

## Bead 1801

Date : Mon Oct 17 13:52:41 PDT 2022

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

Frame size : 12 pixels

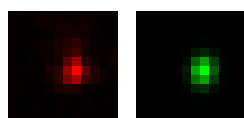
Coordinates : 50.1  $\mu\text{m}$  (x), -24.1  $\mu\text{m}$  (y), 35.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

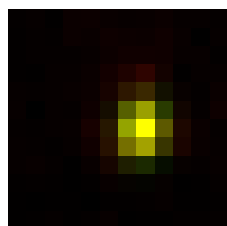
FWHM	Non corrected	Corrected	Theoretical
min	422 nm	439 nm	270 nm
max	541 nm	564 nm	270 nm
z	1.93 $\mu\text{m}$	1.94 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.779		
Theta	83.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 759.346 (brightness)

B = 125.832 (background)

a = 0.751 px

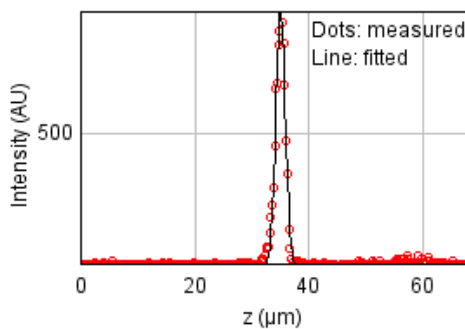
b = 0.032 px

c = 0.461 px

xc = 6.794 px

yc = 6.021 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 46802.0980

Standard deviation: 12.34706

$R^2$ : 0.98712

Parameters:

a = 114.50504

b = 867.05105

c = 35.10888

d = 0.82111

## Bead 1802

Date : Mon Oct 17 13:52:41 PDT 2022

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

Frame size : 12 pixels

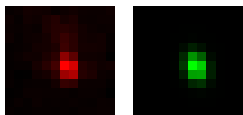
Coordinates : 91.2  $\mu\text{m}$  (x), -30.7  $\mu\text{m}$  (y), 34.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

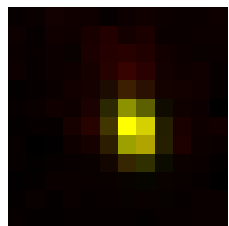
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	532 nm	554 nm	270 nm
z	2.0 $\mu\text{m}$	2.01 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.724		
Theta	-74.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 445.091 (brightness)

B = 119.469 (background)

a = 0.875 px

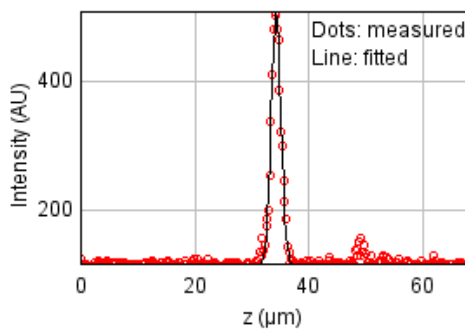
b = -0.112 px

c = 0.506 px

xc = 6.400 px

yc = 6.133 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24322.7151

Standard deviation: 8.90096

$R^2$ : 0.97695

Parameters:

a = 114.20179

b = 510.78208

c = 34.33175

d = 0.85135

## Bead 1803

Date : Mon Oct 17 13:52:41 PDT 2022

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

Frame size : 12 pixels

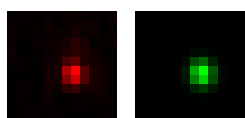
Coordinates : -149  $\mu\text{m}$  (x), -33.8  $\mu\text{m}$  (y), 34.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

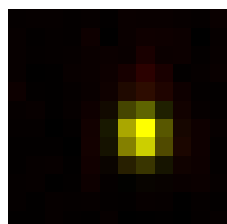
FWHM	Non corrected	Corrected	Theoretical
min	421 nm	439 nm	270 nm
max	485 nm	506 nm	270 nm
z	1.82 $\mu\text{m}$	1.83 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.868		
Theta	-81.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 543.030$  (brightness)

$B = 120.542$  (background)

$a = 0.751$  px

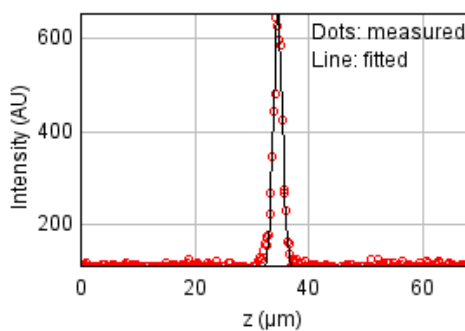
$b = -0.027$  px

$c = 0.574$  px

$x_c = 6.793$  px

$y_c = 6.306$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 35217.9301

Standard deviation: 10.71057

$R^2: 0.98048$

Parameters:

$a = 112.00278$

$b = 655.92413$

$c = 34.64503$

$d = 0.77342$

## Bead 1804

Date : Mon Oct 17 13:52:41 PDT 2022

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

Frame size : 12 pixels

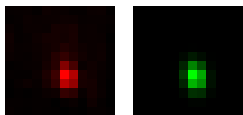
Coordinates : 113 um (x), -39.8 um (y), 34.6 um (z)

Corresponding bead : Not found

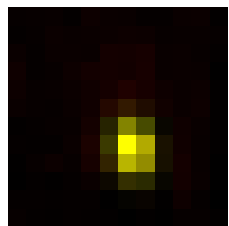
FWHM	Non corrected	Corrected	Theoretical
min	374 nm	390 nm	270 nm
max	524 nm	546 nm	270 nm
z	2.02 um	2.03 um	1.3 um
Asymmetry	0.715		
Theta	-80.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 596.824 (brightness)

B = 122.566 (background)

a = 0.945 px

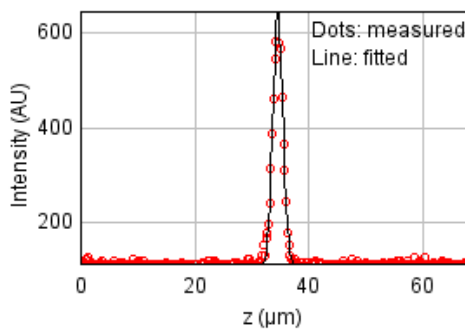
b = -0.076 px

c = 0.501 px

xc = 6.301 px

yc = 7.200 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16039.6800

Standard deviation: 7.22818

$R^2$ : 0.99161

Parameters:

a = 112.36453

b = 648.60579

c = 34.64323

d = 0.85677

## Bead 1805 (Rejected)

Date : Mon Oct 17 13:52:41 PDT 2022

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

Frame size : 12 pixels

Coordinates : 141  $\mu\text{m}$  (x), -41.0  $\mu\text{m}$  (y), 22.3  $\mu\text{m}$  (z)

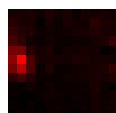
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	2.09 $\mu\text{m}$	2.1 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

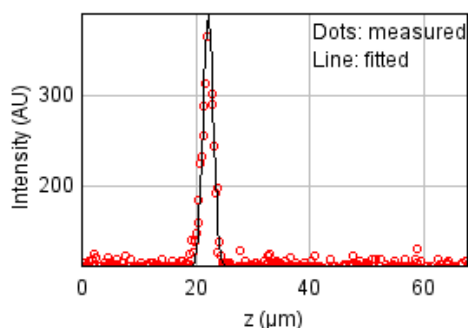
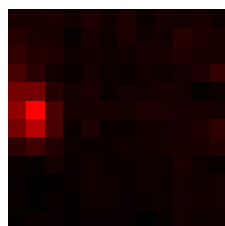
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 21633.8913

Standard deviation: 8.39456

R<sup>2</sup>: 0.96136

Parameters:

a = 110.46112

b = 391.34859

c = 22.27621

d = 0.88802

## Bead 1806

Date : Mon Oct 17 13:52:41 PDT 2022

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

Frame size : 12 pixels

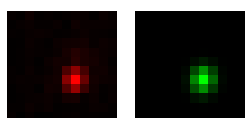
Coordinates : -156  $\mu\text{m}$  (x), -47.2  $\mu\text{m}$  (y), 34.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

