

$R^2$ : 0.97250

Parameters:

a = 114.44251

b = 1621.44596

c = 63.14303

d = 0.50387

## Bead 3020

Date : Mon Oct 17 13:30:14 PDT 2022

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

Frame size : 10 pixels

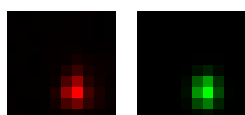
Coordinates : -127  $\mu\text{m}$  (x), 54.4  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	383 nm	396 nm	223 nm
max	471 nm	487 nm	223 nm
z	1.17 $\mu\text{m}$	1.17 $\mu\text{m}$	885 nm
Asymmetry	0.813		
Theta	87.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1933.727$  (brightness)

$B = 132.209$  (background)

$a = 0.914$  px

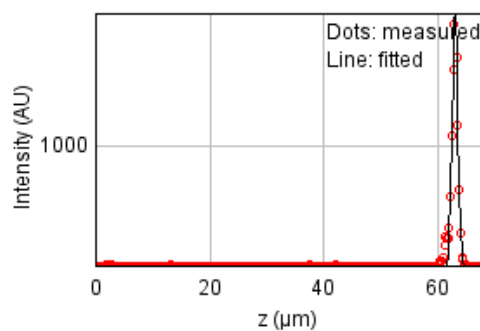
$b = 0.012$  px

$c = 0.605$  px

$x_c = 5.807$  px

$y_c = 6.890$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 163775.837

Standard deviation: 23.09701

$R^2: 0.98824$

Parameters:

$a = 114.67891$

$b = 1996.06719$

$c = 63.04563$

$d = 0.49556$

## Bead 3021

Date : Mon Oct 17 13:30:14 PDT 2022

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

Frame size : 10 pixels

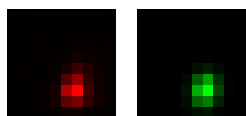
Coordinates : -55.7  $\mu\text{m}$  (x), 52.6  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

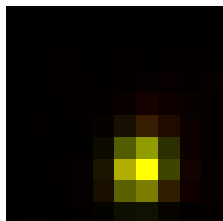
FWHM	Non corrected	Corrected	Theoretical
min	393 nm	406 nm	223 nm
max	478 nm	494 nm	223 nm
z	1.12 $\mu\text{m}$	1.12 $\mu\text{m}$	885 nm
Asymmetry	0.823		
Theta	76.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1715.770 (brightness)

B = 127.633 (background)

a = 0.852 px

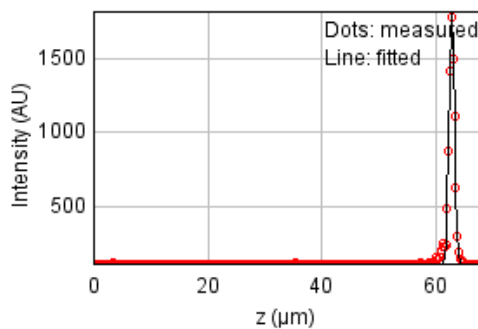
b = 0.065 px

c = 0.604 px

$x_c = 5.735$  px

$y_c = 6.939$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 76143.8632

Standard deviation: 15.74883

$R^2$ : 0.99311

Parameters:

a = 114.73673

b = 1830.57072

c = 62.84679

d = 0.47448

## Bead 3022

Date : Mon Oct 17 13:30:14 PDT 2022

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

Frame size : 10 pixels

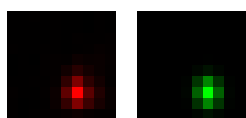
Coordinates : -75.7  $\mu\text{m}$  (x), 47.3  $\mu\text{m}$  (y), 63.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

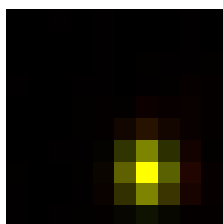
FWHM	Non corrected	Corrected	Theoretical
min	372 nm	384 nm	223 nm
max	450 nm	465 nm	223 nm
z	1.52 $\mu\text{m}$	1.52 $\mu\text{m}$	885 nm
Asymmetry	0.826		
Theta	-86.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.982$



Parameters:

A = 2493.549 (brightness)

B = 134.991 (background)

a = 0.971 px

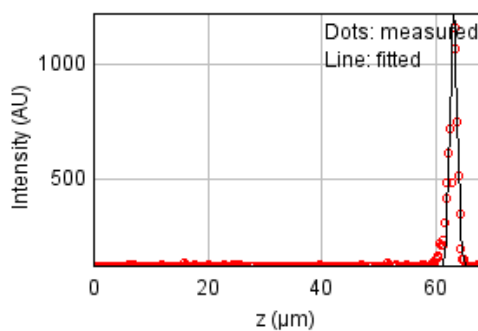
b = -0.020 px

c = 0.664 px

$x_c = 6.003$  px

$y_c = 7.001$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 438363.683

Standard deviation: 37.78749

$R^2$ : 0.93384

Parameters:

a = 114.89103

b = 1225.19026

c = 63.16131

d = 0.64468

## Bead 3023

Date : Mon Oct 17 13:30:14 PDT 2022

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

Frame size : 10 pixels

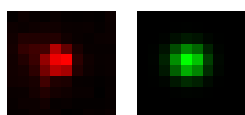
Coordinates : -121  $\mu\text{m}$  (x), 45.7  $\mu\text{m}$  (y), 20.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

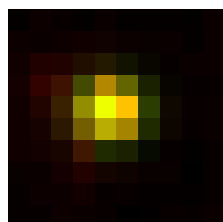
FWHM	Non corrected	Corrected	Theoretical
min	510 nm	527 nm	223 nm
max	556 nm	575 nm	223 nm
z	1.77 $\mu\text{m}$	1.78 $\mu\text{m}$	885 nm
Asymmetry	0.916		
Theta	-1.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 533.419 (brightness)

B = 121.459 (background)

a = 0.433 px

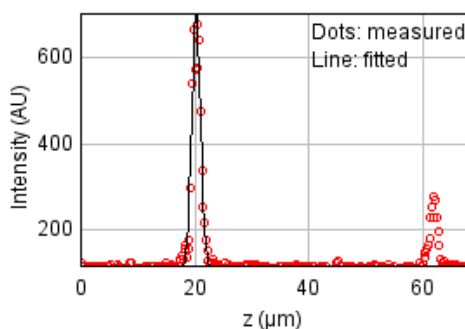
b = -0.002 px

c = 0.516 px

$x_c = 4.181$  px

$y_c = 4.120$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 260512.270

Standard deviation: 29.13030

$R^2$ : 0.88499

Parameters:

a = 117.65431

b = 704.00751

c = 20.33167

d = 0.75343

## Bead 3024

Date : Mon Oct 17 13:30:14 PDT 2022

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

Frame size : 10 pixels

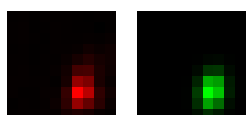
Coordinates : -26.3  $\mu\text{m}$  (x), 42.7  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

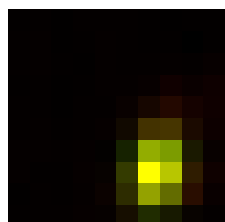
FWHM	Non corrected	Corrected	Theoretical
min	393 nm	406 nm	223 nm
max	573 nm	592 nm	223 nm
z	1.28 $\mu\text{m}$	1.29 $\mu\text{m}$	885 nm
Asymmetry	0.686		
Theta	80.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1450.570$  (brightness)

$B = 127.865$  (background)

$a = 0.858$  px

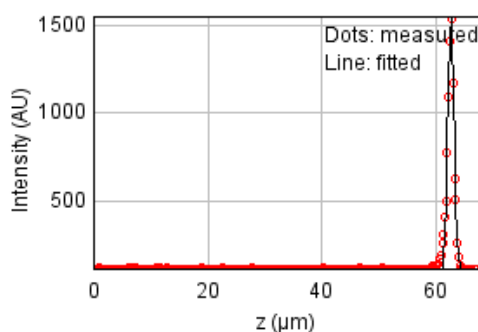
$b = 0.076$  px

$c = 0.422$  px

$x_c = 6.361$  px

$y_c = 6.896$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 119828.736

Standard deviation: 19.75656

$R^2: 0.98646$

Parameters:

$a = 115.09770$

$b = 1546.38162$

$c = 62.69170$

$d = 0.54434$



## Bead 3025

Date : Mon Oct 17 13:30:14 PDT 2022

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

Frame size : 10 pixels

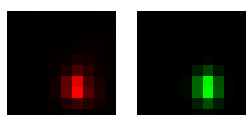
Coordinates : -59.9  $\mu\text{m}$  (x), 38.6  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

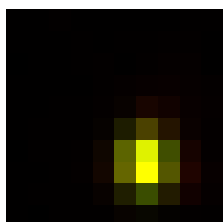
FWHM	Non corrected	Corrected	Theoretical
min	365 nm	377 nm	223 nm
max	462 nm	478 nm	223 nm
z	1.23 $\mu\text{m}$	1.24 $\mu\text{m}$	885 nm
Asymmetry	0.79		
Theta	-87.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 2444.907$  (brightness)

$B = 136.299$  (background)

$a = 1.007$  px

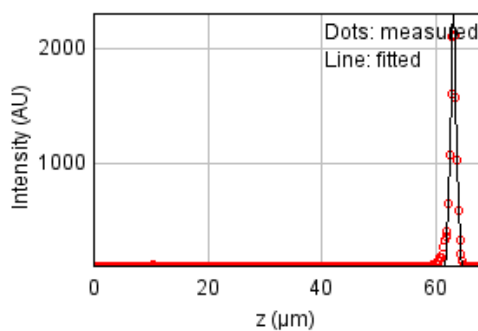
$b = -0.017$  px

$c = 0.629$  px

$x_c = 5.948$  px

$y_c = 6.543$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 167894.474

Standard deviation: 23.38563

$R^2: 0.99150$

Parameters:

$a = 116.14784$

$b = 2301.17293$

$c = 63.12876$

$d = 0.52360$

## Bead 3026

Date : Mon Oct 17 13:30:15 PDT 2022

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

Frame size : 10 pixels

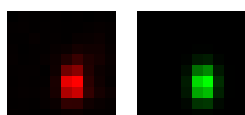
Coordinates : -23.4  $\mu\text{m}$  (x), 38.0  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

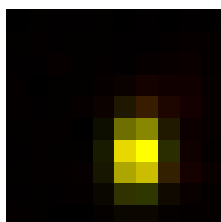
FWHM	Non corrected	Corrected	Theoretical
min	375 nm	387 nm	223 nm
max	536 nm	554 nm	223 nm
z	1.13 $\mu\text{m}$	1.14 $\mu\text{m}$	885 nm
Asymmetry	0.699		
Theta	88.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1266.664 (brightness)

B = 126.031 (background)

a = 0.956 px

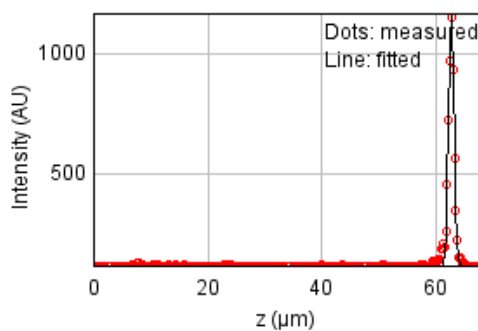
b = 0.017 px

c = 0.468 px

xc = 5.582 px

yc = 6.192 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 43073.7014

Standard deviation: 11.84505

$R^2$ : 0.99004

Parameters:

a = 114.59106

b = 1179.97687

c = 62.76770

d = 0.48036

## Bead 3027

Date : Mon Oct 17 13:30:15 PDT 2022

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

Frame size : 10 pixels

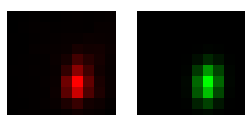
Coordinates : -24.2  $\mu\text{m}$  (x), 31.6  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

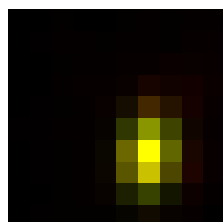
FWHM	Non corrected	Corrected	Theoretical
min	382 nm	395 nm	223 nm
max	579 nm	599 nm	223 nm
z	1.16 $\mu\text{m}$	1.17 $\mu\text{m}$	885 nm
Asymmetry	0.66		
Theta	84.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1681.532 (brightness)

B = 130.706 (background)

a = 0.915 px

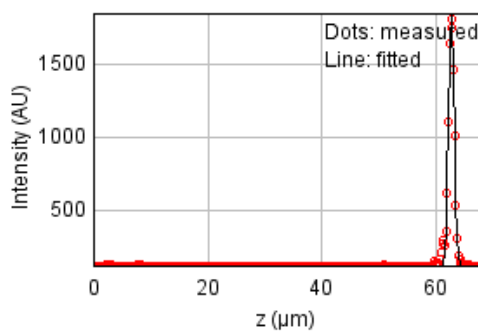
b = 0.052 px

c = 0.405 px

$x_c = 5.989$  px

$y_c = 6.156$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 99142.9763

Standard deviation: 17.97057

$R^2 = 0.99166$

Parameters:

a = 116.09316

b = 1861.21440

c = 62.77677

d = 0.49289

## Bead 3028

Date : Mon Oct 17 13:30:15 PDT 2022

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

Frame size : 10 pixels

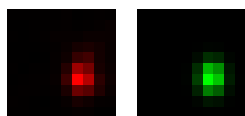
Coordinates : 8.0  $\mu\text{m}$  (x), 28.4  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

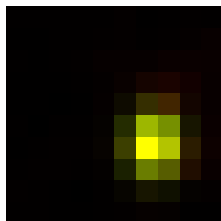
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	415 nm	223 nm
max	506 nm	523 nm	223 nm
z	1.34 $\mu\text{m}$	1.34 $\mu\text{m}$	885 nm
Asymmetry	0.793		
Theta	87.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1363.022 (brightness)

B = 124.637 (background)

a = 0.832 px

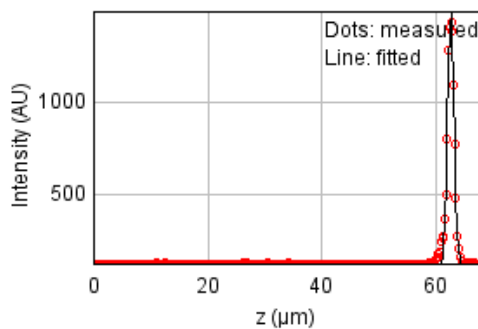
b = 0.013 px

c = 0.524 px

$x_c = 6.343$  px

$y_c = 5.811$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 73378.8975

Standard deviation: 15.46025

$R^2$ : 0.99145

Parameters:

a = 114.77858

b = 1498.47102

c = 62.66439

d = 0.56872

## Bead 3029

Date : Mon Oct 17 13:30:15 PDT 2022

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

Frame size : 10 pixels

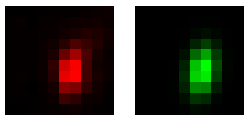
Coordinates : -7.78  $\mu\text{m}$  (x), 23.9  $\mu\text{m}$  (y), 62.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

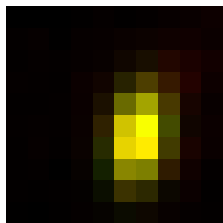
FWHM	Non corrected	Corrected	Theoretical
min	420 nm	435 nm	223 nm
max	729 nm	754 nm	223 nm
z	1.46 $\mu\text{m}$	1.47 $\mu\text{m}$	885 nm
Asymmetry	0.577		
Theta	80.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1172.823 (brightness)

B = 131.840 (background)

a = 0.746 px

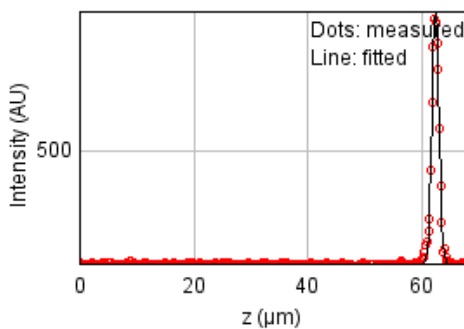
b = 0.081 px

c = 0.266 px

xc = 5.631 px

yc = 5.450 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25968.0780

Standard deviation: 9.19710

$R^2$ : 0.99286

Parameters:

a = 114.71515

b = 978.15478

c = 62.42865

d = 0.62094

## Bead 3030

Date : Mon Oct 17 13:30:15 PDT 2022

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

Frame size : 10 pixels

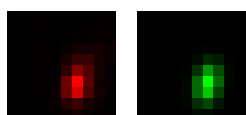
Coordinates : -26.0  $\mu\text{m}$  (x), 14.7  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