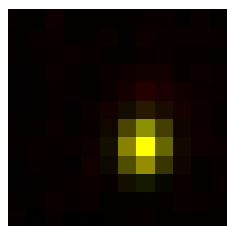
FWHM	Non corrected	Corrected	Theoretical
min	410 nm	427 nm	270 nm
max	481 nm	501 nm	270 nm
z	2.06 $\mu\text{m}$	2.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.854		
Theta	81.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 561.144 (brightness)

B = 119.723 (background)

a = 0.792 px

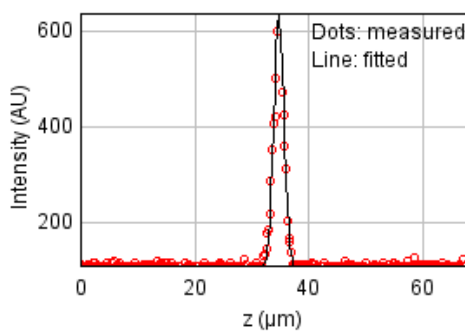
b = 0.032 px

c = 0.586 px

xc = 6.921 px

yc = 6.994 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 46404.9095

Standard deviation: 12.29455

$R^2$ : 0.97582

Parameters:

a = 109.68765

b = 637.24473

c = 34.81941

d = 0.87545

## Bead 1807 (Rejected)

Date : Mon Oct 17 13:52:41 PDT 2022

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

Frame size : 12 pixels

Coordinates : -92.8  $\mu\text{m}$  (x), 72.1  $\mu\text{m}$  (y), 33.9  $\mu\text{m}$  (z)

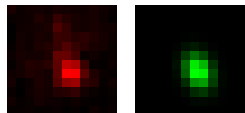
Corresponding bead : Not found

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

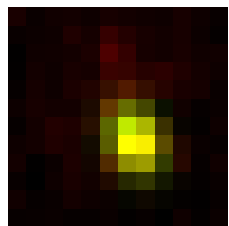
FWHM	Non corrected	Corrected	Theoretical
min	485 nm	505 nm	270 nm
max	663 nm	690 nm	270 nm
z	1.04 $\mu\text{m}$	1.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.732		
Theta	-69.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 313.137 (brightness)

B = 126.630 (background)

a = 0.537 px

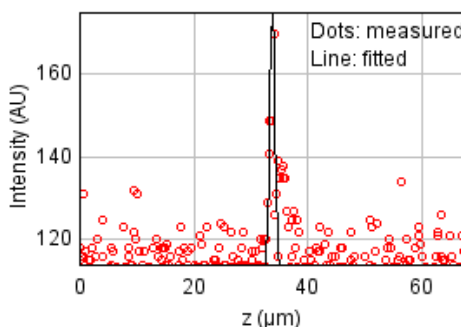
b = -0.087 px

c = 0.338 px

xc = 6.387 px

yc = 6.729 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15471.4599

Standard deviation: 7.09899

$R^2$ : 0.45947

Parameters:

a = 113.57840

b = 175.02569

c = 33.85415

d = 0.44257

## Bead 1808

Date : Mon Oct 17 13:52:41 PDT 2022

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

Frame size : 12 pixels

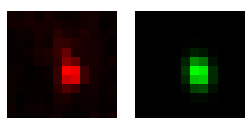
Coordinates : 71.2  $\mu\text{m}$  (x), 66.3  $\mu\text{m}$  (y), 34.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

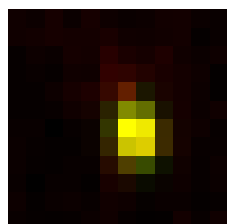
FWHM	Non corrected	Corrected	Theoretical
min	403 nm	420 nm	270 nm
max	560 nm	583 nm	270 nm
z	1.91 $\mu\text{m}$	1.92 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.72		
Theta	-80.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 410.408 (brightness)

B = 120.756 (background)

a = 0.815 px

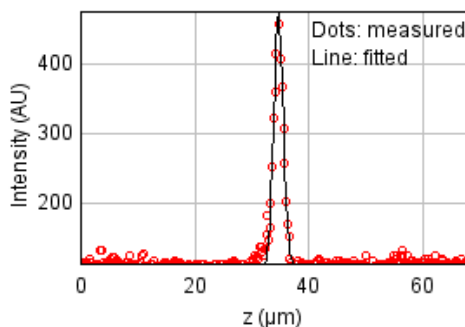
b = -0.066 px

c = 0.439 px

xc = 6.466 px

yc = 6.270 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20281.7752

Standard deviation: 8.12800

$R^2$ : 0.97568

Parameters:

a = 114.11294

b = 474.29011

c = 34.75097

d = 0.81296



## Bead 1809

Date : Mon Oct 17 13:52:42 PDT 2022

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

Frame size : 12 pixels

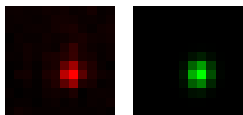
Coordinates : -159  $\mu\text{m}$  (x), 34.0  $\mu\text{m}$  (y), 34.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

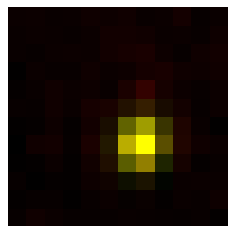
FWHM	Non corrected	Corrected	Theoretical
min	411 nm	428 nm	270 nm
max	480 nm	500 nm	270 nm
z	2.17 $\mu\text{m}$	2.18 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.857		
Theta	79.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 428.001$  (brightness)

$B = 120.887$  (background)

$a = 0.787$  px

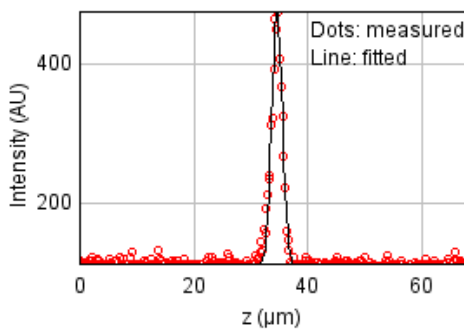
$b = 0.039$  px

$c = 0.591$  px

$x_c = 6.752$  px

$y_c = 6.925$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24341.1375

Standard deviation: 8.90433

$R^2: 0.97519$

Parameters:

$a = 110.70845$

$b = 478.91409$

$c = 34.66396$

$d = 0.92004$

## Bead 1810

Date : Mon Oct 17 13:52:42 PDT 2022

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

Frame size : 12 pixels

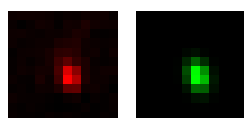
Coordinates : 37.0  $\mu\text{m}$  (x), 26.6  $\mu\text{m}$  (y), 34.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

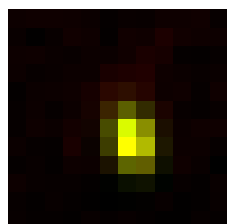
FWHM	Non corrected	Corrected	Theoretical
min	384 nm	400 nm	270 nm
max	552 nm	575 nm	270 nm
z	2.19 $\mu\text{m}$	2.2 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.695		
Theta	-74.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 347.950$  (brightness)

$B = 119.540$  (background)

$a = 0.876$  px

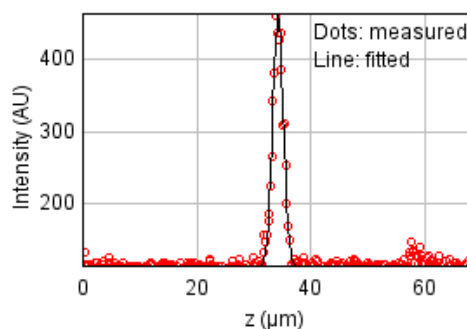
$b = -0.122$  px

$c = 0.474$  px

$x_c = 6.260$  px

$y_c = 6.586$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22663.6233

Standard deviation: 8.59202

$R^2: 0.97443$

Parameters:

$a = 114.39125$

$b = 462.47877$

$c = 34.31715$

$d = 0.93002$

## Bead 1811

Date : Mon Oct 17 13:52:42 PDT 2022

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

Frame size : 12 pixels

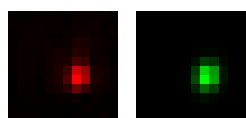
Coordinates : -39.8  $\mu\text{m}$  (x), 24.8  $\mu\text{m}$  (y), 35.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

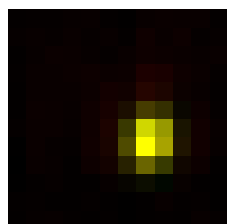
FWHM	Non corrected	Corrected	Theoretical
min	399 nm	416 nm	270 nm
max	498 nm	518 nm	270 nm
z	2.15 $\mu\text{m}$	2.16 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.802		
Theta	79.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 802.498$  (brightness)

$B = 127.680$  (background)

$a = 0.832$  px

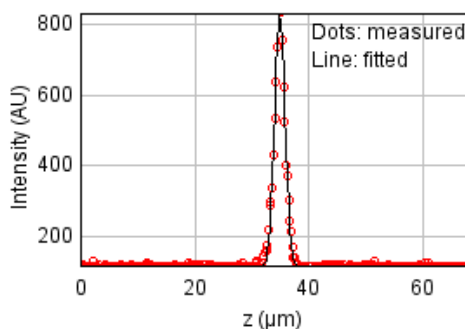
$b = 0.052$  px

$c = 0.551$  px

$x_c = 7.255$  px

$y_c = 6.630$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36104.2948

Standard deviation: 10.84452

$R^2 = 0.99009$

Parameters:

$a = 114.26768$

$b = 831.48829$

$c = 34.96919$

$d = 0.91369$

## Bead 1812 (Rejected)

Date : Mon Oct 17 13:52:42 PDT 2022

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

Frame size : 12 pixels

Coordinates : 85.3  $\mu\text{m}$  (x), 21.9  $\mu\text{m}$  (y), 27.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

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

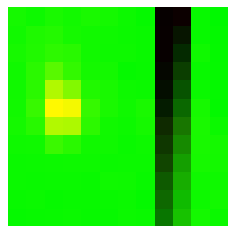
FWHM	Non corrected	Corrected	Theoretical
min	125 nm	131 nm	270 nm
max	4.79 $\mu\text{m}$	4.98 $\mu\text{m}$	270 nm
z	2.39 $\mu\text{m}$	2.4 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.026		
Theta	89.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.028$



Parameters:

A = -318.901 (brightness)

B = 152.993 (background)

a = 8.528 px

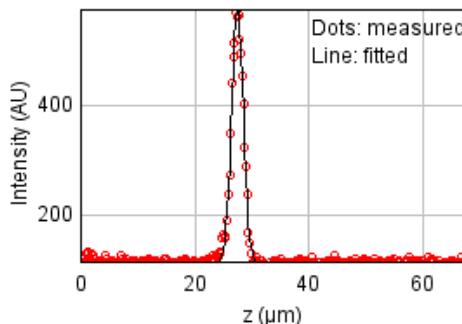
b = 0.041 px

c = 0.006 px

xc = 8.514 px

yc = -2.905 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17730.9730

Standard deviation: 7.59971

$R^2$ : 0.98944

Parameters:

a = 113.02186

b = 575.80688

c = 27.55709

d = 1.01658

## Bead 1813

Date : Mon Oct 17 13:52:42 PDT 2022

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

Frame size : 12 pixels

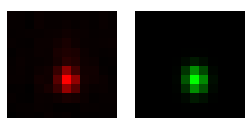
Coordinates : -103  $\mu\text{m}$  (x), 5.61  $\mu\text{m}$  (y), 35.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

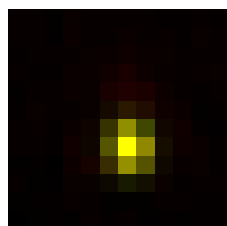
FWHM	Non corrected	Corrected	Theoretical
min	393 nm	409 nm	270 nm
max	483 nm	503 nm	270 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.813		
Theta	-83.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 880.929 (brightness)

B = 127.401 (background)

a = 0.867 px

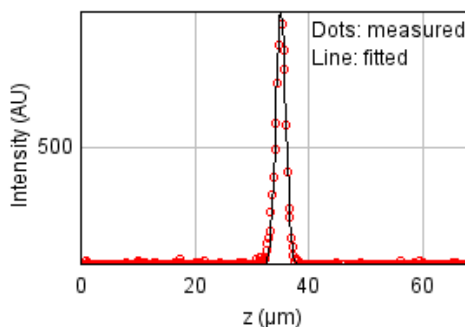
b = -0.032 px

c = 0.579 px

xc = 6.135 px

yc = 7.010 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 43683.7173

Standard deviation: 11.92863

$R^2$ : 0.99063

Parameters:

a = 113.49847

b = 946.06209

c = 35.15324

d = 0.86617

## Bead 1814

Date : Mon Oct 17 13:52:42 PDT 2022

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

Frame size : 12 pixels

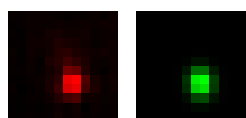
Coordinates : 1.88  $\mu\text{m}$  (x), -1.73  $\mu\text{m}$  (y), 35.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

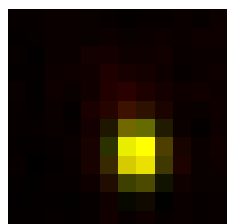
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	441 nm	270 nm
max	523 nm	544 nm	270 nm
z	1.82 $\mu\text{m}$	1.83 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.81		
Theta	-86.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 694.228 (brightness)

B = 126.112 (background)

a = 0.749 px

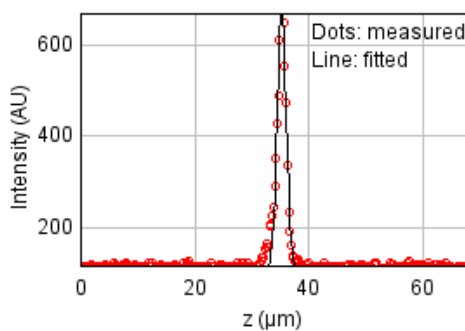
b = -0.016 px

c = 0.492 px

xc = 6.559 px

yc = 7.355 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 42734.4203

Standard deviation: 11.79831

$R^2$ : 0.97779

Parameters:

a = 114.60246

b = 675.12325

c = 35.30861

d = 0.77468

## Bead 1815 (Rejected)

Date : Mon Oct 17 13:52:43 PDT 2022

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

Frame size : 12 pixels

Coordinates : -75.9  $\mu\text{m}$  (x), -29.9  $\mu\text{m}$  (y), 31.6  $\mu\text{m}$  (z)

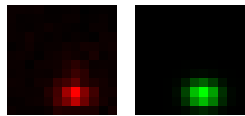
Corresponding bead : Not found

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

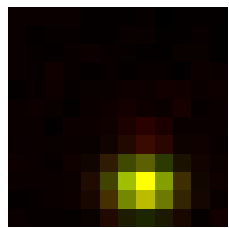
FWHM	Non corrected	Corrected	Theoretical
min	455 nm	474 nm	270 nm
max	596 nm	620 nm	270 nm
z	3.63 $\mu\text{m}$	3.65 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.764		
Theta	-3.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 434.480 (brightness)

B = 125.371 (background)

a = 0.379 px

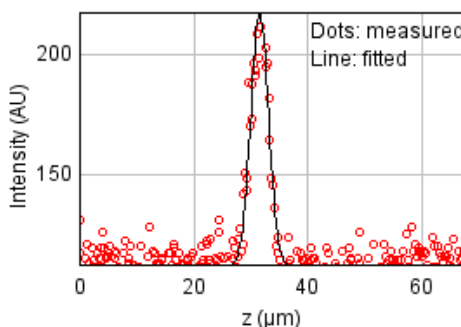
b = -0.015 px

c = 0.646 px

xc = 6.892 px

yc = 9.260 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14394.7642

Standard deviation: 6.84752

$R^2$ : 0.89671

Parameters:

a = 112.78353

b = 217.34999

c = 31.61799

d = 1.54328

## Bead 1816 (Rejected)

Date : Mon Oct 17 13:52:43 PDT 2022

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

Frame size : 12 pixels

Coordinates : 50.7  $\mu\text{m}$  (x), -30.4  $\mu\text{m}$  (y), 31.4  $\mu\text{m}$  (z)

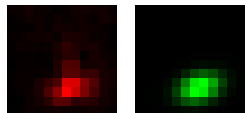
Corresponding bead : Not found

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

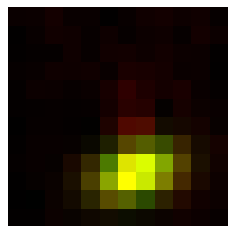
FWHM	Non corrected	Corrected	Theoretical
min	485 nm	505 nm	270 nm
max	761 nm	793 nm	270 nm
z	3.24 $\mu\text{m}$	3.25 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.637		
Theta	17.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 423.953 (brightness)