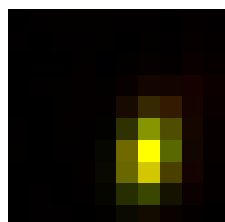
FWHM	Non corrected	Corrected	Theoretical
min	382 nm	395 nm	223 nm
max	605 nm	626 nm	223 nm
z	1.15 $\mu\text{m}$	1.16 $\mu\text{m}$	885 nm
Asymmetry	0.631		
Theta	77.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1655.654 (brightness)

B = 132.180 (background)

a = 0.894 px

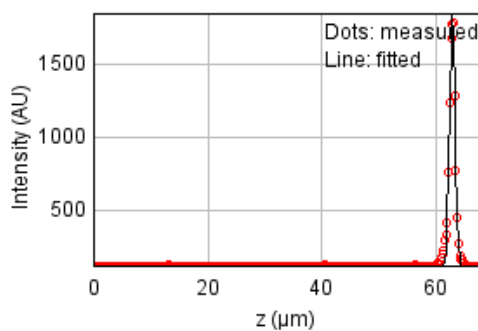
b = 0.117 px

c = 0.392 px

$x_c = 5.974$  px

$y_c = 6.188$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 90232.3347

Standard deviation: 17.14399

$R^2$ : 0.99230

Parameters:

a = 115.36204

b = 1853.79812

c = 62.93091

d = 0.49030

## Bead 3031

Date : Mon Oct 17 13:30:15 PDT 2022

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

Frame size : 10 pixels

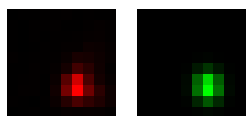
Coordinates : 23.1  $\mu\text{m}$  (x), 11.3  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

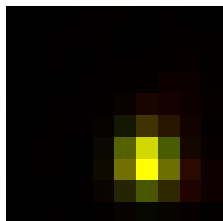
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	461 nm	476 nm	223 nm
z	1.25 $\mu\text{m}$	1.26 $\mu\text{m}$	885 nm
Asymmetry	0.874		
Theta	-85.9°		

### 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 = 1826.078 (brightness)

B = 129.124 (background)

a = 0.828 px

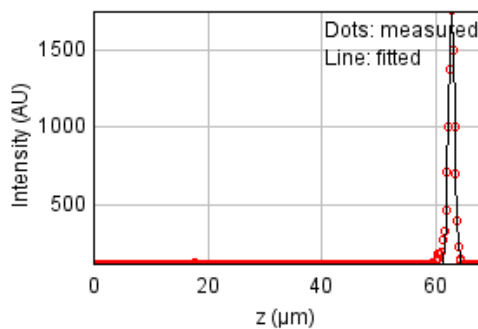
b = -0.014 px

c = 0.633 px

$x_c = 5.997$  px

$y_c = 6.635$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 123397.799

Standard deviation: 20.04862

$R^2$ : 0.98939

Parameters:

a = 115.21901

b = 1776.76067

c = 62.81393

d = 0.53217

## Bead 3032

Date : Mon Oct 17 13:30:15 PDT 2022

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

Frame size : 10 pixels

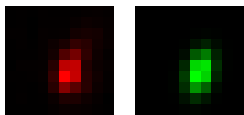
Coordinates : 30.7  $\mu\text{m}$  (x), 11.3  $\mu\text{m}$  (y), 62.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

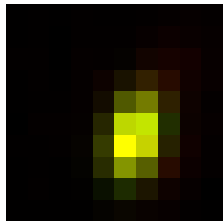
FWHM	Non corrected	Corrected	Theoretical
min	393 nm	407 nm	223 nm
max	645 nm	666 nm	223 nm
z	1.28 $\mu\text{m}$	1.28 $\mu\text{m}$	885 nm
Asymmetry	0.61		
Theta	75.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1307.116 (brightness)

B = 131.094 (background)

a = 0.835 px

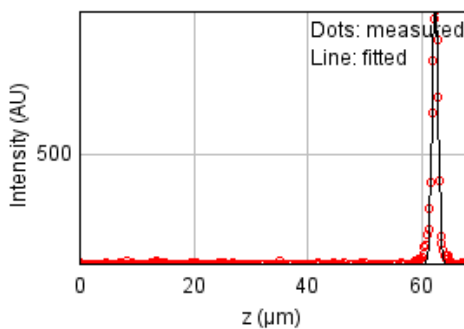
b = 0.129 px

c = 0.355 px

xc = 5.447 px

yc = 5.580 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 47992.3258

Standard deviation: 12.50307

$R^2$ : 0.98614

Parameters:

a = 114.61683

b = 1011.26799

c = 62.37819

d = 0.54237



## Bead 3033

Date : Mon Oct 17 13:30:15 PDT 2022

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

Frame size : 10 pixels

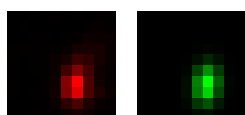
Coordinates : 14.1  $\mu\text{m}$  (x), 9.4  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

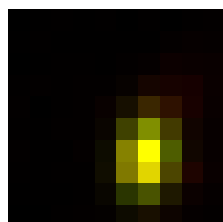
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	410 nm	223 nm
max	599 nm	620 nm	223 nm
z	1.13 $\mu\text{m}$	1.13 $\mu\text{m}$	885 nm
Asymmetry	0.662		
Theta	83.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1633.823 (brightness)

B = 133.202 (background)

a = 0.846 px

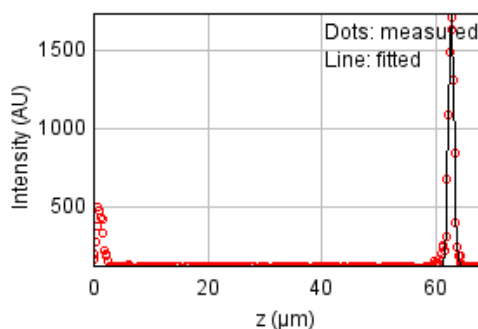
b = 0.057 px

c = 0.380 px

xc = 5.883 px

yc = 6.279 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 743562.386

Standard deviation: 49.21410

$R^2$ : 0.93000

Parameters:

a = 124.96844

b = 1747.33526

c = 62.74825

d = 0.47784

## Bead 3034

Date : Mon Oct 17 13:30:16 PDT 2022

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

Frame size : 10 pixels

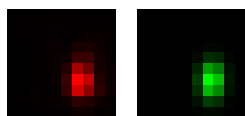
Coordinates : 81.3  $\mu\text{m}$  (x), -24.4  $\mu\text{m}$  (y), 62.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

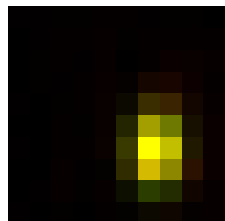
FWHM	Non corrected	Corrected	Theoretical
min	389 nm	402 nm	223 nm
max	582 nm	601 nm	223 nm
z	1.42 $\mu\text{m}$	1.43 $\mu\text{m}$	885 nm
Asymmetry	0.669		
Theta	88.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.982$



Parameters:

A = 1183.169 (brightness)

B = 123.944 (background)

a = 0.887 px

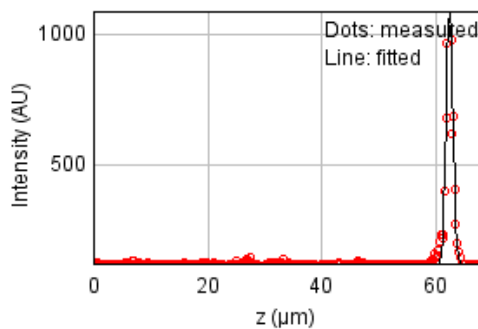
b = 0.010 px

c = 0.397 px

xc = 6.331 px

yc = 6.090 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 250239.285

Standard deviation: 28.55016

$R^2$ : 0.94728

Parameters:

a = 113.95529

b = 1091.33276

c = 62.43731

d = 0.60325

## Bead 3035

Date : Mon Oct 17 13:30:16 PDT 2022

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

Frame size : 10 pixels

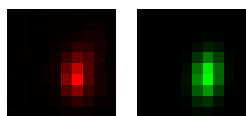
Coordinates : 75.9  $\mu\text{m}$  (x), -41.5  $\mu\text{m}$  (y), 62.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

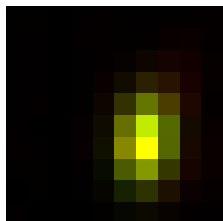
FWHM	Non corrected	Corrected	Theoretical
min	416 nm	430 nm	223 nm
max	674 nm	697 nm	223 nm
z	1.14 $\mu\text{m}$	1.15 $\mu\text{m}$	885 nm
Asymmetry	0.616		
Theta	83.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1258.742 (brightness)

B = 128.382 (background)

a = 0.770 px

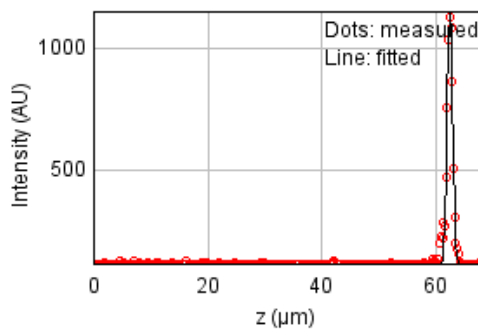
b = 0.058 px

c = 0.302 px

$x_c = 5.936$  px

$y_c = 5.654$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 66631.6418

Standard deviation: 14.73232

$R^2$ : 0.98411

Parameters:

a = 114.31034

b = 1154.71494

c = 62.50398

d = 0.48560

## Bead 3036

Date : Mon Oct 17 13:30:16 PDT 2022

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

Frame size : 10 pixels

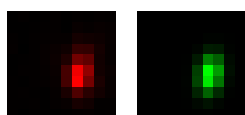
Coordinates : 77.5  $\mu\text{m}$  (x), -56.2  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

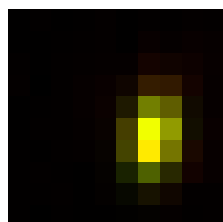
FWHM	Non corrected	Corrected	Theoretical
min	370 nm	383 nm	223 nm
max	594 nm	614 nm	223 nm
z	1.26 $\mu\text{m}$	1.26 $\mu\text{m}$	885 nm
Asymmetry	0.623		
Theta	80.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1500.944 (brightness)

B = 128.943 (background)

a = 0.964 px

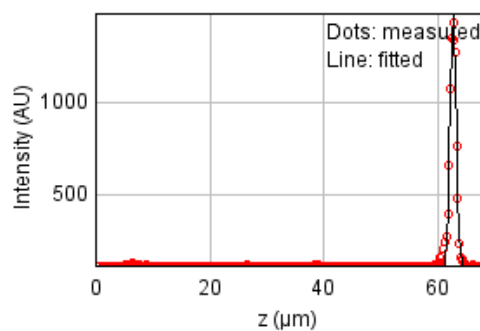
b = 0.097 px

c = 0.396 px

$x_c = 6.206$  px

$y_c = 5.338$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 85218.4696

Standard deviation: 16.66087

$R^2$ : 0.98914

Parameters:

a = 115.01798

b = 1476.23341

c = 62.73265

d = 0.53493

## Bead 3037

Date : Mon Oct 17 13:30:16 PDT 2022

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

Frame size : 10 pixels

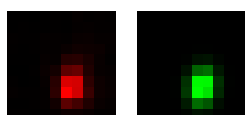
Coordinates : 60.2  $\mu\text{m}$  (x), -74.5  $\mu\text{m}$  (y), 63.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

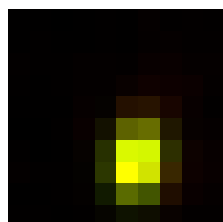
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	414 nm	223 nm
max	550 nm	569 nm	223 nm
z	1.56 $\mu\text{m}$	1.57 $\mu\text{m}$	885 nm
Asymmetry	0.728		
Theta	81.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 2198.196 (brightness)

B = 133.717 (background)

a = 0.827 px

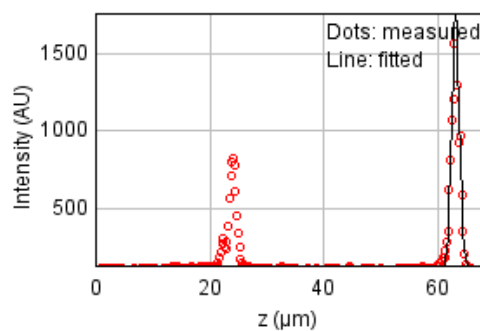
b = 0.056 px

c = 0.451 px

xc = 5.464 px

yc = 6.473 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 2885746.35

Standard deviation: 96.95270

$R^2$ : 0.82366

Parameters:

a = 135.64850

b = 1752.15447

c = 63.15310

d = 0.66328

## Bead 3038

Date : Mon Oct 17 13:30:16 PDT 2022

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

Frame size : 10 pixels

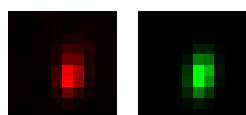
Coordinates : -75.4  $\mu\text{m}$  (x), 91.2  $\mu\text{m}$  (y), 62.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

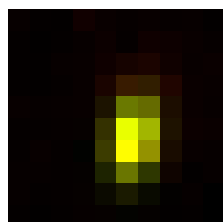
FWHM	Non corrected	Corrected	Theoretical
min	364 nm	376 nm	223 nm
max	611 nm	632 nm	223 nm
z	1.2 $\mu\text{m}$	1.2 $\mu\text{m}$	885 nm
Asymmetry	0.595		
Theta	80.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 841.708 (brightness)

B = 123.372 (background)

a = 0.996 px

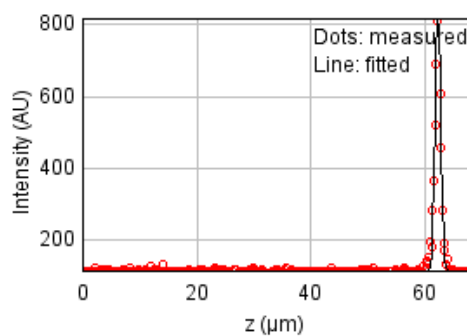
b = 0.109 px

c = 0.378 px

xc = 5.286 px

yc = 5.407 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31718.0539

Standard deviation: 10.16445

$R^2$ : 0.98436

Parameters:

a = 113.74947

b = 821.22143

c = 62.32121

d = 0.50853

## Bead 3039

Date : Mon Oct 17 13:30:16 PDT 2022

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

Frame size : 10 pixels

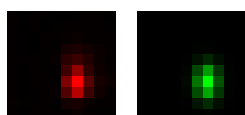
Coordinates : -130  $\mu\text{m}$  (x), 75.7  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

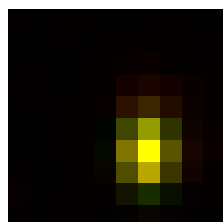
FWHM	Non corrected	Corrected	Theoretical
min	375 nm	388 nm	223 nm
max	540 nm	558 nm	223 nm
z	1.23 $\mu\text{m}$	1.24 $\mu\text{m}$	885 nm
Asymmetry	0.695		
Theta	89.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1061.252 (brightness)

B = 124.044 (background)

a = 0.952 px

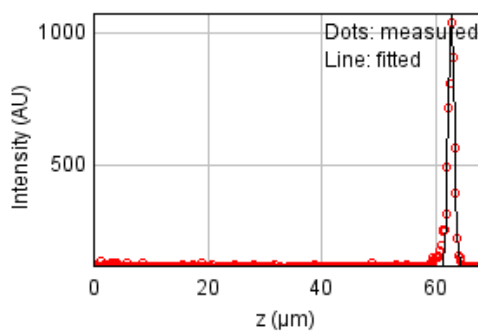
b = 0.007 px

c = 0.460 px

xc = 5.912 px

yc = 6.041 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 98782.7517

Standard deviation: 17.93789

$R^2$ : 0.97482

Parameters:

a = 113.90432

b = 1078.88746

c = 62.76557

d = 0.52420

## Bead 3040

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

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

Frame size : 10 pixels

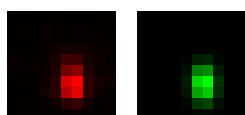
Coordinates : -148  $\mu\text{m}$  (x), 71.9  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

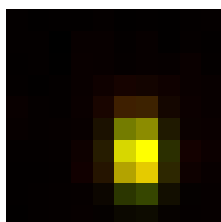
FWHM	Non corrected	Corrected	Theoretical
min	379 nm	392 nm	223 nm
max	569 nm	588 nm	223 nm
z	1.44 $\mu\text{m}$	1.44 $\mu\text{m}$	885 nm
Asymmetry	0.667		
Theta	-87.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 914.348 (brightness)

B = 119.187 (background)

a = 0.932 px

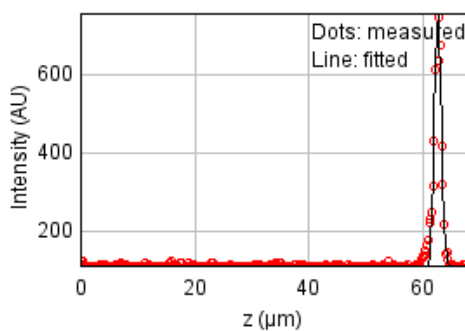
b = -0.023 px

c = 0.416 px

xc = 5.597 px

yc = 6.200 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 54371.3430

Standard deviation: 13.30809

$R^2$ : 0.97332

Parameters:

a = 110.99921

b = 756.54507

c = 62.67528

d = 0.61021



## Bead 3041

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

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

Frame size : 10 pixels

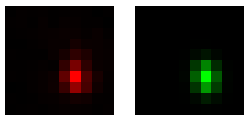
Coordinates : -140  $\mu\text{m}$  (x), 66.4  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

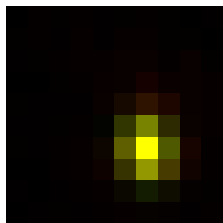
FWHM	Non corrected	Corrected	Theoretical
min	361 nm	373 nm	223 nm
max	477 nm	493 nm	223 nm
z	1.08 $\mu\text{m}$	1.08 $\mu\text{m}$	885 nm
Asymmetry	0.757		
Theta	-83.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1003.608 (brightness)

B = 122.251 (background)

a = 1.023 px

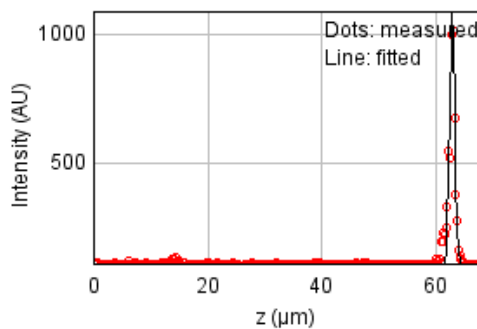
b = -0.049 px

c = 0.595 px

$x_c = 5.988$  px

$y_c = 6.061$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 132499.977

Standard deviation: 20.77489

$R^2$ : 0.96233

Parameters:

a = 114.22268

b = 1085.13944

c = 62.91542

d = 0.45663

## Bead 3042

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

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

Frame size : 10 pixels

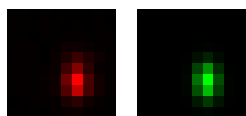
Coordinates : -150  $\mu\text{m}$  (x), 62.0  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

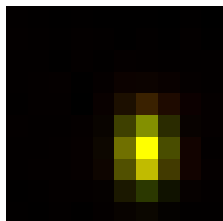
FWHM	Non corrected	Corrected	Theoretical
min	364 nm	376 nm	223 nm
max	549 nm	568 nm	223 nm
z	1.13 $\mu\text{m}$	1.13 $\mu\text{m}$	885 nm
Asymmetry	0.663		
Theta	-88.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1337.358 (brightness)

B = 126.482 (background)

a = 1.012 px

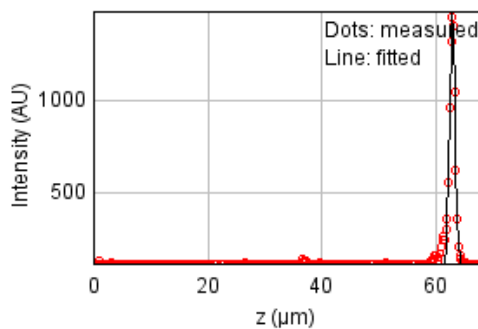
b = -0.011 px

c = 0.445 px

$x_c = 5.910$  px

$y_c = 6.145$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 110118.577

Standard deviation: 18.93918

$R^2$ : 0.98454

Parameters:

a = 114.83797

b = 1481.52566

c = 62.93827

d = 0.47804

## Bead 3043

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

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

Frame size : 10 pixels

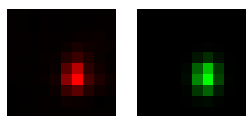
Coordinates : -66.7  $\mu\text{m}$  (x), 58.8  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	367 nm	380 nm	223 nm
max	469 nm	485 nm	223 nm
z	1.09 $\mu\text{m}$	1.09 $\mu\text{m}$	885 nm
Asymmetry	0.783		
Theta	84.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1617.943 (brightness)

B = 130.331 (background)

a = 0.991 px

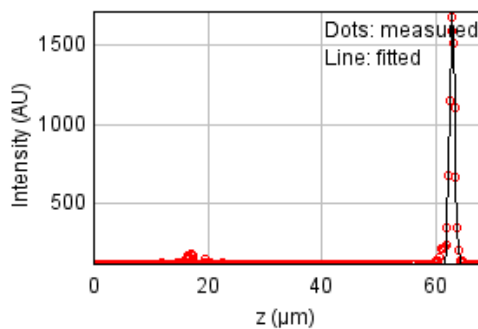
b = 0.036 px

c = 0.614 px

$x_c = 5.838$  px

$y_c = 5.731$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 85540.7898

Standard deviation: 16.69235

$R^2$ : 0.99085

Parameters:

a = 117.35892

b = 1715.13608

c = 62.90934

d = 0.46150

## Bead 3044

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

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

Frame size : 10 pixels

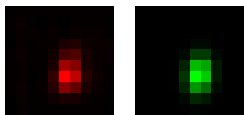
Coordinates : -119  $\mu\text{m}$  (x), 58.6  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

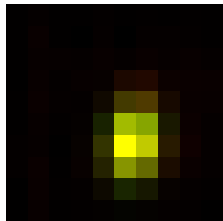
FWHM	Non corrected	Corrected	Theoretical
min	382 nm	395 nm	223 nm
max	564 nm	584 nm	223 nm
z	1.31 $\mu\text{m}$	1.31 $\mu\text{m}$	885 nm
Asymmetry	0.677		
Theta	83.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1456.389 (brightness)

B = 130.744 (background)

a = 0.912 px

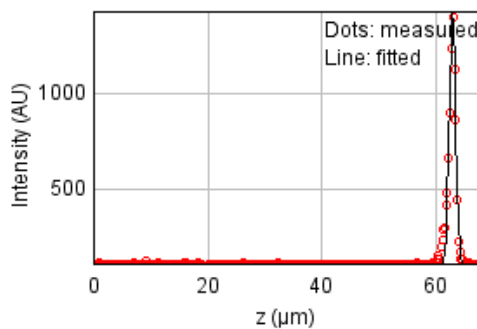
b = 0.056 px

c = 0.428 px

$x_c = 5.382$  px

$y_c = 5.815$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 148940.446

Standard deviation: 22.02608

$R^2$ : 0.98039

Parameters:

a = 113.14238

b = 1422.67278

c = 62.96087

d = 0.55495

## Bead 3045

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

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

Frame size : 10 pixels

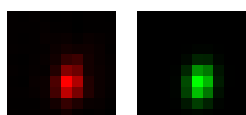
Coordinates : -113  $\mu\text{m}$  (x), 58.3  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

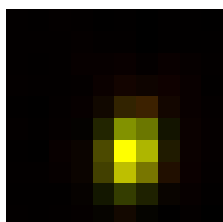
FWHM	Non corrected	Corrected	Theoretical
min	409 nm	423 nm	223 nm
max	569 nm	588 nm	223 nm
z	1.25 $\mu\text{m}$	1.26 $\mu\text{m}$	885 nm
Asymmetry	0.72		
Theta	79.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1280.041 (brightness)

B = 123.901 (background)

a = 0.788 px

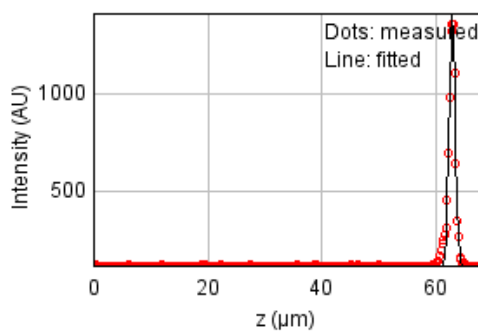
b = 0.068 px

c = 0.427 px

$x_c = 5.273$  px

$y_c = 6.115$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 94502.7551

Standard deviation: 17.54499

$R^2$ : 0.98667

Parameters:

a = 114.82531

b = 1411.35598

c = 62.91674

d = 0.53111

## Bead 3046

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

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

Frame size : 10 pixels

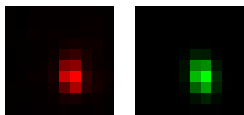
Coordinates : -38.6  $\mu\text{m}$  (x), 55.9  $\mu\text{m}$  (y), 62.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

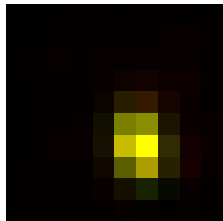
FWHM	Non corrected	Corrected	Theoretical
min	357 nm	369 nm	223 nm
max	508 nm	526 nm	223 nm
z	1.49 $\mu\text{m}$	1.5 $\mu\text{m}$	885 nm
Asymmetry	0.702		
Theta	-78.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1261.843 (brightness)

B = 122.588 (background)

a = 1.031 px

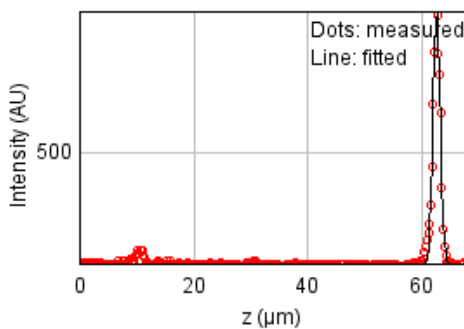
b = -0.103 px

c = 0.540 px

$x_c = 5.648$  px

$y_c = 5.986$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 56997.7805

Standard deviation: 13.62573

$R^2$ : 0.98518

Parameters:

a = 116.22518

b = 991.98360

c = 62.63612

d = 0.63425

## Bead 3047 (Rejected)

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

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

Frame size : 10 pixels

Coordinates : -159  $\mu\text{m}$  (x), 53.8  $\mu\text{m}$  (y), 61.9  $\mu\text{m}$  (z)

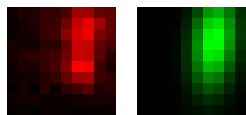
Corresponding bead : Not found

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

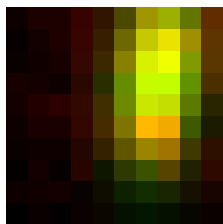
FWHM	Non corrected	Corrected	Theoretical
min	690 nm	713 nm	223 nm
max	1.48 $\mu\text{m}$	1.53 $\mu\text{m}$	223 nm
z	2.36 $\mu\text{m}$	2.37 $\mu\text{m}$	885 nm
Asymmetry	0.465		
Theta	83.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 183.457 (brightness)

B = 118.752 (background)

a = 0.279 px

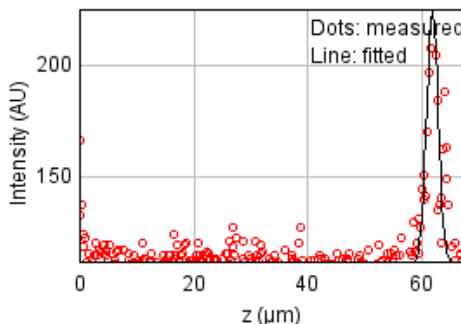
b = 0.024 px

c = 0.064 px

xc = 6.550 px

yc = 2.618 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31936.7575

Standard deviation: 10.19944

$R^2$ : 0.75491

Parameters:

a = 111.87010

b = 225.23964

c = 61.89561

d = 1.00256

## Bead 3048

Date : Mon Oct 17 13:30:18 PDT 2022

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

Frame size : 10 pixels

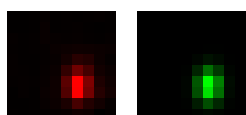
Coordinates : -89.3  $\mu\text{m}$  (x), 53.4  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

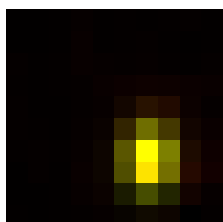
FWHM	Non corrected	Corrected	Theoretical
min	389 nm	402 nm	223 nm
max	528 nm	546 nm	223 nm
z	1.21 $\mu\text{m}$	1.21 $\mu\text{m}$	885 nm
Asymmetry	0.735		
Theta	88.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1449.022 (brightness)

B = 126.000 (background)

a = 0.888 px

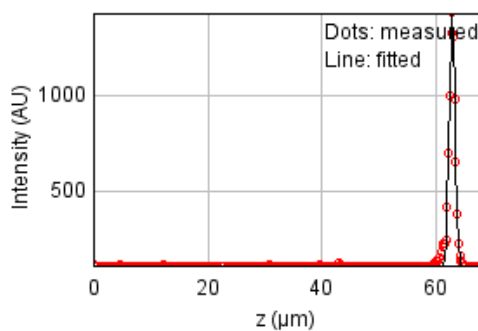
b = 0.011 px

c = 0.481 px

xc = 6.106 px

yc = 6.372 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 53013.0515

Standard deviation: 13.14081

$R^2$ : 0.99234

Parameters:

a = 114.00833

b = 1419.96014

c = 62.90560

d = 0.51335



## Bead 3049

Date : Mon Oct 17 13:30:18 PDT 2022

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

Frame size : 10 pixels

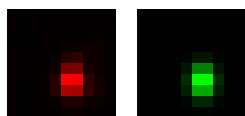
Coordinates : -54.9  $\mu\text{m}$  (x), 48.2  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

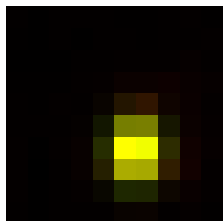
FWHM	Non corrected	Corrected	Theoretical
min	393 nm	406 nm	223 nm
max	494 nm	511 nm	223 nm
z	1.31 $\mu\text{m}$	1.32 $\mu\text{m}$	885 nm
Asymmetry	0.795		
Theta	88.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1930.877 (brightness)

B = 126.115 (background)

a = 0.870 px

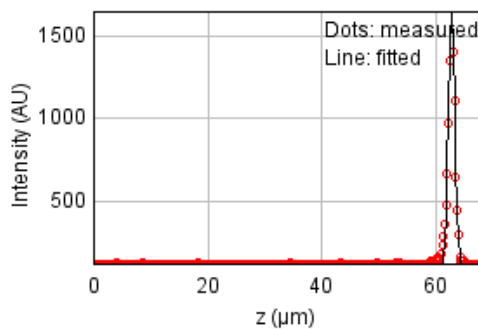
b = 0.007 px

c = 0.550 px

xc = 5.494 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: 88397.3750

Standard deviation: 16.96878

$R^2$ : 0.99171

Parameters:

a = 114.25872

b = 1672.24930

c = 62.82099

d = 0.55688

## Bead 3050

Date : Mon Oct 17 13:30:18 PDT 2022

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

Frame size : 10 pixels

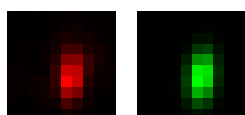
Coordinates : -154  $\mu\text{m}$  (x), 48.7  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

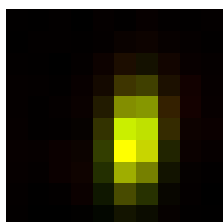
FWHM	Non corrected	Corrected	Theoretical
min	407 nm	421 nm	223 nm
max	780 nm	806 nm	223 nm
z	1.39 $\mu\text{m}$	1.4 $\mu\text{m}$	885 nm
Asymmetry	0.523		
Theta	84.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1039.087$  (brightness)

$B = 127.063$  (background)