B = 126.330 (background)

a = 0.262 px

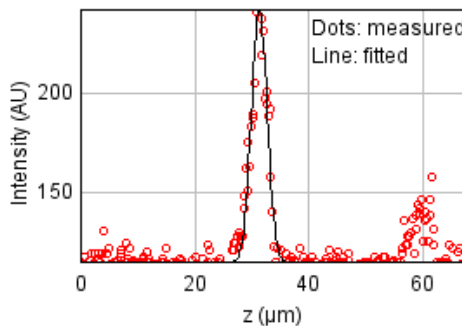
b = 0.097 px

c = 0.541 px

xc = 6.507 px

yc = 8.512 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25344.4745

Standard deviation: 9.08599

$R^2$ : 0.86992

Parameters:

a = 114.52658

b = 242.96506

c = 31.37612

d = 1.37407



## Bead 1817

Date : Mon Oct 17 13:52:43 PDT 2022

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

Frame size : 12 pixels

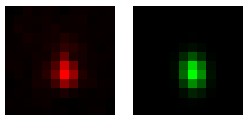
Coordinates : 73.7  $\mu\text{m}$  (x), -59.2  $\mu\text{m}$  (y), 34.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

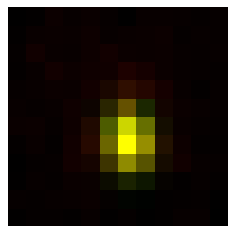
FWHM	Non corrected	Corrected	Theoretical
min	421 nm	439 nm	270 nm
max	585 nm	610 nm	270 nm
z	2.32 $\mu\text{m}$	2.33 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.72		
Theta	-84.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 539.915 (brightness)

B = 122.940 (background)

a = 0.753 px

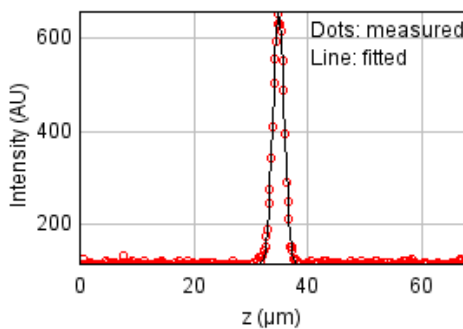
b = -0.036 px

c = 0.395 px

$x_c = 6.096$  px

$y_c = 6.735$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14251.4421

Standard deviation: 6.81334

$R^2$ : 0.99365

Parameters:

a = 112.93202

b = 657.65129

c = 34.94213

d = 0.98365

## Bead 1818

Date : Mon Oct 17 13:52:43 PDT 2022

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

Frame size : 12 pixels

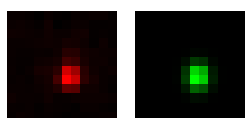
Coordinates : -54.5  $\mu\text{m}$  (x), -63.6  $\mu\text{m}$  (y), 34.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

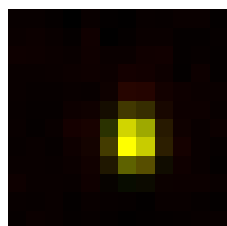
FWHM	Non corrected	Corrected	Theoretical
min	399 nm	416 nm	270 nm
max	483 nm	503 nm	270 nm
z	2.22 $\mu\text{m}$	2.23 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.826		
Theta	-89.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 635.775 (brightness)

B = 122.441 (background)

a = 0.843 px

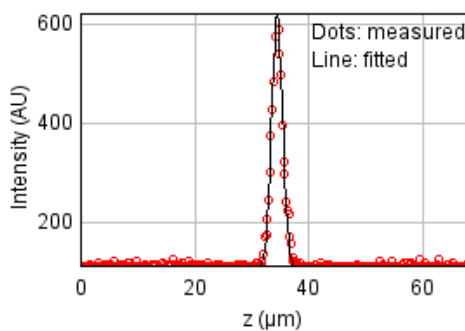
b = -0.002 px

c = 0.575 px

xc = 6.365 px

yc = 6.661 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25809.4502

Standard deviation: 9.16896

$R^2$ : 0.98638

Parameters:

a = 113.00288

b = 621.52333

c = 34.51209

d = 0.94411

## Bead 1819 (Rejected)

Date : Mon Oct 17 13:52:43 PDT 2022

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

Frame size : 12 pixels

Coordinates : 159  $\mu\text{m}$  (x), -81.8  $\mu\text{m}$  (y), 21.1  $\mu\text{m}$  (z)

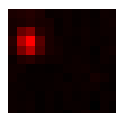
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	2.33 $\mu\text{m}$	2.34 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

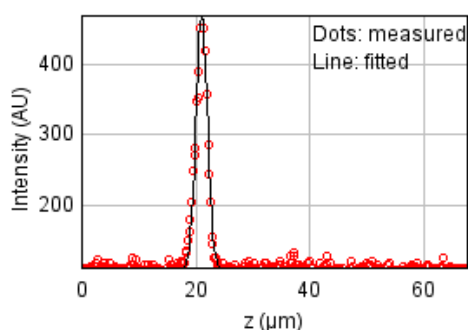
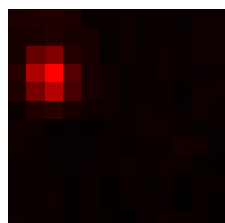
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 24205.7509

Standard deviation: 8.87953

R<sup>2</sup>: 0.97552

Parameters:

a = 110.57541

b = 467.82578

c = 21.11977

d = 0.98928

## Bead 1820

Date : Mon Oct 17 13:52:43 PDT 2022

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

Frame size : 12 pixels

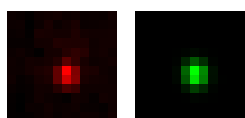
Coordinates : -148  $\mu\text{m}$  (x), -82.5  $\mu\text{m}$  (y), 34.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

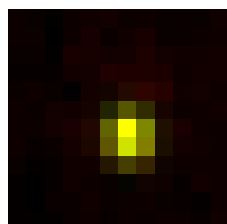
FWHM	Non corrected	Corrected	Theoretical
min	412 nm	429 nm	270 nm
max	474 nm	494 nm	270 nm
z	2.24 $\mu\text{m}$	2.25 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.869		
Theta	-83.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 378.717$  (brightness)

$B = 118.051$  (background)

$a = 0.787$  px

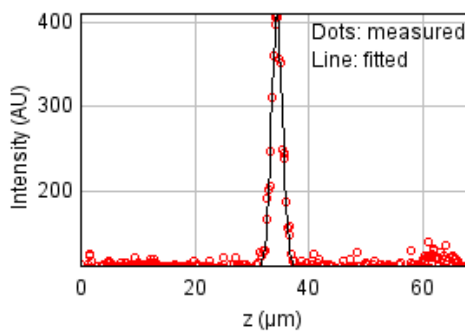
$b = -0.023$  px

$c = 0.600$  px

$x_c = 6.107$  px

$y_c = 6.406$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22554.4598

Standard deviation: 8.57131

$R^2: 0.96631$

Parameters:

$a = 111.90485$

$b = 409.98958$

$c = 34.49088$

$d = 0.95112$

## Bead 1821

Date : Mon Oct 17 13:52:43 PDT 2022

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

Frame size : 12 pixels

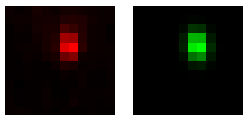
Coordinates : 51.2  $\mu\text{m}$  (x), 76.3  $\mu\text{m}$  (y), 57.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

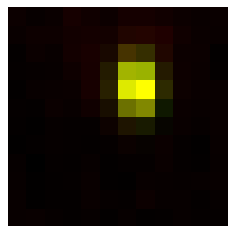
FWHM	Non corrected	Corrected	Theoretical
min	375 nm	391 nm	270 nm
max	523 nm	545 nm	270 nm
z	1.98 $\mu\text{m}$	1.99 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.717		
Theta	-83.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 729.508 (brightness)