$a = 0.802$  px

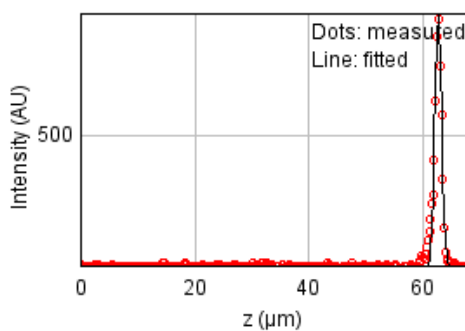
$b = 0.062$  px

$c = 0.227$  px

$x_c = 5.422$  px

$y_c = 5.535$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 52593.5941

Standard deviation: 13.08872

$R^2: 0.98012$

Parameters:

$a = 111.61825$

$b = 860.73318$

$c = 62.74229$

$d = 0.59197$

## Bead 3051

Date : Mon Oct 17 13:30:18 PDT 2022

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

Frame size : 10 pixels

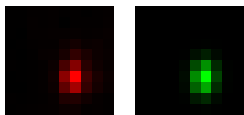
Coordinates : -89.1  $\mu\text{m}$  (x), 48.2  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

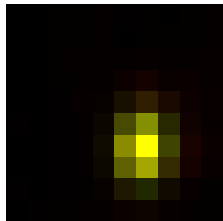
FWHM	Non corrected	Corrected	Theoretical
min	373 nm	385 nm	223 nm
max	518 nm	536 nm	223 nm
z	1.19 $\mu\text{m}$	1.19 $\mu\text{m}$	885 nm
Asymmetry	0.719		
Theta	86.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1685.253 (brightness)

B = 131.450 (background)

a = 0.964 px

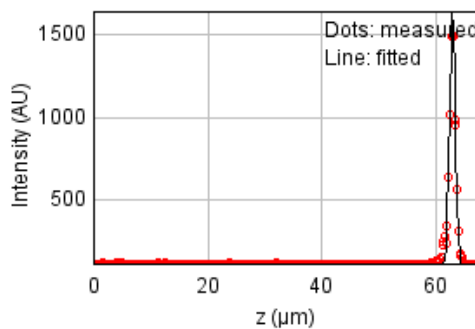
b = 0.026 px

c = 0.501 px

$x_c = 5.814$  px

$y_c = 6.085$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 191392.072

Standard deviation: 24.96852

$R^2$ : 0.97965

Parameters:

a = 116.66246

b = 1642.71403

c = 62.96111

d = 0.50444

## Bead 3052

Date : Mon Oct 17 13:30:18 PDT 2022

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

Frame size : 10 pixels

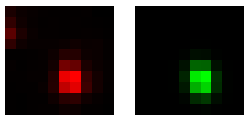
Coordinates : -125  $\mu\text{m}$  (x), 47.2  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

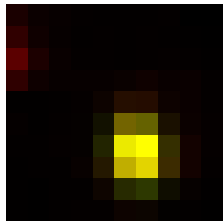
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	399 nm	223 nm
max	488 nm	505 nm	223 nm
z	1.08 $\mu\text{m}$	1.08 $\mu\text{m}$	885 nm
Asymmetry	0.79		
Theta	-80.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1643.558 (brightness)

B = 144.227 (background)

a = 0.893 px

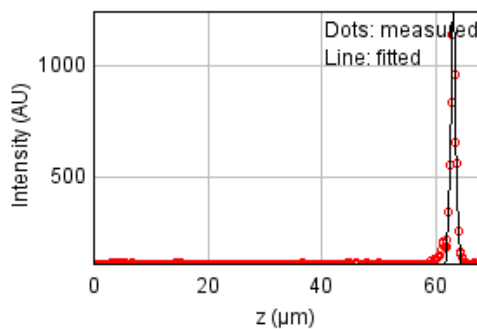
b = -0.053 px

c = 0.571 px

$x_c = 5.567$  px

$y_c = 6.296$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 123811.482

Standard deviation: 20.08220

$R^2$ : 0.97407

Parameters:

a = 113.99733

b = 1251.01983

c = 63.09155

d = 0.45742

## Bead 3053

Date : Mon Oct 17 13:30:19 PDT 2022

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

Frame size : 10 pixels

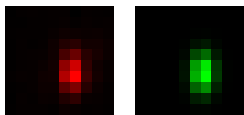
Coordinates : -156  $\mu\text{m}$  (x), 46.3  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

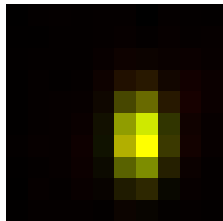
FWHM	Non corrected	Corrected	Theoretical
min	378 nm	391 nm	223 nm
max	624 nm	645 nm	223 nm
z	1.2 $\mu\text{m}$	1.2 $\mu\text{m}$	885 nm
Asymmetry	0.606		
Theta	89.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1289.868 (brightness)

B = 127.606 (background)

a = 0.938 px

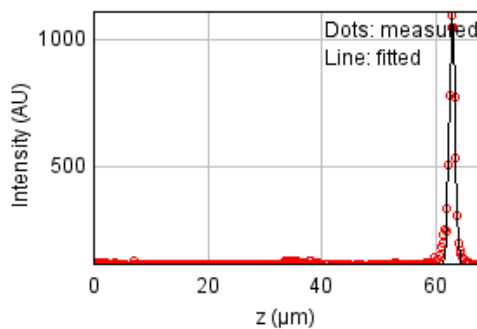
b = 0.007 px

c = 0.345 px

$x_c = 5.705$  px

$y_c = 5.641$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 62725.0248

Standard deviation: 14.29392

$R^2$ : 0.98436

Parameters:

a = 114.35994

b = 1109.39579

c = 62.91572

d = 0.50834

## Bead 3054

Date : Mon Oct 17 13:30:19 PDT 2022

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

Frame size : 10 pixels

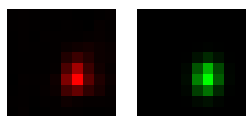
Coordinates : -73.5  $\mu\text{m}$  (x), 43.2  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

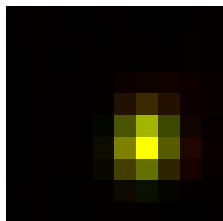
FWHM	Non corrected	Corrected	Theoretical
min	394 nm	407 nm	223 nm
max	485 nm	501 nm	223 nm
z	1.13 $\mu\text{m}$	1.14 $\mu\text{m}$	885 nm
Asymmetry	0.813		
Theta	81.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1677.066 (brightness)

B = 129.222 (background)

a = 0.857 px

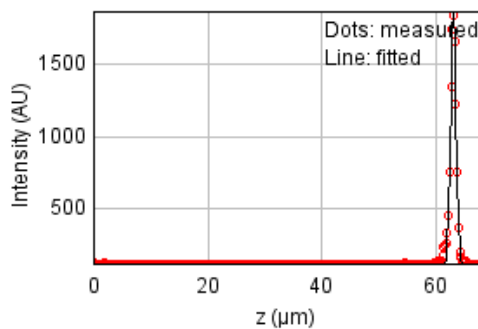
b = 0.045 px

c = 0.578 px

$x_c = 5.916$  px

$y_c = 5.804$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 83551.8911

Standard deviation: 16.49715

$R^2$ : 0.99282

Parameters:

a = 114.61858

b = 1863.89651

c = 63.11656

d = 0.48104

## Bead 3055

Date : Mon Oct 17 13:30:19 PDT 2022

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

Frame size : 10 pixels

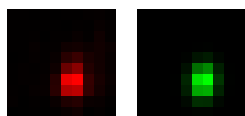
Coordinates : -43.0  $\mu\text{m}$  (x), 41.8  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

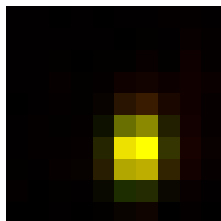
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	411 nm	223 nm
max	519 nm	536 nm	223 nm
z	1.18 $\mu\text{m}$	1.18 $\mu\text{m}$	885 nm
Asymmetry	0.766		
Theta	83.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1286.183 (brightness)

B = 123.640 (background)

a = 0.846 px

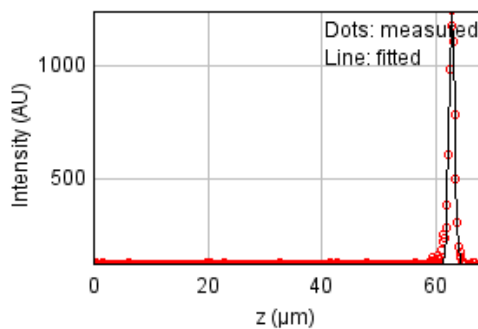
b = 0.042 px

c = 0.504 px

$x_c = 5.567$  px

$y_c = 6.156$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 66811.8341

Standard deviation: 14.75222

$R^2$ : 0.98704

Parameters:

a = 114.99311

b = 1253.37042

c = 62.85604

d = 0.50030

## Bead 3056

Date : Mon Oct 17 13:30:19 PDT 2022

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

Frame size : 10 pixels

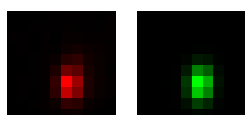
Coordinates : -64.0  $\mu\text{m}$  (x), 41.5  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

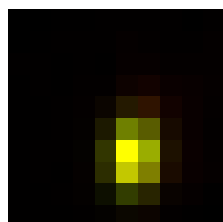
FWHM	Non corrected	Corrected	Theoretical
min	371 nm	383 nm	223 nm
max	536 nm	555 nm	223 nm
z	1.24 $\mu\text{m}$	1.24 $\mu\text{m}$	885 nm
Asymmetry	0.691		
Theta	86.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 2132.651 (brightness)

B = 132.932 (background)

a = 0.975 px

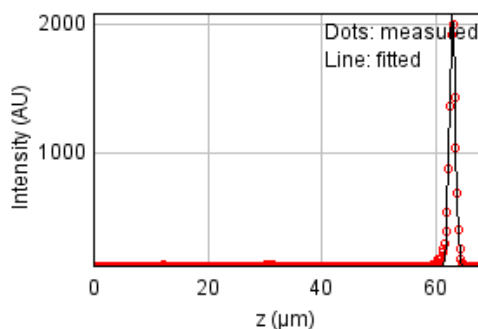
b = 0.033 px

c = 0.468 px

$x_c = 5.292$  px

$y_c = 6.219$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 118287.268

Standard deviation: 19.62907

$R^2$ : 0.99260

Parameters:

a = 116.14543

b = 2077.80268

c = 62.94682

d = 0.52630



## Bead 3057

Date : Mon Oct 17 13:30:19 PDT 2022

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

Frame size : 10 pixels

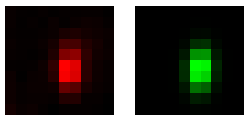
Coordinates : -119  $\mu\text{m}$  (x), 41.7  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

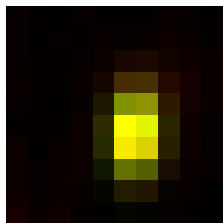
FWHM	Non corrected	Corrected	Theoretical
min	382 nm	394 nm	223 nm
max	646 nm	668 nm	223 nm
z	1.32 $\mu\text{m}$	1.33 $\mu\text{m}$	885 nm
Asymmetry	0.591		
Theta	86.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1278.887$  (brightness)

$B = 139.359$  (background)

$a = 0.920$  px

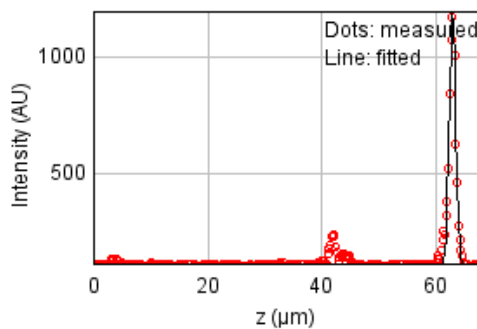
$b = 0.032$  px

$c = 0.323$  px

$x_c = 5.463$  px

$y_c = 5.316$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 176689.105

Standard deviation: 23.99030

$R^2: 0.96618$

Parameters:

$a = 120.51908$

$b = 1193.01993$

$c = 62.96912$

$d = 0.56115$

## Bead 3058

Date : Mon Oct 17 13:30:19 PDT 2022

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

Frame size : 10 pixels

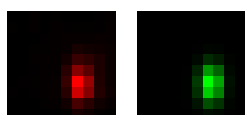
Coordinates : -91.7  $\mu\text{m}$  (x), 41.5  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

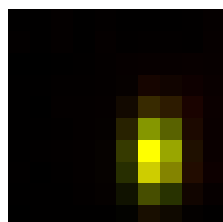
FWHM	Non corrected	Corrected	Theoretical
min	373 nm	386 nm	223 nm
max	598 nm	618 nm	223 nm
z	1.26 $\mu\text{m}$	1.26 $\mu\text{m}$	885 nm
Asymmetry	0.624		
Theta	89.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1790.623 (brightness)

B = 133.413 (background)

a = 0.964 px

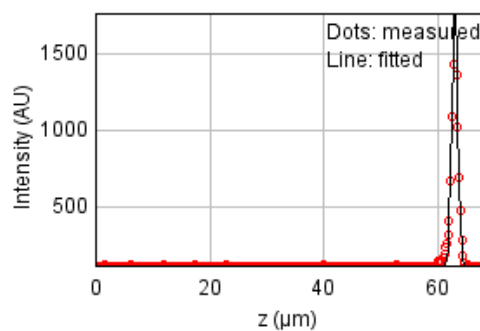
b = 0.002 px

c = 0.376 px

$x_c = 6.274$  px

$y_c = 6.204$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 114829.856

Standard deviation: 19.34008

$R^2$ : 0.99027

Parameters:

a = 116.03179

b = 1788.81868

c = 63.02182

d = 0.53324

## Bead 3059

Date : Mon Oct 17 13:30:19 PDT 2022

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

Frame size : 10 pixels

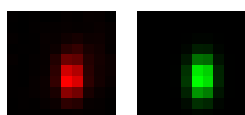
Coordinates : -138  $\mu\text{m}$  (x), 39.0  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

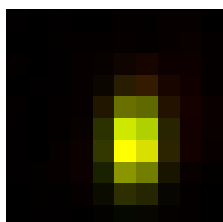
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	414 nm	223 nm
max	652 nm	674 nm	223 nm
z	1.38 $\mu\text{m}$	1.38 $\mu\text{m}$	885 nm
Asymmetry	0.615		
Theta	88.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.982$



Parameters:

A = 1319.598 (brightness)

B = 130.085 (background)

a = 0.835 px

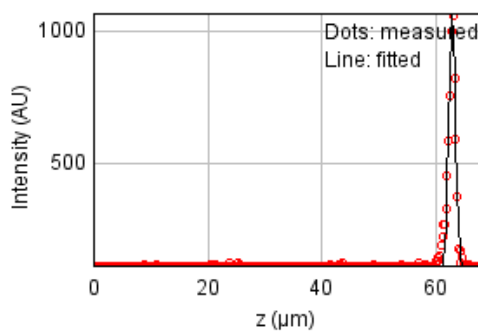
b = 0.016 px

c = 0.316 px

$x_c = 5.423$  px

$y_c = 5.635$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 81806.8569

Standard deviation: 16.32397

$R^2$ : 0.98058

Parameters:

a = 113.51001

b = 1064.43339

c = 62.90576

d = 0.58497

## Bead 3060

Date : Mon Oct 17 13:30:20 PDT 2022

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

Frame size : 10 pixels

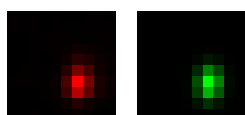
Coordinates : -68.8  $\mu\text{m}$  (x), 34.7  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

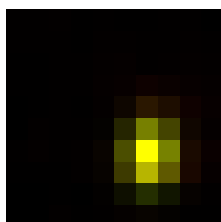
FWHM	Non corrected	Corrected	Theoretical
min	379 nm	392 nm	223 nm
max	510 nm	527 nm	223 nm
z	1.12 $\mu\text{m}$	1.12 $\mu\text{m}$	885 nm
Asymmetry	0.744		
Theta	87.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1860.393 (brightness)

B = 128.851 (background)

a = 0.931 px

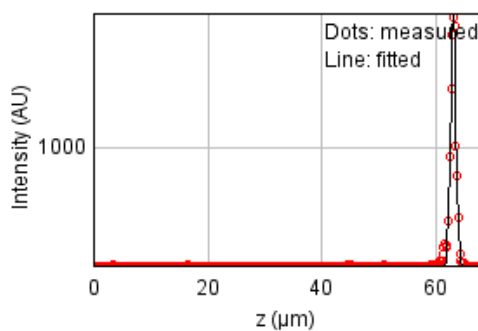
b = 0.021 px

c = 0.517 px

xc = 6.134 px

yc = 6.162 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 191224.617

Standard deviation: 24.95759

$R^2$ : 0.98569

Parameters:

a = 116.96967

b = 1995.56943

c = 63.09837

d = 0.47492

## Bead 3061

Date : Mon Oct 17 13:30:20 PDT 2022

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

Frame size : 10 pixels

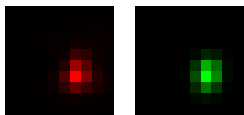
Coordinates : -44.6  $\mu\text{m}$  (x), 31.3  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

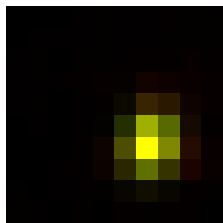
FWHM	Non corrected	Corrected	Theoretical
min	381 nm	394 nm	223 nm
max	475 nm	491 nm	223 nm
z	1.2 $\mu\text{m}$	1.21 $\mu\text{m}$	885 nm
Asymmetry	0.803		
Theta	78.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1576.327$  (brightness)

$B = 128.990$  (background)

$a = 0.911$  px

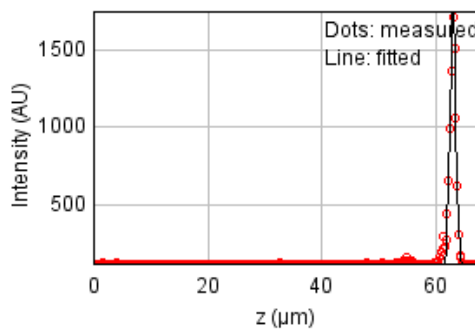
$b = 0.064$  px

$c = 0.608$  px

$x_c = 6.164$  px

$y_c = 5.795$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 119608.108

Standard deviation: 19.73836

$R^2: 0.98936$

Parameters:

$a = 116.47509$

$b = 1784.20794$

$c = 63.03242$

$d = 0.51015$

## Bead 3062

Date : Mon Oct 17 13:30:20 PDT 2022

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

Frame size : 10 pixels

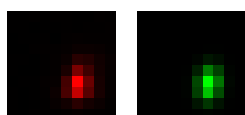
Coordinates : -58.1  $\mu\text{m}$  (x), 30.8  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

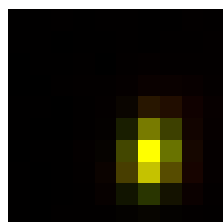
FWHM	Non corrected	Corrected	Theoretical
min	358 nm	370 nm	223 nm
max	520 nm	538 nm	223 nm
z	1.1 $\mu\text{m}$	1.1 $\mu\text{m}$	885 nm
Asymmetry	0.688		
Theta	82.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 2424.424 (brightness)

B = 136.097 (background)

a = 1.036 px

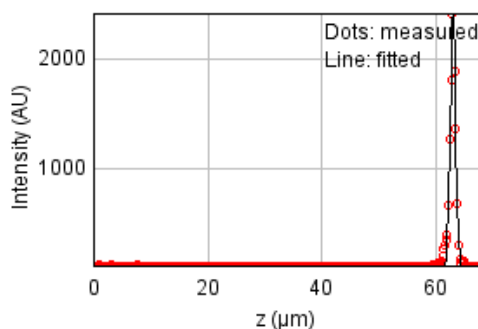
b = 0.069 px

c = 0.504 px

$x_c = 6.102$  px

$y_c = 6.210$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 158476.783

Standard deviation: 22.72028

$R^2$ : 0.99226

Parameters:

a = 116.61026

b = 2471.73649

c = 63.03905

d = 0.46576

## Bead 3063

Date : Mon Oct 17 13:30:20 PDT 2022

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

Frame size : 10 pixels

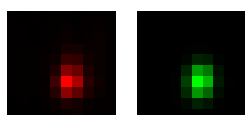
Coordinates : -37.1  $\mu\text{m}$  (x), 28.6  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

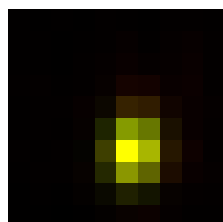
FWHM	Non corrected	Corrected	Theoretical
min	392 nm	406 nm	223 nm
max	514 nm	531 nm	223 nm
z	1.3 $\mu\text{m}$	1.3 $\mu\text{m}$	885 nm
Asymmetry	0.764		
Theta	84.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 2131.157 (brightness)

B = 137.933 (background)

a = 0.867 px

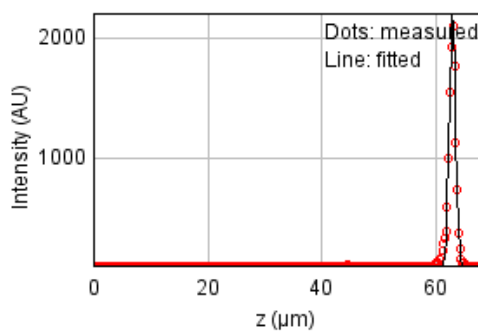
b = 0.037 px

c = 0.512 px

$x_c = 5.305$  px

$y_c = 5.965$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 106644.032

Standard deviation: 18.63799

$R^2$ : 0.99436

Parameters:

a = 115.15769

b = 2205.31669

c = 62.95683

d = 0.55026

## Bead 3064

Date : Mon Oct 17 13:30:20 PDT 2022

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

Frame size : 10 pixels

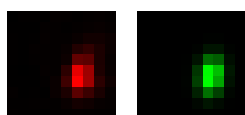
Coordinates : -30.7  $\mu\text{m}$  (x), 27.4  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

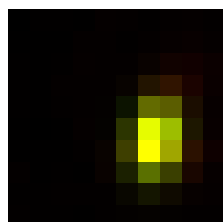
FWHM	Non corrected	Corrected	Theoretical
min	380 nm	392 nm	223 nm
max	572 nm	592 nm	223 nm
z	1.41 $\mu\text{m}$	1.42 $\mu\text{m}$	885 nm
Asymmetry	0.663		
Theta	81.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1572.020 (brightness)

B = 127.161 (background)

a = 0.921 px

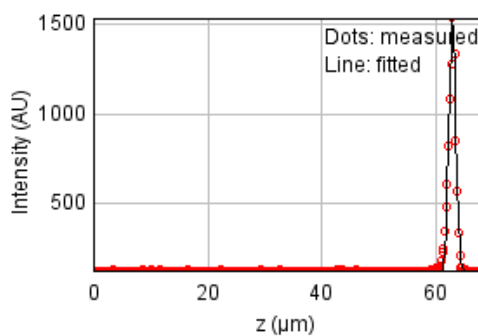
b = 0.075 px

c = 0.421 px

$x_c = 6.308$  px

$y_c = 5.465$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 138593.447

Standard deviation: 21.24722

$R^2$ : 0.98553

Parameters:

a = 114.69851

b = 1534.88852

c = 62.94825

d = 0.59957



## Bead 3065

Date : Mon Oct 17 13:30:20 PDT 2022

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

Frame size : 10 pixels

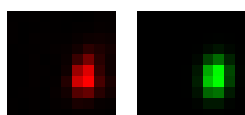
Coordinates : -21.6  $\mu\text{m}$  (x), 21.2  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

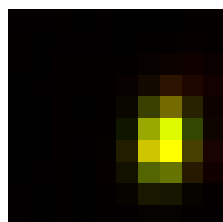
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	414 nm	223 nm
max	579 nm	598 nm	223 nm
z	1.19 $\mu\text{m}$	1.2 $\mu\text{m}$	885 nm
Asymmetry	0.693		
Theta	81.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1733.059 (brightness)

B = 128.519 (background)

a = 0.825 px

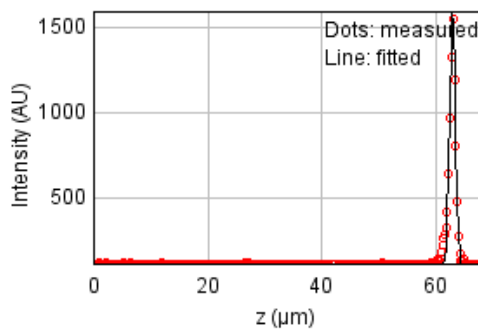
b = 0.064 px

c = 0.410 px

xc = 6.691 px

yc = 5.578 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 111486.693

Standard deviation: 19.05646

$R^2$ : 0.98741

Parameters:

a = 116.30977

b = 1598.86895

c = 62.97276

d = 0.50714

## Bead 3066

Date : Mon Oct 17 13:30:20 PDT 2022

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

Frame size : 10 pixels

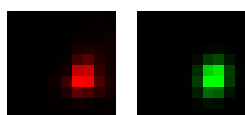
Coordinates : -33.5  $\mu\text{m}$  (x), 21.6  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

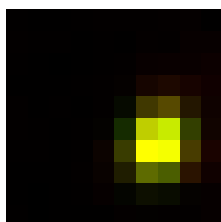
FWHM	Non corrected	Corrected	Theoretical
min	424 nm	439 nm	223 nm
max	508 nm	526 nm	223 nm
z	1.48 $\mu\text{m}$	1.49 $\mu\text{m}$	885 nm
Asymmetry	0.835		
Theta	71.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1642.323 (brightness)

B = 125.013 (background)

a = 0.723 px

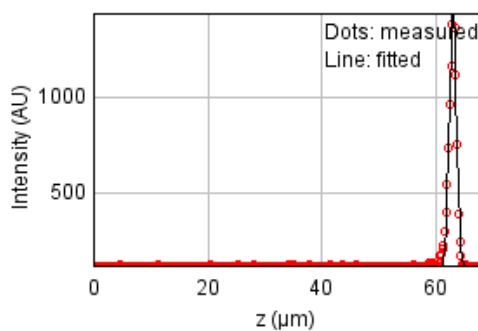
b = 0.067 px

c = 0.541 px

xc = 6.531 px

yc = 5.633 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 103110.589

Standard deviation: 18.32662

$R^2$ : 0.98849

Parameters:

a = 113.70147

b = 1457.27890

c = 63.04203

d = 0.62952

## Bead 3067

Date : Mon Oct 17 13:30:21 PDT 2022

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

Frame size : 10 pixels

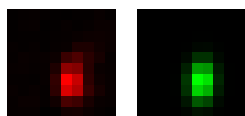
Coordinates : -12.2  $\mu\text{m}$  (x), 16.9  $\mu\text{m}$  (y), 62.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

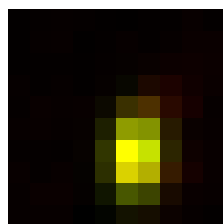
FWHM	Non corrected	Corrected	Theoretical
min	398 nm	412 nm	223 nm
max	625 nm	647 nm	223 nm
z	1.37 $\mu\text{m}$	1.37 $\mu\text{m}$	885 nm
Asymmetry	0.637		
Theta	86.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1261.129 (brightness)

B = 131.303 (background)

a = 0.844 px

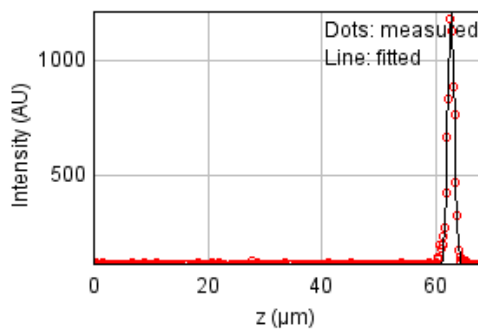
b = 0.031 px

c = 0.345 px

$x_c = 5.421$  px

$y_c = 6.179$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 51697.6747

Standard deviation: 12.97676

$R^2$ : 0.99066

Parameters:

a = 114.74166

b = 1214.47462

c = 62.72228

d = 0.58033

## Bead 3068

Date : Mon Oct 17 13:30:21 PDT 2022

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

Frame size : 10 pixels

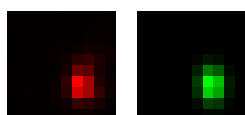
Coordinates : -14.4  $\mu\text{m}$  (x), 16.4  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

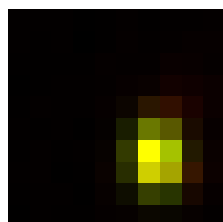
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	404 nm	223 nm
max	527 nm	545 nm	223 nm
z	1.33 $\mu\text{m}$	1.33 $\mu\text{m}$	885 nm
Asymmetry	0.741		
Theta	-87.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1590.107$  (brightness)

$B = 128.991$  (background)

$a = 0.877$  px

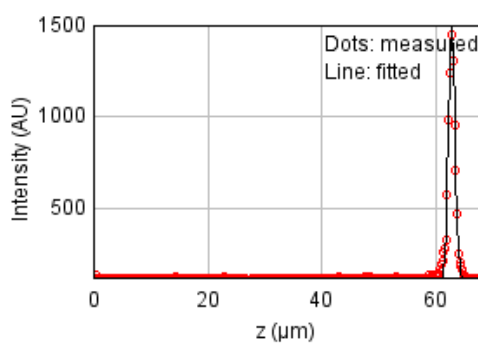
$b = -0.021$  px

$c = 0.484$  px

$x_c = 6.350$  px

$y_c = 6.295$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 65957.4946

Standard deviation: 14.65760

$R^2: 0.99245$

Parameters:

$a = 114.69962$

$b = 1517.22580$

$c = 62.83684$

$d = 0.56399$

## Bead 3069

Date : Mon Oct 17 13:30:21 PDT 2022

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

Frame size : 10 pixels

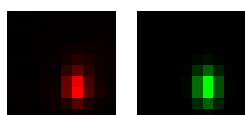
Coordinates : -149  $\mu\text{m}$  (x), 4.95  $\mu\text{m}$  (y), 63.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

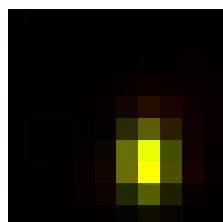
FWHM	Non corrected	Corrected	Theoretical
min	363 nm	375 nm	223 nm
max	521 nm	539 nm	223 nm
z	1.29 $\mu\text{m}$	1.29 $\mu\text{m}$	885 nm
Asymmetry	0.696		
Theta	-89.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1969.175 (brightness)

B = 135.928 (background)

a = 1.018 px

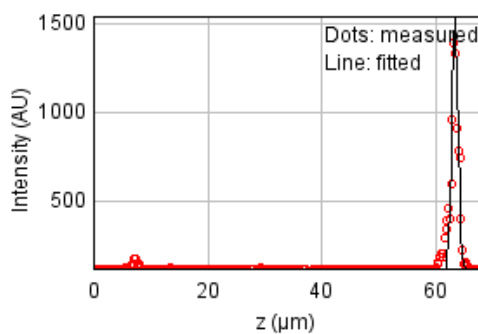
b = -0.006 px

c = 0.494 px

xc = 5.921 px

yc = 6.504 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 602027.123

Standard deviation: 44.28318

$R^2$ : 0.93546

Parameters:

a = 116.86052

b = 1545.09833

c = 63.38829

d = 0.54661

## Bead 3070

Date : Mon Oct 17 13:30:21 PDT 2022

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

Frame size : 10 pixels

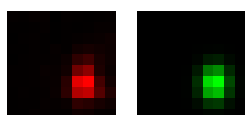
Coordinates : -8.01  $\mu\text{m}$  (x), 1.06  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

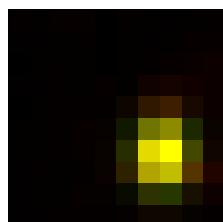
FWHM	Non corrected	Corrected	Theoretical
min	434 nm	448 nm	223 nm
max	543 nm	561 nm	223 nm
z	1.06 $\mu\text{m}$	1.06 $\mu\text{m}$	885 nm
Asymmetry	0.799		
Theta	88.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1482.289 (brightness)