B = 122.690 (background)

a = 0.949 px

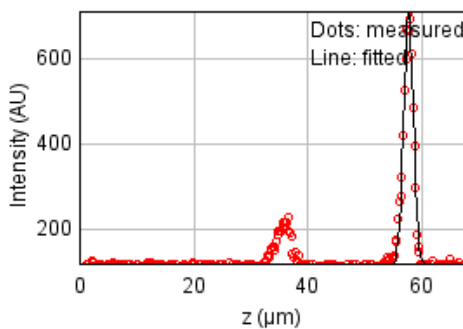
b = -0.049 px

c = 0.496 px

xc = 6.537 px

yc = 3.817 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 143945.802

Standard deviation: 21.65361

$R^2$ : 0.94051

Parameters:

a = 119.13429

b = 711.74091

c = 57.70056

d = 0.84132

## Bead 1822

Date : Mon Oct 17 13:52:43 PDT 2022

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

Frame size : 12 pixels

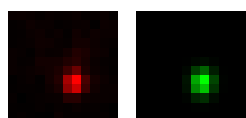
Coordinates : -55.9  $\mu\text{m}$  (x), 66.5  $\mu\text{m}$  (y), 35.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

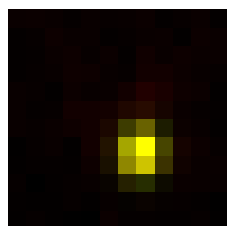
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	407 nm	270 nm
max	470 nm	489 nm	270 nm
z	1.96 $\mu\text{m}$	1.97 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.832		
Theta	83.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 598.650 (brightness)

B = 124.483 (background)

a = 0.875 px

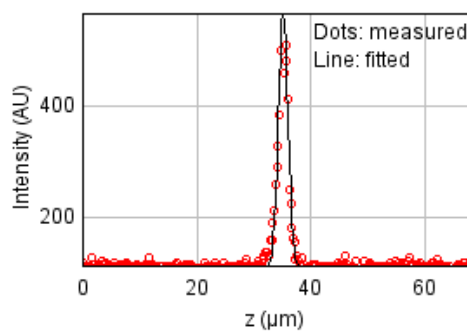
b = 0.028 px

c = 0.611 px

xc = 6.737 px

yc = 7.295 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 49406.1856

Standard deviation: 12.68591

$R^2$ : 0.96375

Parameters:

a = 113.12903

b = 565.38177

c = 35.21509

d = 0.83357

## Bead 1823

Date : Mon Oct 17 13:52:44 PDT 2022

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

Frame size : 12 pixels

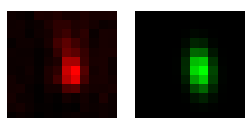
Coordinates : 163  $\mu\text{m}$  (x), 55.8  $\mu\text{m}$  (y), 34.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

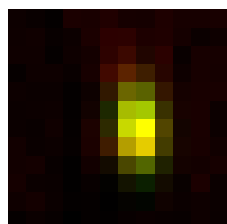
FWHM	Non corrected	Corrected	Theoretical
min	426 nm	444 nm	270 nm
max	765 nm	796 nm	270 nm
z	2.12 $\mu\text{m}$	2.13 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.557		
Theta	-84.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.907$



Parameters:

$A = 265.001$  (brightness)

$B = 115.726$  (background)

$a = 0.734$  px

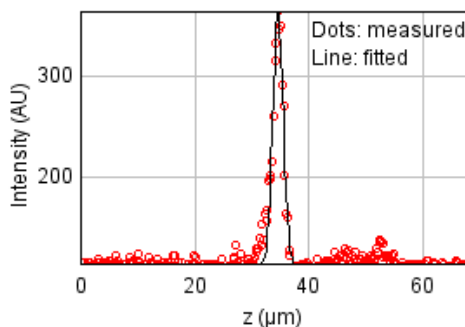
$b = -0.049$  px

$c = 0.234$  px

$x_c = 6.605$  px

$y_c = 5.936$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27401.9777

Standard deviation: 9.44761

$R^2: 0.94110$

Parameters:

$a = 112.95058$

$b = 364.43003$

$c = 34.66845$

$d = 0.90190$

## Bead 1824

Date : Mon Oct 17 13:52:44 PDT 2022

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

Frame size : 12 pixels

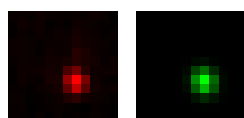
Coordinates : -51.9  $\mu\text{m}$  (x), 41.0  $\mu\text{m}$  (y), 35.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

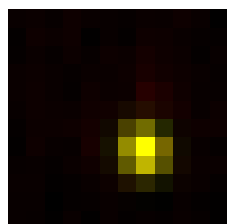
FWHM	Non corrected	Corrected	Theoretical
min	418 nm	435 nm	270 nm
max	477 nm	497 nm	270 nm
z	2.18 $\mu\text{m}$	2.19 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.876		
Theta	-74.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 530.535 (brightness)

B = 120.720 (background)

a = 0.756 px

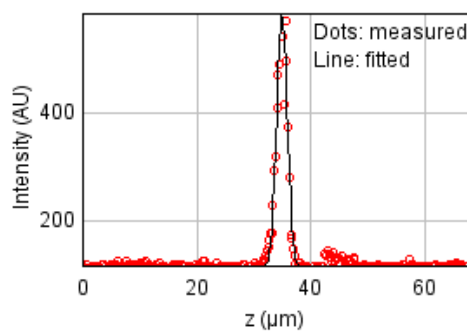
b = -0.047 px

c = 0.603 px

xc = 6.909 px

yc = 7.206 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 58892.3221

Standard deviation: 13.85033

$R^2$ : 0.96346

Parameters:

a = 115.59528

b = 583.08485

c = 35.00507

d = 0.92682



## Bead 1825

Date : Mon Oct 17 13:52:44 PDT 2022

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

Frame size : 12 pixels

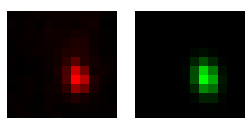
Coordinates : 70.4  $\mu\text{m}$  (x), 36.0  $\mu\text{m}$  (y), 35.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

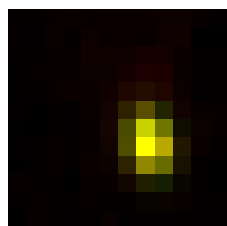
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	422 nm	270 nm
max	587 nm	611 nm	270 nm
z	2.19 $\mu\text{m}$	2.2 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.69		
Theta	-78.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 607.490 (brightness)

B = 123.792 (background)

a = 0.801 px

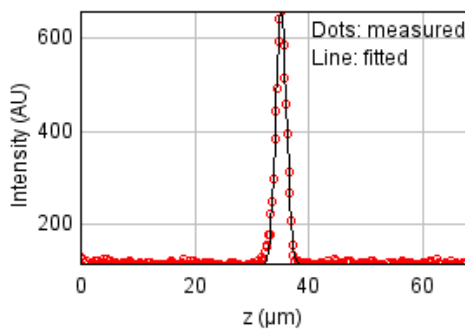
b = -0.086 px

c = 0.408 px

$x_c = 7.219$  px

$y_c = 6.777$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19690.1789

Standard deviation: 8.00858

$R^2$ : 0.99073

Parameters:

a = 114.09810

b = 656.84907

c = 35.20931

d = 0.93205

## Bead 1826 (Rejected)

Date : Mon Oct 17 13:52:44 PDT 2022

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

Frame size : 12 pixels

Coordinates : 141 um (x), 10.7 um (y), 33.2 um (z)

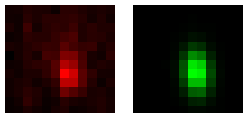
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	481 nm	501 nm	270 nm
max	816 nm	850 nm	270 nm
z	2.18 um	2.19 um	1.3 um
Asymmetry	0.589		
Theta	-85.6°		

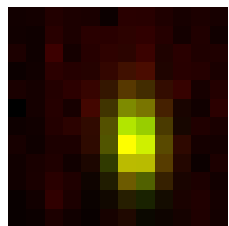
### XY profile & fitting parameters :

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



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

$R^2 = 0.880$



Parameters:

A = 142.338 (brightness)