B = 126.416 (background)

a = 0.714 px

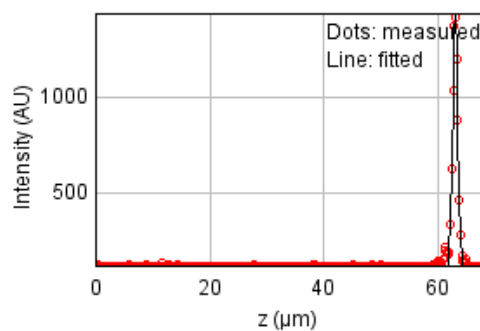
b = 0.006 px

c = 0.456 px

xc = 6.608 px

yc = 6.174 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 50001.2762

Standard deviation: 12.76208

$R^2$ : 0.99212

Parameters:

a = 114.79156

b = 1450.68208

c = 63.08936

d = 0.44828

## Bead 3071

Date : Mon Oct 17 13:30:21 PDT 2022

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

Frame size : 10 pixels

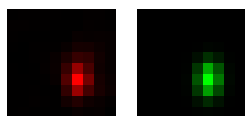
Coordinates : 64.5  $\mu\text{m}$  (x), -48.8  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

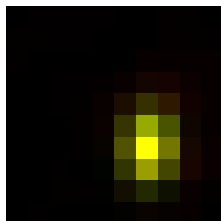
FWHM	Non corrected	Corrected	Theoretical
min	377 nm	390 nm	223 nm
max	551 nm	569 nm	223 nm
z	1.19 $\mu\text{m}$	1.19 $\mu\text{m}$	885 nm
Asymmetry	0.685		
Theta	87.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1371.268 (brightness)

B = 126.564 (background)

a = 0.942 px

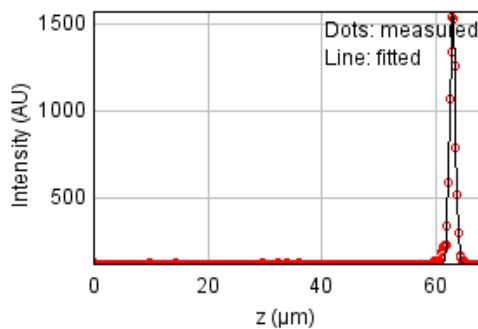
b = 0.026 px

c = 0.444 px

$x_c = 6.096$  px

$y_c = 5.950$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 54902.3120

Standard deviation: 13.37292

$R^2$ : 0.99360

Parameters:

a = 114.60700

b = 1582.24555

c = 62.98475

d = 0.50473

## Bead 3072

Date : Mon Oct 17 13:30:21 PDT 2022

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

Frame size : 10 pixels

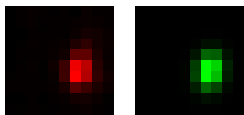
Coordinates : 68.1  $\mu\text{m}$  (x), -55.3  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

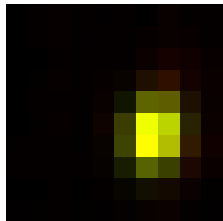
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	540 nm	558 nm	223 nm
z	1.25 $\mu\text{m}$	1.25 $\mu\text{m}$	885 nm
Asymmetry	0.744		
Theta	80.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1190.228 (brightness)

B = 122.303 (background)

a = 0.821 px

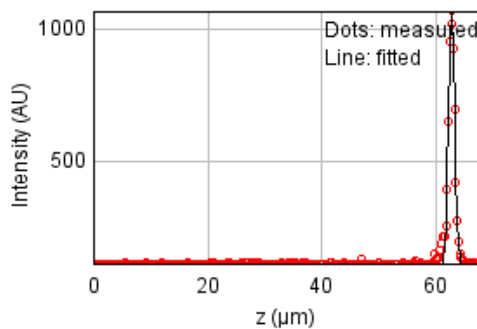
b = 0.058 px

c = 0.469 px

xc = 6.355 px

yc = 5.449 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 53832.3869

Standard deviation: 13.24197

$R^2$ : 0.98647

Parameters:

a = 113.19727

b = 1086.78722

c = 62.81759

d = 0.52874



## Bead 3073

Date : Mon Oct 17 13:30:21 PDT 2022

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

Frame size : 10 pixels

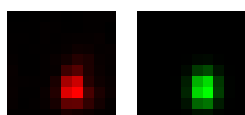
Coordinates : -5.14  $\mu\text{m}$  (x), -67.7  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

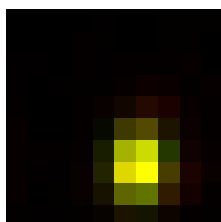
FWHM	Non corrected	Corrected	Theoretical
min	409 nm	423 nm	223 nm
max	533 nm	551 nm	223 nm
z	1.13 $\mu\text{m}$	1.14 $\mu\text{m}$	885 nm
Asymmetry	0.767		
Theta	86.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1354.543 (brightness)

B = 127.853 (background)

a = 0.801 px

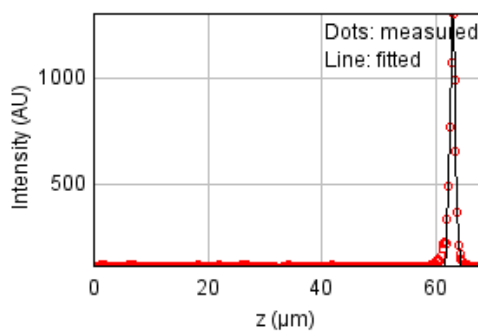
b = 0.020 px

c = 0.473 px

xc = 5.618 px

yc = 6.677 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 60176.7820

Standard deviation: 14.00056

$R^2$ : 0.98894

Parameters:

a = 116.07172

b = 1309.22470

c = 62.98685

d = 0.48107

## Bead 3074

Date : Mon Oct 17 13:30:21 PDT 2022

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

Frame size : 10 pixels

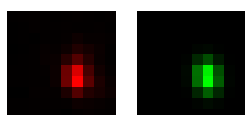
Coordinates : 65.5  $\mu\text{m}$  (x), -79.1  $\mu\text{m}$  (y), 63.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

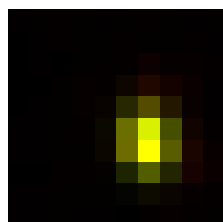
FWHM	Non corrected	Corrected	Theoretical
min	376 nm	389 nm	223 nm
max	501 nm	518 nm	223 nm
z	1.32 $\mu\text{m}$	1.33 $\mu\text{m}$	885 nm
Asymmetry	0.751		
Theta	-83.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1786.825$  (brightness)

$B = 128.293$  (background)

$a = 0.941$  px

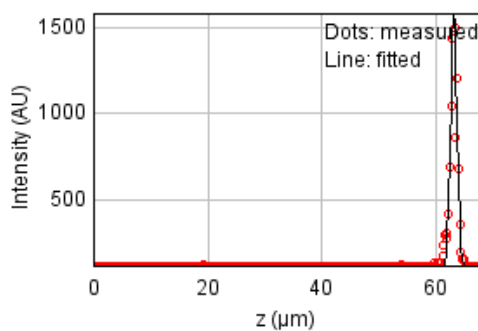
$b = -0.048$  px

$c = 0.540$  px

$x_c = 5.936$  px

$y_c = 5.553$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 388693.687

Standard deviation: 35.58234

$R^2: 0.96073$

Parameters:

$a = 114.17869$

$b = 1585.90002$

$c = 63.19686$

$d = 0.56147$

## Bead 3075 (Rejected)

Date : Mon Oct 17 13:30:22 PDT 2022

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

Frame size : 10 pixels

Coordinates : -4.36  $\mu\text{m}$  (x), -85.7  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

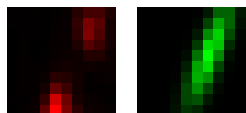
Corresponding bead : Not found

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

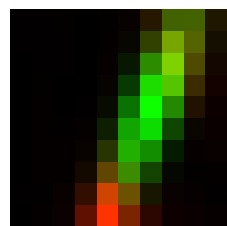
FWHM	Non corrected	Corrected	Theoretical
min	406 nm	420 nm	223 nm
max	1.64 $\mu\text{m}$	1.7 $\mu\text{m}$	223 nm
z	1.36 $\mu\text{m}$	1.36 $\mu\text{m}$	885 nm
Asymmetry	0.248		
Theta	68.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.804$



Parameters:

A = 296.404 (brightness)

B = 136.866 (background)

a = 0.700 px

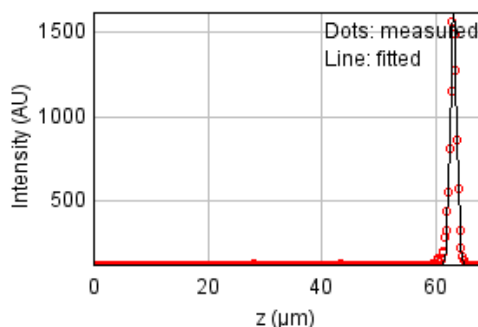
b = 0.291 px

c = 0.063 px

xc = 6.163 px

yc = 3.727 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 81456.3180

Standard deviation: 16.28895

$R^2$ : 0.99206

Parameters:

a = 115.63699

b = 1618.53102

c = 63.14324

d = 0.57679

## Bead 3076

Date : Mon Oct 17 13:30:22 PDT 2022

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

Frame size : 10 pixels

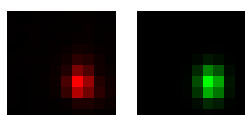
Coordinates : 78.4  $\mu\text{m}$  (x), -92.0  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

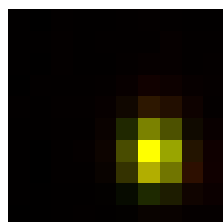
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	503 nm	520 nm	223 nm
z	1.27 $\mu\text{m}$	1.28 $\mu\text{m}$	885 nm
Asymmetry	0.8		
Theta	-86.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1553.532 (brightness)

B = 127.601 (background)

a = 0.827 px

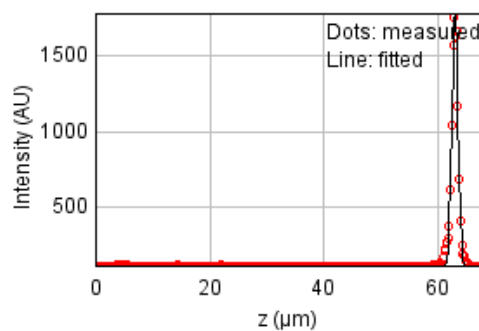
b = -0.020 px

c = 0.531 px

xc = 6.238 px

yc = 6.145 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 121742.428

Standard deviation: 19.91369

$R^2$ : 0.98997

Parameters:

a = 113.16716

b = 1799.00201

c = 63.05056

d = 0.54011

## Bead 3077 (Rejected)

Date : Mon Oct 17 13:30:22 PDT 2022

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

Frame size : 10 pixels

Coordinates : 79.7  $\mu\text{m}$  (x), -93.5  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

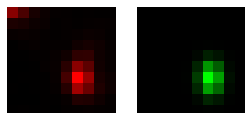
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

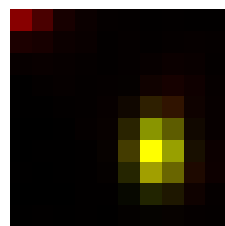
FWHM	Non corrected	Corrected	Theoretical
min	374 nm	387 nm	223 nm
max	513 nm	531 nm	223 nm
z	1.31 $\mu\text{m}$	1.32 $\mu\text{m}$	885 nm
Asymmetry	0.729		
Theta	-89.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.844$



Parameters:

A = 1898.387 (brightness)

B = 165.624 (background)

a = 0.957 px

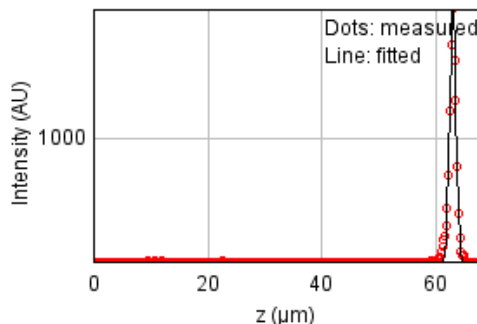
b = -0.006 px

c = 0.509 px

xc = 6.255 px

yc = 6.037 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 114414.615

Standard deviation: 19.30508

$R^2$ : 0.99242

Parameters:

a = 114.94150

b = 1967.59545

c = 63.02534

d = 0.55769

## Bead 3078

Date : Mon Oct 17 13:30:22 PDT 2022

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

Frame size : 10 pixels

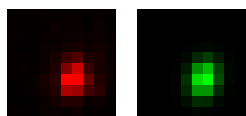
Coordinates : -144  $\mu\text{m}$  (x), 68.2  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

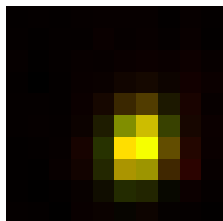
FWHM	Non corrected	Corrected	Theoretical
min	440 nm	455 nm	223 nm
max	577 nm	597 nm	223 nm
z	1.28 $\mu\text{m}$	1.29 $\mu\text{m}$	885 nm
Asymmetry	0.763		
Theta	75.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 749.184$  (brightness)

$B = 117.158$  (background)

$a = 0.673$  px

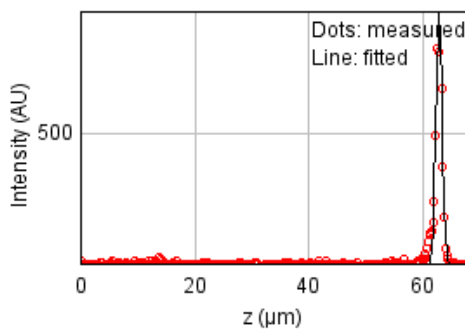
$b = 0.072$  px

$c = 0.422$  px

$x_c = 5.613$  px

$y_c = 5.926$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 102353.042

Standard deviation: 18.25918

$R^2: 0.95880$

Parameters:

$a = 112.09610$

$b = 859.09144$

$c = 62.88865$

$d = 0.54545$

## Bead 3079

Date : Mon Oct 17 13:30:22 PDT 2022

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

Frame size : 10 pixels

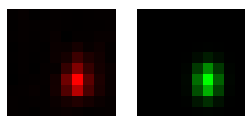
Coordinates : -109  $\mu\text{m}$  (x), 63.8  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

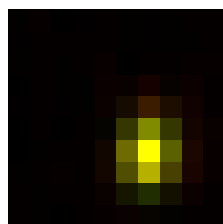
FWHM	Non corrected	Corrected	Theoretical
min	383 nm	396 nm	223 nm
max	523 nm	541 nm	223 nm
z	1.16 $\mu\text{m}$	1.16 $\mu\text{m}$	885 nm
Asymmetry	0.732		
Theta	86.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1015.847$  (brightness)

$B = 123.153$  (background)

$a = 0.915$  px

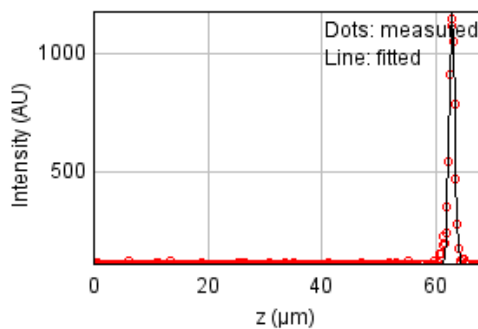
$b = 0.023$  px

$c = 0.492$  px

$x_c = 5.967$  px

$y_c = 6.122$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 44312.6024

Standard deviation: 12.01419

$R^2: 0.98998$

Parameters:

$a = 114.11305$

$b = 1178.56621$

$c = 62.87724$

$d = 0.49218$

## Bead 3080

Date : Mon Oct 17 13:30:22 PDT 2022

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

Frame size : 10 pixels

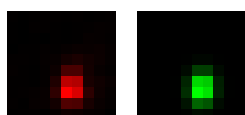
Coordinates : -77.8  $\mu\text{m}$  (x), 54.0  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

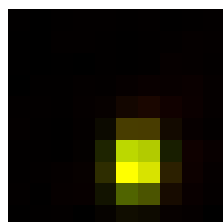
FWHM	Non corrected	Corrected	Theoretical
min	380 nm	393 nm	223 nm
max	494 nm	511 nm	223 nm
z	1.37 $\mu\text{m}$	1.37 $\mu\text{m}$	885 nm
Asymmetry	0.77		
Theta	85.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1371.396$  (brightness)

$B = 125.056$  (background)

$a = 0.925$  px

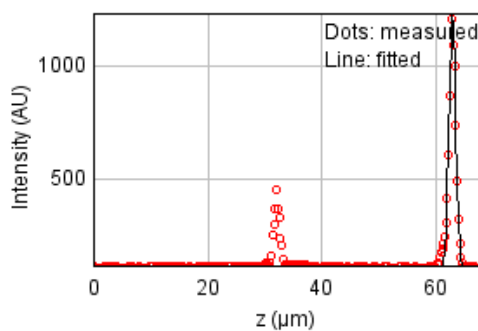
$b = 0.029$  px

$c = 0.552$  px

$x_c = 5.448$  px

$y_c = 6.628$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 453484.019

Standard deviation: 38.43367

$R^2: 0.92490$

Parameters:

$a = 121.47574$

$b = 1231.03057$

$c = 62.95058$

$d = 0.58072$



## Bead 3081 (Rejected)

Date : Mon Oct 17 13:30:23 PDT 2022

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

Frame size : 10 pixels

Coordinates : -159  $\mu\text{m}$  (x), 53.7  $\mu\text{m}$  (y), 61.9  $\mu\text{m}$  (z)

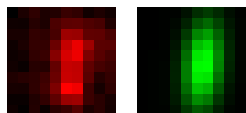
Corresponding bead : Not found

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

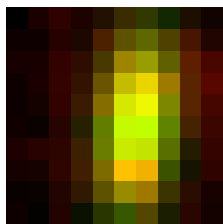
FWHM	Non corrected	Corrected	Theoretical
min	625 nm	646 nm	223 nm
max	1.43 $\mu\text{m}$	1.48 $\mu\text{m}$	223 nm
z	2.36 $\mu\text{m}$	2.37 $\mu\text{m}$	885 nm
Asymmetry	0.436		
Theta	84.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 173.706 (brightness)

B = 130.413 (background)

a = 0.341 px

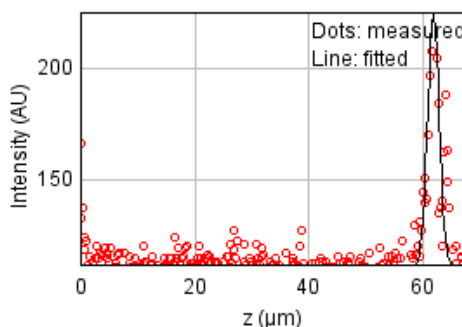
b = 0.027 px

c = 0.068 px

xc = 5.535 px

yc = 4.844 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31936.7575

Standard deviation: 10.19944

$R^2$ : 0.75491

Parameters:

a = 111.87010

b = 225.23964

c = 61.89561

d = 1.00256

## Bead 3082

Date : Mon Oct 17 13:30:23 PDT 2022

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

Frame size : 10 pixels

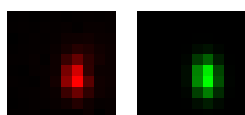
Coordinates : -127  $\mu\text{m}$  (x), 48.3  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

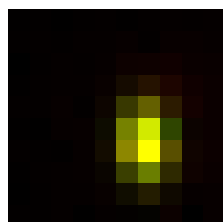
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	398 nm	223 nm
max	580 nm	599 nm	223 nm
z	1.15 $\mu\text{m}$	1.15 $\mu\text{m}$	885 nm
Asymmetry	0.663		
Theta	-87.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1119.446 (brightness)

B = 125.929 (background)

a = 0.906 px

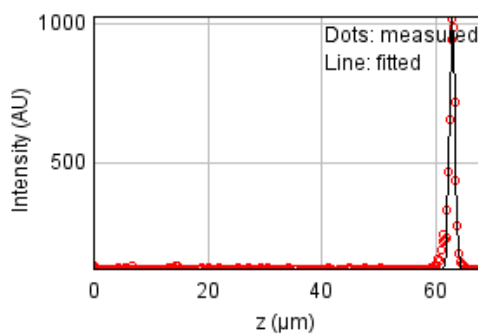
b = -0.025 px

c = 0.400 px

$x_c = 5.841$  px

$y_c = 5.602$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 69112.7475

Standard deviation: 15.00410

$R^2$ : 0.97872

Parameters:

a = 113.80642

b = 1025.67076

c = 62.91968

d = 0.48699

## Bead 3083

Date : Mon Oct 17 13:30:23 PDT 2022

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

Frame size : 10 pixels

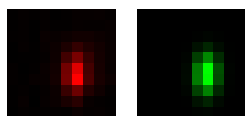
Coordinates : -115  $\mu\text{m}$  (x), 43.9  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

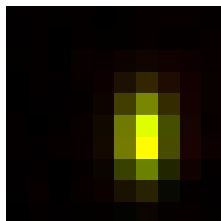
FWHM	Non corrected	Corrected	Theoretical
min	373 nm	386 nm	223 nm
max	641 nm	663 nm	223 nm
z	1.13 $\mu\text{m}$	1.13 $\mu\text{m}$	885 nm
Asymmetry	0.582		
Theta	88.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1263.725$  (brightness)

$B = 130.070$  (background)

$a = 0.962$  px

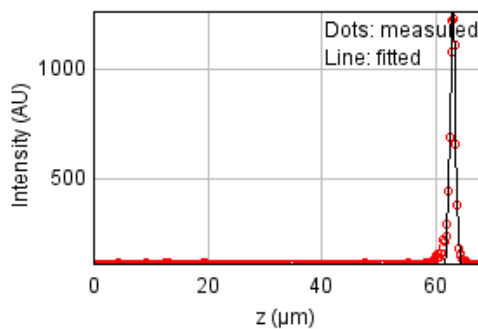
$b = 0.015$  px

$c = 0.327$  px

$x_c = 5.879$  px

$y_c = 5.479$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 76373.8557

Standard deviation: 15.77260

$R^2: 0.98535$

Parameters:

$a = 114.11020$

$b = 1282.42784$

$c = 63.01657$

$d = 0.47906$

## Bead 3084

Date : Mon Oct 17 13:30:23 PDT 2022

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

Frame size : 10 pixels

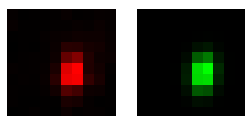
Coordinates : -106  $\mu\text{m}$  (x), 42.6  $\mu\text{m}$  (y), 62.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

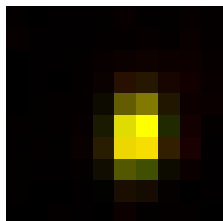
FWHM	Non corrected	Corrected	Theoretical
min	367 nm	379 nm	223 nm
max	553 nm	572 nm	223 nm
z	1.28 $\mu\text{m}$	1.28 $\mu\text{m}$	885 nm
Asymmetry	0.663		
Theta	83.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1286.272 (brightness)

B = 126.874 (background)

a = 0.989 px

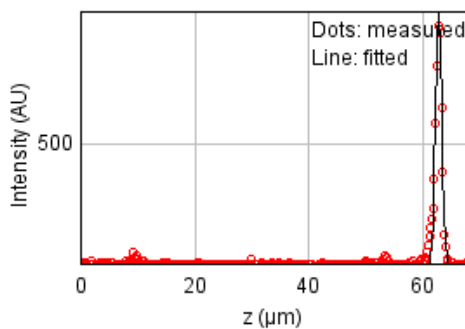
b = 0.062 px

c = 0.445 px

$x_c = 5.550$  px

$y_c = 5.401$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 65022.1334

Standard deviation: 14.55330

$R^2$ : 0.97762

Parameters:

a = 115.87106

b = 933.49171

c = 62.82631

d = 0.54281

## Bead 3085

Date : Mon Oct 17 13:30:23 PDT 2022

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

Frame size : 10 pixels

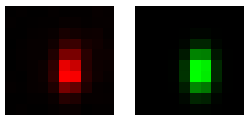
Coordinates : -134  $\mu\text{m}$  (x), 42.1  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

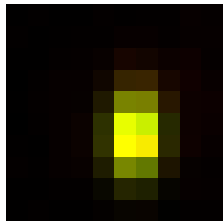
FWHM	Non corrected	Corrected	Theoretical
min	398 nm	412 nm	223 nm
max	644 nm	666 nm	223 nm
z	1.23 $\mu\text{m}$	1.23 $\mu\text{m}$	885 nm
Asymmetry	0.618		
Theta	88.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.982$



Parameters:

A = 1074.093 (brightness)

B = 126.643 (background)

a = 0.846 px

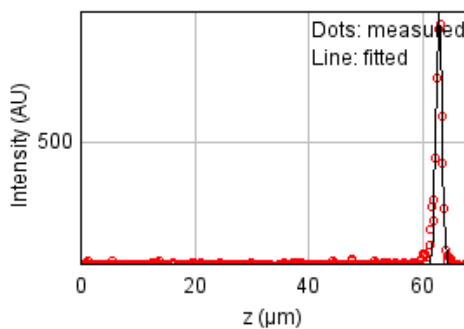
b = 0.014 px

c = 0.324 px

$x_c = 5.457$  px

$y_c = 5.493$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 66437.4847

Standard deviation: 14.71084

$R^2$ : 0.97556

Parameters:

a = 113.87166

b = 918.79310

c = 62.88150

d = 0.52224

## Bead 3086

Date : Mon Oct 17 13:30:23 PDT 2022

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

Frame size : 10 pixels

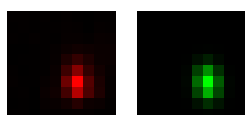
Coordinates : -129  $\mu\text{m}$  (x), 41.6  $\mu\text{m}$  (y), 63.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

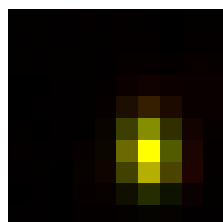
FWHM	Non corrected	Corrected	Theoretical
min	372 nm	385 nm	223 nm
max	527 nm	545 nm	223 nm
z	1.14 $\mu\text{m}$	1.14 $\mu\text{m}$	885 nm
Asymmetry	0.706		
Theta	-85.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1549.778 (brightness)

B = 129.420 (background)

a = 0.966 px

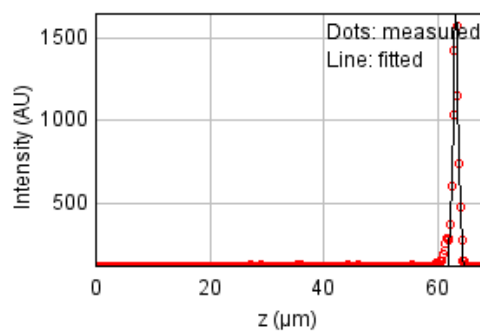
b = -0.039 px

c = 0.486 px

$x_c = 5.966$  px

$y_c = 6.104$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 120320.628

Standard deviation: 19.79707

$R^2$ : 0.98676

Parameters:

a = 114.58678

b = 1653.90024

c = 63.17651

d = 0.48204

## Bead 3087

Date : Mon Oct 17 13:30:23 PDT 2022

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

Frame size : 10 pixels

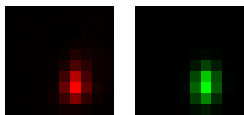
Coordinates : -121  $\mu\text{m}$  (x), 40.1  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

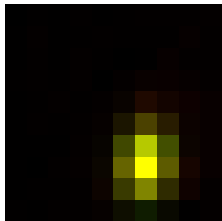
FWHM	Non corrected	Corrected	Theoretical
min	368 nm	381 nm	223 nm
max	550 nm	569 nm	223 nm
z	1.24 $\mu\text{m}$	1.24 $\mu\text{m}$	885 nm
Asymmetry	0.67		
Theta	84.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1256.161$  (brightness)

$B = 124.487$  (background)

$a = 0.984$  px

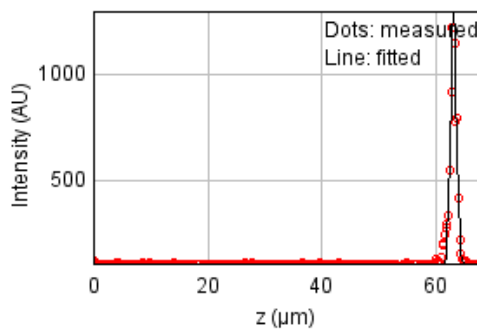
$b = 0.048$  px

$c = 0.447$  px

$x_c = 5.988$  px

$y_c = 6.772$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 143868.653

Standard deviation: 21.64781

$R^2: 0.97540$

Parameters:

$a = 114.25322$

$b = 1291.65297$

$c = 63.14545$

$d = 0.52516$

## Bead 3088

Date : Mon Oct 17 13:30:23 PDT 2022

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

Frame size : 10 pixels

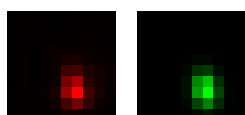
Coordinates : -135  $\mu\text{m}$  (x), 38.3  $\mu\text{m}$  (y), 63.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

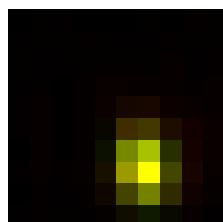
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	398 nm	223 nm
max	535 nm	553 nm	223 nm
z	1.23 $\mu\text{m}$	1.23 $\mu\text{m}$	885 nm
Asymmetry	0.72		
Theta	-80.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1212.494 (brightness)

B = 125.402 (background)

a = 0.894 px

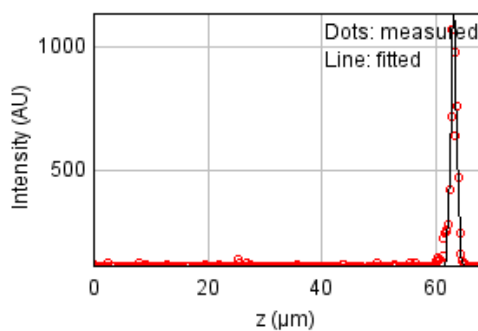
b = -0.073 px

c = 0.482 px

$x_c = 5.759$  px

$y_c = 6.757$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 212119.335

Standard deviation: 26.28578

$R^2$ : 0.95245

Parameters:

a = 114.05664

b = 1133.70216

c = 63.18092

d = 0.52150



## Bead 3089 (Rejected)

Date : Mon Oct 17 13:30:23 PDT 2022

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

Frame size : 10 pixels

Coordinates : -117  $\mu\text{m}$  (x), 37.0  $\mu\text{m}$  (y), 45.9  $\mu\text{m}$  (z)

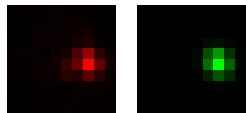
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

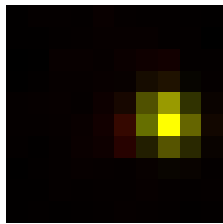
FWHM	Non corrected	Corrected	Theoretical
min	375 nm	388 nm	223 nm
max	425 nm	440 nm	223 nm
z	1.21 $\mu\text{m}$	1.22 $\mu\text{m}$	885 nm
Asymmetry	0.882		
Theta	-55.2°		

### 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 = 1056.651 (brightness)

B = 125.999 (background)

a = 0.884 px

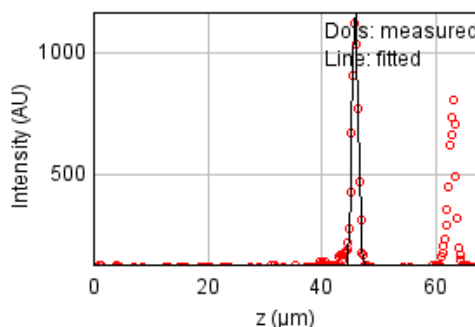
b = -0.099 px

c = 0.811 px

xc = 6.951 px

yc = 4.808 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 2209170.92

Standard deviation: 84.82922

$R^2$ : 0.66262

Parameters:

a = 133.02720

b = 1170.38546

c = 45.90819

d = 0.51429

## Bead 3090

Date : Mon Oct 17 13:30:24 PDT 2022

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

Frame size : 10 pixels

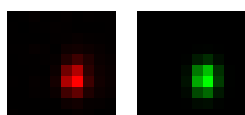
Coordinates : -71.6  $\mu\text{m}$  (x), 35.7  $\mu\text{m}$  (y), 63.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	379 nm	392 nm	223 nm
max	477 nm	493 nm	223 nm
z	1.2 $\mu\text{m}$	1.2 $\mu\text{m}$	885 nm
Asymmetry	0.794		
Theta	85.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.987$



Parameters:

A = 1855.677 (brightness)

B = 131.981 (background)

a = 0.933 px

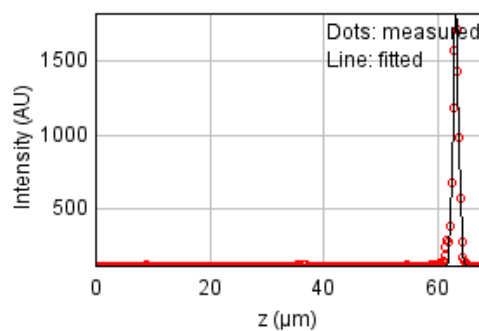
b = 0.027 px

c = 0.591 px

$x_c = 5.732$  px

$y_c = 5.754$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 94921.1917

Standard deviation: 17.58379

$R^2$ : 0.99197

Parameters:

a = 117.17501

b = 1833.53660

c = 63.20085

d = 0.50768

## Bead 3091

Date : Mon Oct 17 13:30:24 PDT 2022

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

Frame size : 10 pixels

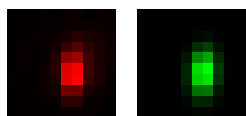
Coordinates : -110  $\mu\text{m}$  (x), 36.0  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

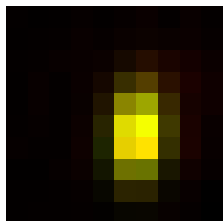
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	416 nm	223 nm
max	699 nm	723 nm	223 nm
z	1.41 $\mu\text{m}$	1.42 $\mu\text{m}$	885 nm
Asymmetry	0.576		
Theta	86.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1105.526$  (brightness)

$B = 128.135$  (background)

$a = 0.826$  px

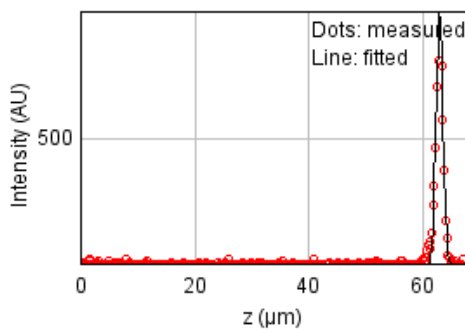
$b = 0.034$  px

$c = 0.277$  px

$x_c = 5.581$  px

$y_c = 5.329$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 43630.6575

Standard deviation: 11.92138

$R^2: 0.98509$

Parameters:

$a = 113.12945$

$b = 897.25496$

$c = 62.96876$

$d = 0.60063$

## Bead 3092

Date : Mon Oct 17 13:30:24 PDT 2022

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

Frame size : 10 pixels

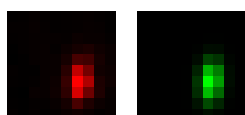
Coordinates : -133  $\mu\text{m}$  (x), 34.1  $\mu\text{m}$  (y), 63.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

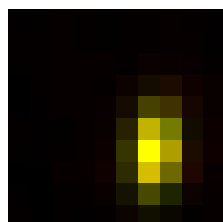
FWHM	Non corrected	Corrected	Theoretical
min	359 nm	371 nm	223 nm
max	644 nm	666 nm	223 nm
z	1.38 $\mu\text{m}$	1.38 $\mu\text{m}$	885 nm
Asymmetry	0.557		
Theta	85.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.987$



Parameters:

A = 1158.450 (brightness)

B = 121.462 (background)

a = 1.039 px

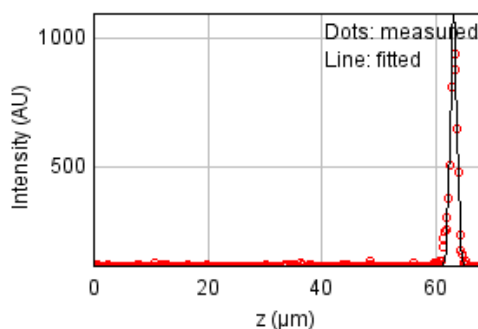
b = 0.053 px

c = 0.328 px

xc = 6.268 px

yc = 5.998 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 111721.155

Standard deviation: 19.07649

$R^2$ : 0.97538

Parameters:

a = 113.17674

b = 1097.98718

c = 63.15946

d = 0.58433

## Bead 3093

Date : Mon Oct 17 13:30:24 PDT 2022

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

Frame size : 10 pixels

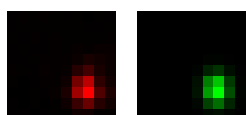
Coordinates : -86.1  $\mu\text{m}$  (x), 31.7  $\mu\text{m}$  (y), 63.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

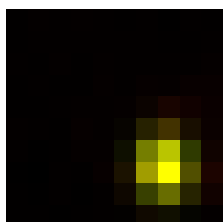
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	414 nm	223 nm
max	492 nm	508 nm	223 nm
z	1.16 $\mu\text{m}$	1.17 $\mu\text{m}$	885 nm
Asymmetry	0.814		
Theta	-85.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 2104.383$  (brightness)

$B = 130.550$  (background)

$a = 0.836$  px

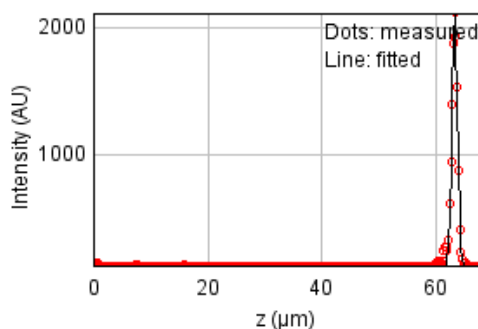
$b = -0.021$  px

$c = 0.556$  px

$x_c = 6.787$  px

$y_c = 6.726$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 127557.079

Standard deviation: 20.38370

$R^2: 0.99178$

Parameters:

$a = 117.28139$

$b = 2110.31784$

$c = 63.35468$

$d = 0.49393$

## Bead 3094

Date : Mon Oct 17 13:30:24 PDT 2022

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

Frame size : 10 pixels

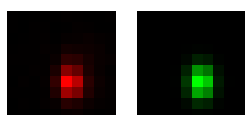
Coordinates : -55.1  $\mu\text{m}$  (x), 19.8  $\mu\text{m}$  (y), 63.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

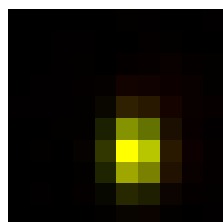
FWHM	Non corrected	Corrected	Theoretical
min	387 nm	400 nm	223 nm
max	522 nm	540 nm	223 nm
z	1.3 $\mu\text{m}$	1.3 $\mu\text{m}$	885 nm
Asymmetry	0.74		
Theta	-89.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1823.692 (brightness)

B = 128.408 (background)

a = 0.898 px

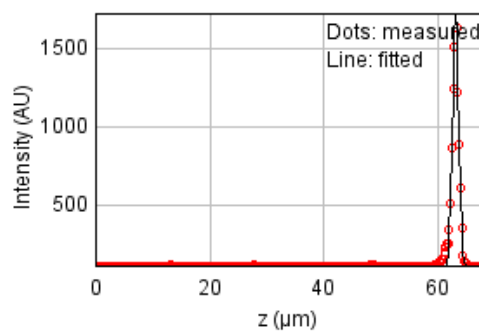
b = -0.001 px

c = 0.492 px

xc = 5.356 px

yc = 6.062 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 88259.1930

Standard deviation: 16.95551

$R^2$ : 0.99219

Parameters:

a = 114.38319

b = 1726.71294

c = 63.15219

d = 0.55137

## Bead 3095

Date : Mon Oct 17 13:30:24 PDT 2022

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

Frame size : 10 pixels

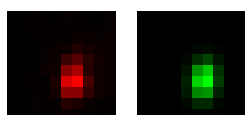
Coordinates : -19.2  $\mu\text{m}$  (x), 18.1  $\mu\text{m}$  (y), 62.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

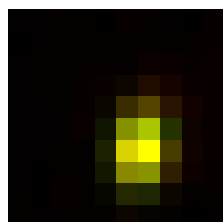
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	413 nm	223 nm
max	582 nm	602 nm	223 nm
z	1.54 $\mu\text{m}$	1.55 $\mu\text{m}$	885 nm
Asymmetry	0.686		
Theta	82.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1077.975$  (brightness)

$B = 122.919$  (background)

$a = 0.834$  px

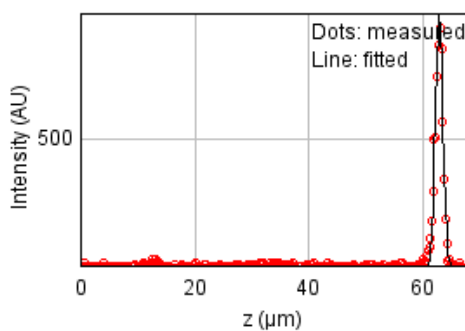
$b = 0.055$  px

$c = 0.403$  px

$x_c = 5.625$  px

$y_c = 5.872$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 53920.6246

Standard deviation: 13.25282

$R^2: 0.98234$

Parameters:

$a = 116.37491$

$b = 883.34611$

$c = 62.90658$

$d = 0.65519$

## Bead 3096

Date : Mon Oct 17 13:30:24 PDT 2022

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

Frame size : 10 pixels

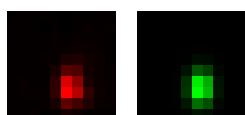
Coordinates : -14.7  $\mu\text{m}$  (x), 13.3  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

FWHM	Non corrected	Corrected	Theoretical
min	375 nm	388 nm	223 nm
max	536 nm	554 nm	223 nm
z	1.44 $\mu\text{m}$	1.45 $\mu\text{m}$	885 nm
Asymmetry	0.7		
Theta	89.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1186.665$  (brightness)

$B = 124.573$  (background)

$a = 0.953$  px

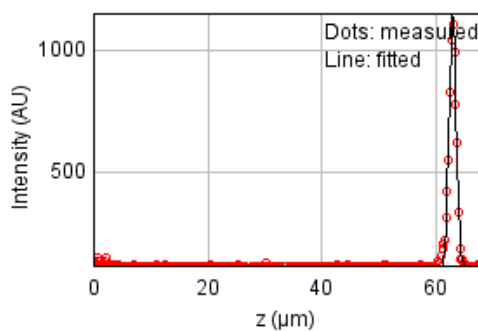
$b = 0.001$  px

$c = 0.467$  px

$x_c = 5.329$  px

$y_c = 6.584$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 45482.6593

Standard deviation: 12.17177

$R^2: 0.99139$

Parameters:

$a = 115.21896$

$b = 1163.17377$

$c = 63.00232$

$d = 0.61151$



## Bead 3097 (Rejected)

Date : Mon Oct 17 13:30:25 PDT 2022

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

Frame size : 10 pixels

Coordinates : -8.14  $\mu\text{m}$  (x), -45.5  $\mu\text{m}$  (y), 63.5  $\mu\text{m}$  (z)

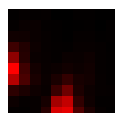
Corresponding bead : Not found

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	1.11 $\mu\text{m}$	1.11 $\mu\text{m}$	885 nm
Asymmetry	0.0		
Theta	0.0°		

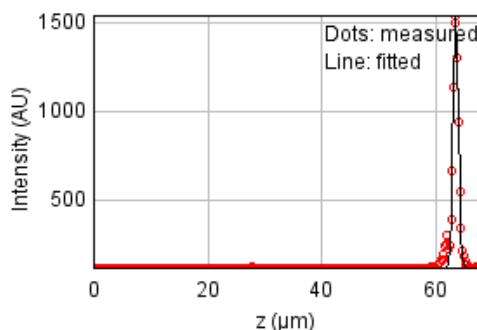
### XY profile & fitting parameters :

(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: 124805.921

Standard deviation: 20.16269

R<sup>2</sup>: 0.98383

Parameters:

a = 117.04941

b = 1549.43144

c = 63.52722

d = 0.47106

## Bead 3098 (Rejected)

Date : Mon Oct 17 13:30:25 PDT 2022

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

Frame size : 10 pixels

Coordinates : -8.54  $\mu\text{m}$  (x), -45.8  $\mu\text{m}$  (y), 64.7  $\mu\text{m}$  (z)

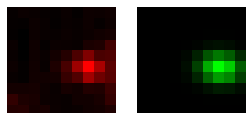
Corresponding bead : Not found

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

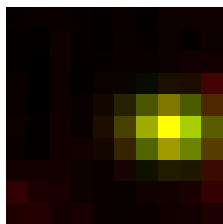
FWHM	Non corrected	Corrected	Theoretical
min	461 nm	477 nm	223 nm
max	669 nm	691 nm	223 nm
z	1.16 $\mu\text{m}$	1.16 $\mu\text{m}$	885 nm
Asymmetry	0.689		
Theta	-4.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 345.909 (brightness)

B = 119.954 (background)

a = 0.302 px

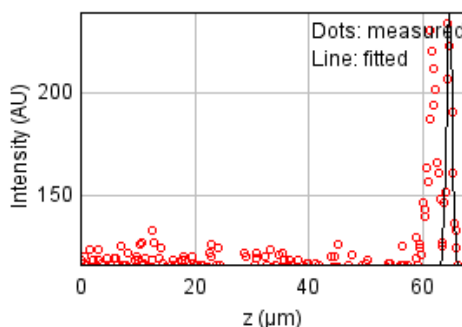
b = -0.024 px

c = 0.630 px

xc = 7.163 px

yc = 5.110 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 76390.8464

Standard deviation: 15.77435

$R^2$ : 0.42903

Parameters:

a = 116.43198

b = 238.26111

c = 64.67051

d = 0.49273

## Bead 3099

Date : Mon Oct 17 13:30:25 PDT 2022

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

Frame size : 10 pixels

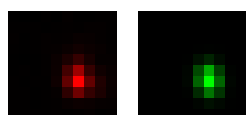
Coordinates : 82.3  $\mu\text{m}$  (x), -91.5  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

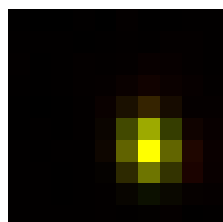
FWHM	Non corrected	Corrected	Theoretical
min	376 nm	389 nm	223 nm
max	478 nm	495 nm	223 nm
z	1.2 $\mu\text{m}$	1.2 $\mu\text{m}$	885 nm
Asymmetry	0.787		
Theta	-81.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 1794.598 (brightness)

B = 131.717 (background)

a = 0.939 px

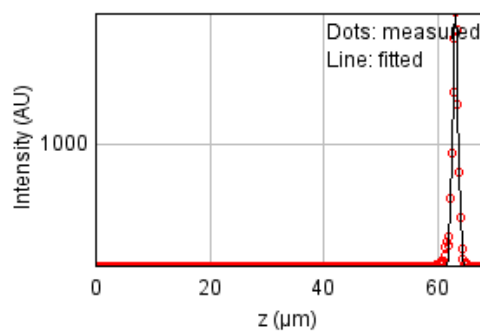
b = -0.053 px

c = 0.594 px

$x_c = 5.997$  px

$y_c = 5.841$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 94064.7456

Standard deviation: 17.50428

$R^2$ : 0.99305

Parameters:

a = 115.08275

b = 1949.68013

c = 63.11379

d = 0.50952

## Bead 3100

Date : Mon Oct 17 13:30:25 PDT 2022

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

Frame size : 10 pixels

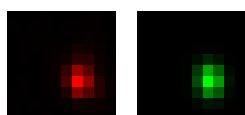
Coordinates : 70.4  $\mu\text{m}$  (x), -91.1  $\mu\text{m}$  (y), 63.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

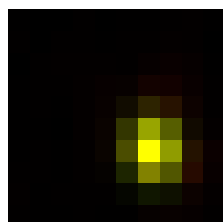
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	411 nm	223 nm
max	494 nm	510 nm	223 nm
z	1.3 $\mu\text{m}$	1.31 $\mu\text{m}$	885 nm
Asymmetry	0.805		
Theta	-82.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 2087.809 (brightness)

B = 132.939 (background)

a = 0.844 px

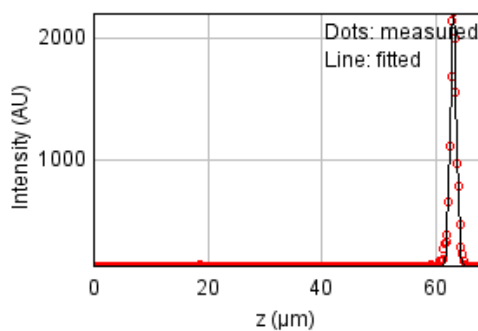
b = -0.039 px

c = 0.556 px

$x_c = 6.203$  px

$y_c = 5.907$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 128757.668

Standard deviation: 20.47941

$R^2$ : 0.99323

Parameters:

a = 115.05906

b = 2204.73829

c = 63.12140

d = 0.55326