B = 114.354 (background)

a = 0.578 px

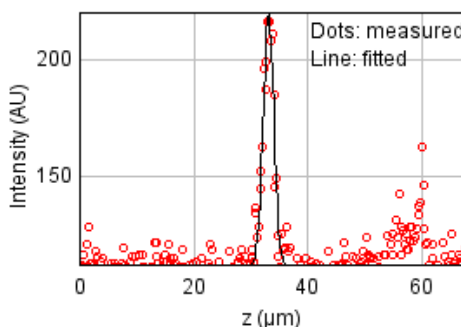
b = -0.029 px

c = 0.204 px

xc = 6.442 px

yc = 6.807 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23354.8133

Standard deviation: 8.72206

$R^2$ : 0.78200

Parameters:

a = 111.98178

b = 220.66473

c = 33.17866

d = 0.92514

## Bead 1827

Date : Mon Oct 17 13:52:44 PDT 2022

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

Frame size : 12 pixels

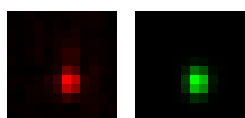
Coordinates : -109  $\mu\text{m}$  (x), -35.6  $\mu\text{m}$  (y), 34.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

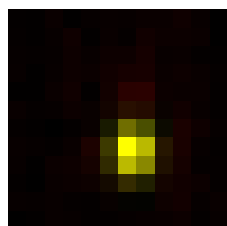
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	481 nm	501 nm	270 nm
z	2.09 $\mu\text{m}$	2.1 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.8		
Theta	-89.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 542.245 (brightness)

B = 122.318 (background)

a = 0.905 px

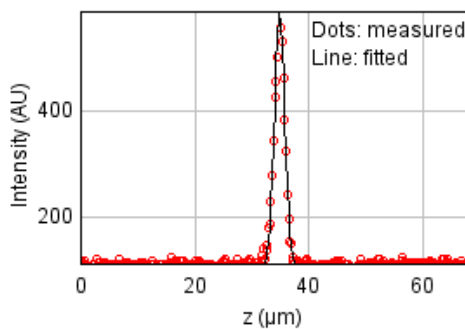
b = -0.005 px

c = 0.579 px

$x_c = 6.321$  px

$y_c = 7.229$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16414.2656

Standard deviation: 7.31209

$R^2$ : 0.98946

Parameters:

a = 112.97559

b = 588.33703

c = 34.93844

d = 0.88781

## Bead 1828

Date : Mon Oct 17 13:52:45 PDT 2022

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

Frame size : 12 pixels

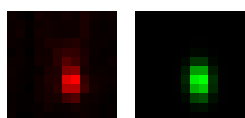
Coordinates : 137  $\mu\text{m}$  (x), -41.3  $\mu\text{m}$  (y), 35.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

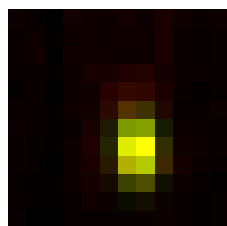
FWHM	Non corrected	Corrected	Theoretical
min	388 nm	404 nm	270 nm
max	617 nm	642 nm	270 nm
z	1.95 $\mu\text{m}$	1.96 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.63		
Theta	-87.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 532.800$  (brightness)

$B = 120.592$  (background)

$a = 0.889$  px

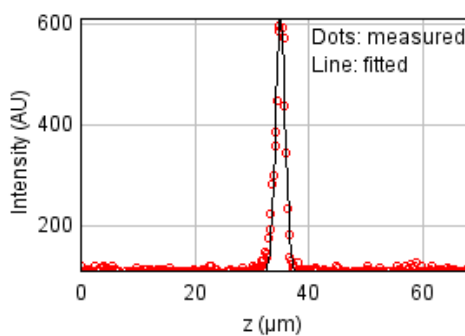
$b = -0.027$  px

$c = 0.354$  px

$x_c = 6.549$  px

$y_c = 7.132$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 41132.2422

Standard deviation: 11.57503

$R^2: 0.97511$

Parameters:

$a = 111.68461$

$b = 613.85926$

$c = 35.07991$

$d = 0.82898$

## Bead 1829

Date : Mon Oct 17 13:52:45 PDT 2022

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

Frame size : 12 pixels

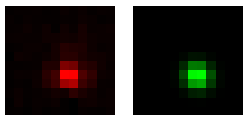
Coordinates : -109  $\mu\text{m}$  (x), -48.1  $\mu\text{m}$  (y), 35.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

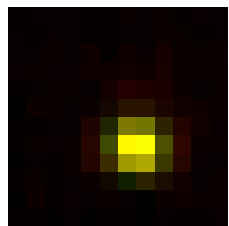
FWHM	Non corrected	Corrected	Theoretical
min	465 nm	484 nm	270 nm
max	486 nm	506 nm	270 nm
z	2.06 $\mu\text{m}$	2.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.957		
Theta	-45.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 638.535 (brightness)

B = 124.691 (background)

a = 0.595 px

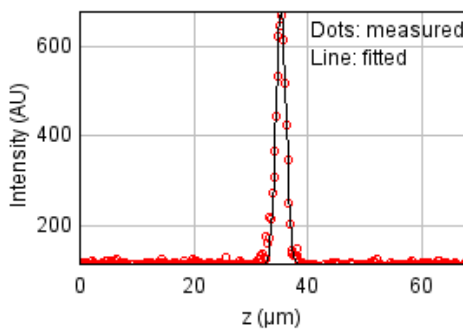
b = -0.026 px

c = 0.594 px

$x_c = 6.531$  px

$y_c = 7.126$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31484.2480

Standard deviation: 10.12692

$R^2 = 0.98549$

Parameters:

a = 113.20196

b = 677.27408

c = 35.37001

d = 0.87395

## Bead 1830

Date : Mon Oct 17 13:52:45 PDT 2022

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

Frame size : 12 pixels

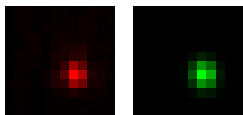
Coordinates : 22.5  $\mu\text{m}$  (x), -92.1  $\mu\text{m}$  (y), 35.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

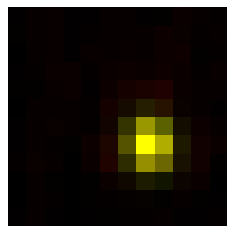
FWHM	Non corrected	Corrected	Theoretical
min	419 nm	436 nm	270 nm
max	497 nm	517 nm	270 nm
z	2.08 $\mu\text{m}$	2.08 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.843		
Theta	-82.1°		

### 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:

$A = 755.049$  (brightness)

$B = 124.334$  (background)

$a = 0.761$  px

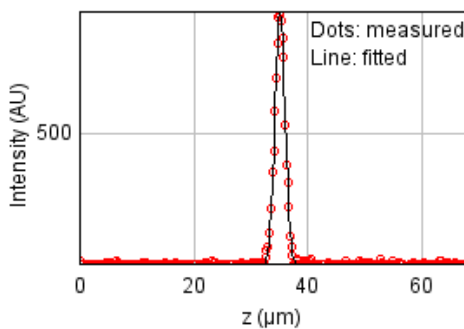
$b = -0.030$  px

$c = 0.548$  px

$x_c = 7.243$  px

$y_c = 6.987$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19855.4894

Standard deviation: 8.04213

$R^2 = 0.99475$

Parameters:

$a = 113.21997$

$b = 858.14364$

$c = 35.18612$

$d = 0.88144$

## Bead 1831 (Rejected)

Date : Mon Oct 17 13:52:45 PDT 2022

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

Frame size : 12 pixels

Coordinates : -83.9  $\mu\text{m}$  (x), 43.6  $\mu\text{m}$  (y), 31.3  $\mu\text{m}$  (z)

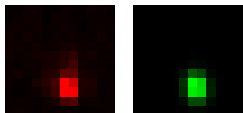
Corresponding bead : Not found

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

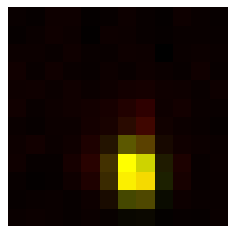
FWHM	Non corrected	Corrected	Theoretical
min	381 nm	396 nm	270 nm
max	489 nm	510 nm	270 nm
z	3.41 $\mu\text{m}$	3.43 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.777		
Theta	-82.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 626.066 (brightness)

B = 125.952 (background)

a = 0.920 px

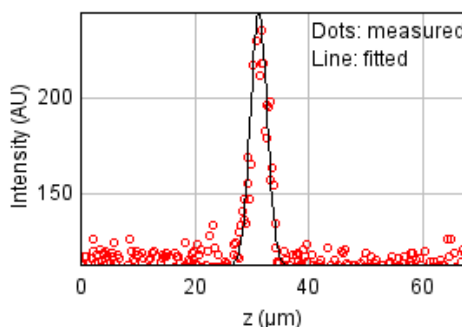
b = -0.049 px

c = 0.567 px

xc = 6.421 px

yc = 8.479 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21129.1536

Standard deviation: 8.29606

$R^2$ : 0.89922

Parameters:

a = 112.98275

b = 245.11988

c = 31.28726

d = 1.45019

## Bead 1832

Date : Mon Oct 17 13:52:45 PDT 2022

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

Frame size : 12 pixels

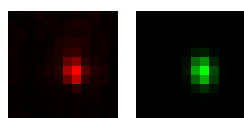
Coordinates : 5.01  $\mu\text{m}$  (x), 34.0  $\mu\text{m}$  (y), 35.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

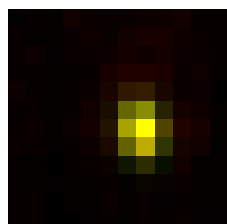
FWHM	Non corrected	Corrected	Theoretical
min	389 nm	405 nm	270 nm
max	528 nm	550 nm	270 nm
z	2.07 $\mu\text{m}$	2.08 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.736		
Theta	-80.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 583.479 (brightness)

B = 122.015 (background)

a = 0.877 px

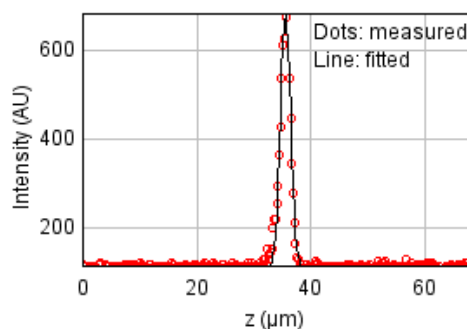
b = -0.067 px

c = 0.493 px

$x_c = 6.759$  px

$y_c = 6.071$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37861.4849

Standard deviation: 11.10528

$R^2$ : 0.98284

Parameters:

a = 114.35232

b = 681.07929

c = 35.63245

d = 0.87864



## Bead 1833

Date : Mon Oct 17 13:52:45 PDT 2022

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

Frame size : 12 pixels

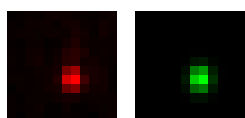
Coordinates : -130  $\mu\text{m}$  (x), 18.2  $\mu\text{m}$  (y), 35.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

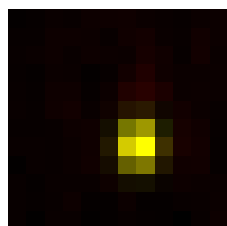
FWHM	Non corrected	Corrected	Theoretical
min	375 nm	391 nm	270 nm
max	457 nm	476 nm	270 nm
z	2.19 $\mu\text{m}$	2.2 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.821		
Theta	87.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 603.071$  (brightness)

$B = 120.223$  (background)

$a = 0.952$  px

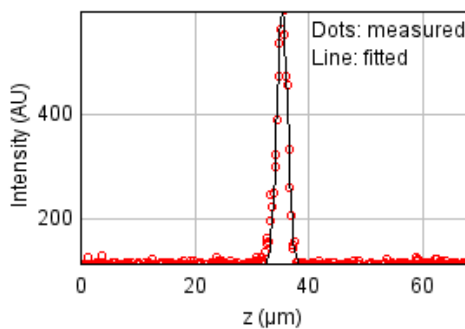
$b = 0.012$  px

$c = 0.642$  px

$x_c = 6.622$  px

$y_c = 6.908$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36710.2155

Standard deviation: 10.93514

$R^2: 0.97880$

Parameters:

$a = 111.41039$

$b = 598.49664$

$c = 35.40163$

$d = 0.93204$

## Bead 1834 (Rejected)

Date : Mon Oct 17 13:52:45 PDT 2022

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

Frame size : 12 pixels

Coordinates : -108  $\mu\text{m}$  (x), 15.0  $\mu\text{m}$  (y), 35.9  $\mu\text{m}$  (z)

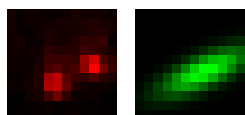
Corresponding bead : Not found

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

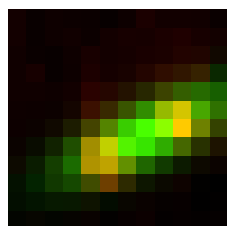
FWHM	Non corrected	Corrected	Theoretical
min	567 nm	590 nm	270 nm
max	1.71 $\mu\text{m}$	1.78 $\mu\text{m}$	270 nm
z	2.18 $\mu\text{m}$	2.19 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.332		
Theta	24.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.593$



Parameters:

A = 253.674 (brightness)

B = 124.995 (background)

a = 0.111 px

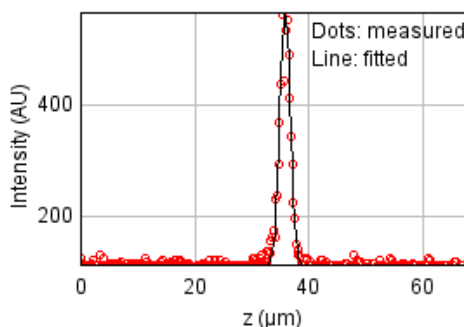
b = 0.142 px

c = 0.352 px

xc = 7.093 px

yc = 6.307 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 46636.3870

Standard deviation: 12.32518

$R^2$ : 0.96877

Parameters:

a = 113.26988

b = 564.73315

c = 35.90451

d = 0.92593

## Bead 1835

Date : Mon Oct 17 13:52:46 PDT 2022

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

Frame size : 12 pixels

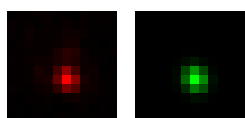
Coordinates : -59.2  $\mu\text{m}$  (x), -972 nm (y), 35.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

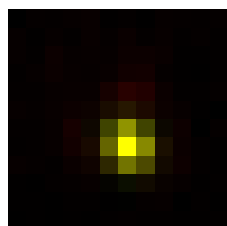
FWHM	Non corrected	Corrected	Theoretical
min	404 nm	421 nm	270 nm
max	463 nm	482 nm	270 nm
z	2.11 $\mu\text{m}$	2.12 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.874		
Theta	-62.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 848.813$  (brightness)

$B = 128.263$  (background)

$a = 0.780$  px

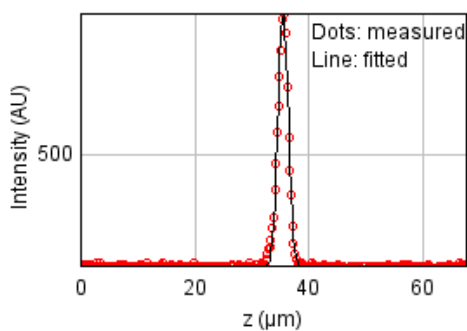
$b = -0.079$  px

$c = 0.668$  px

$x_c = 6.090$  px

$y_c = 6.919$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 48710.7480

Standard deviation: 12.59631

$R^2: 0.99083$

Parameters:

$a = 113.90572$

$b = 988.45407$

$c = 35.55995$

$d = 0.89569$

## Bead 1836 (Rejected)

Date : Mon Oct 17 13:52:46 PDT 2022

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

Frame size : 12 pixels

Coordinates : 133  $\mu\text{m}$  (x), -7.65  $\mu\text{m}$  (y), 32.3  $\mu\text{m}$  (z)

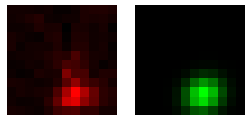
Corresponding bead : Not found

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

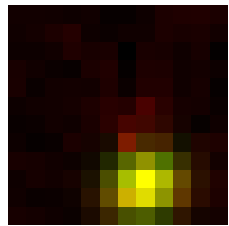
FWHM	Non corrected	Corrected	Theoretical
min	602 nm	627 nm	270 nm
max	683 nm	711 nm	270 nm
z	3.25 $\mu\text{m}$	3.27 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.881		
Theta	28.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 215.973 (brightness)

B = 116.291 (background)

a = 0.306 px

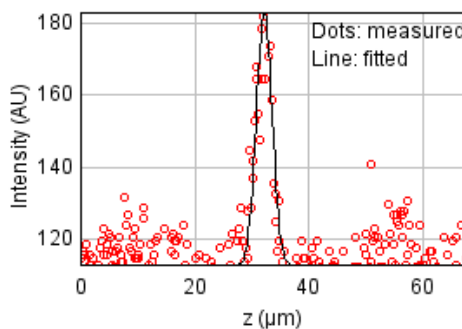
b = 0.034 px

c = 0.352 px

xc = 6.938 px

yc = 9.294 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17848.1600

Standard deviation: 7.62478

$R^2$ : 0.74042

Parameters:

a = 112.82288

b = 183.02345

c = 32.25884

d = 1.38220

## Bead 1837

Date : Mon Oct 17 13:52:46 PDT 2022

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

Frame size : 12 pixels

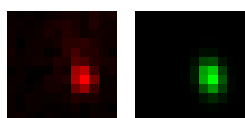
Coordinates : 133  $\mu\text{m}$  (x), -7.75  $\mu\text{m}$  (y), 31.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

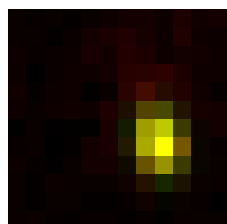
FWHM	Non corrected	Corrected	Theoretical
min	420 nm	437 nm	270 nm
max	599 nm	624 nm	270 nm
z	2.2 $\mu\text{m}$	2.21 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.701		
Theta	-77.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 292.656 (brightness)

B = 119.657 (background)

a = 0.742 px

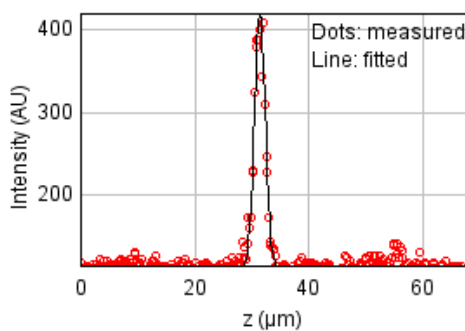
b = -0.082 px

c = 0.393 px

$x_c = 7.749$  px

$y_c = 6.743$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 35418.5461

Standard deviation: 10.74104

$R^2$ : 0.94947

Parameters:

a = 113.83407

b = 418.91348

c = 31.47599

d = 0.93300

## Bead 1838

Date : Mon Oct 17 13:52:46 PDT 2022

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

Frame size : 12 pixels

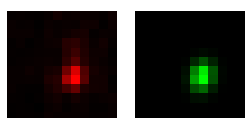
Coordinates : -108  $\mu\text{m}$  (x), -9.49  $\mu\text{m}$  (y), 35.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

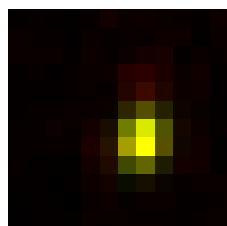
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	417 nm	270 nm
max	524 nm	545 nm	270 nm
z	2.17 $\mu\text{m}$	2.18 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.765		
Theta	78.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 591.338 (brightness)

B = 123.393 (background)

a = 0.822 px

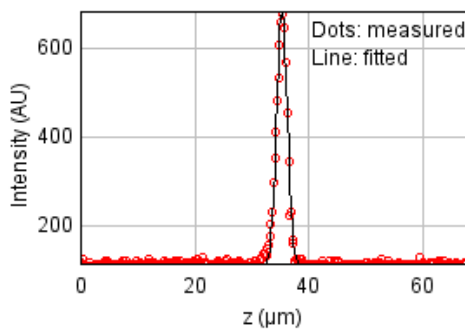
b = 0.069 px

c = 0.504 px

xc = 6.825 px

yc = 6.614 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37399.0692

Standard deviation: 11.03726

$R^2$ : 0.98392

Parameters:

a = 113.73560

b = 682.92068

c = 35.36129

d = 0.92109

## Bead 1839

Date : Mon Oct 17 13:52:46 PDT 2022

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

Frame size : 12 pixels

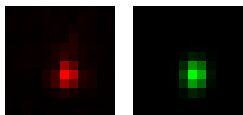
Coordinates : 19.4  $\mu\text{m}$  (x), -62.6  $\mu\text{m}$  (y), 35.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

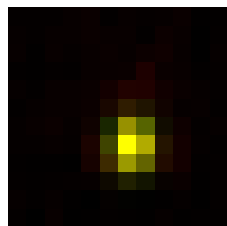
FWHM	Non corrected	Corrected	Theoretical
min	394 nm	410 nm	270 nm
max	501 nm	522 nm	270 nm
z	2.03 $\mu\text{m}$	2.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.786		
Theta	87.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 834.483 (brightness)

B = 125.685 (background)

a = 0.864 px

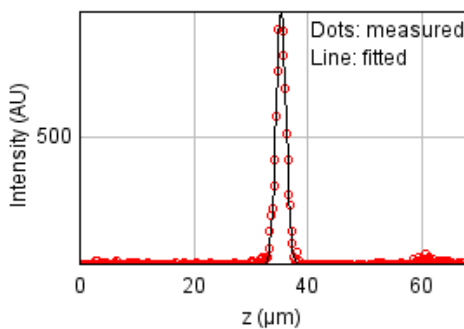
b = 0.015 px

c = 0.535 px

xc = 6.268 px

yc = 7.018 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 32672.9225

Standard deviation: 10.31632

$R^2$ : 0.99157

Parameters:

a = 115.19920

b = 876.27403

c = 35.37257

d = 0.86198

## Bead 1840

Date : Mon Oct 17 13:52:46 PDT 2022

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

Frame size : 12 pixels

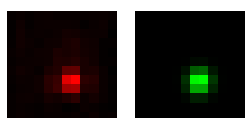
Coordinates : -27.4  $\mu\text{m}$  (x), -65.5  $\mu\text{m}$  (y), 35.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

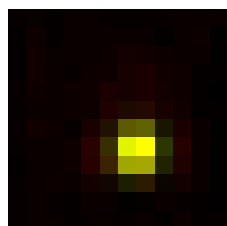
FWHM	Non corrected	Corrected	Theoretical
min	409 nm	426 nm	270 nm
max	445 nm	464 nm	270 nm
z	2.02 $\mu\text{m}$	2.03 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.918		
Theta	80.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 579.066$  (brightness)

$B = 123.569$  (background)

$a = 0.800$  px

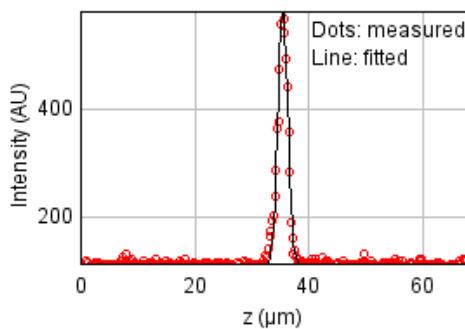
$b = 0.021$  px

$c = 0.681$  px

$x_c = 6.521$  px

$y_c = 7.207$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23240.7011

Standard deviation: 8.70072

$R^2 = 0.98433$

Parameters:

$a = 113.64661$

$b = 583.80880$

$c = 35.51849$

$d = 0.85830$



## Bead 1841

Date : Mon Oct 17 13:52:47 PDT 2022

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

Frame size : 12 pixels

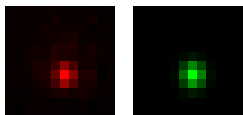
Coordinates : 36.1  $\mu\text{m}$  (x), -88.8  $\mu\text{m}$  (y), 35.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

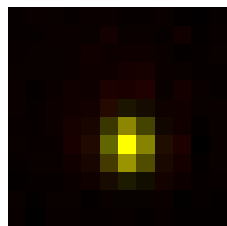
FWHM	Non corrected	Corrected	Theoretical
min	411 nm	429 nm	270 nm
max	474 nm	494 nm	270 nm
z	2.02 $\mu\text{m}$	2.03 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.868		
Theta	-87.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 684.481 (brightness)

B = 126.447 (background)

a = 0.792 px

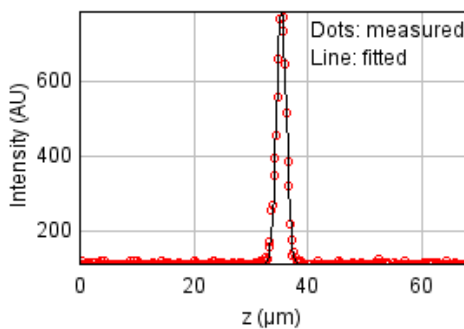
b = -0.008 px

c = 0.598 px

xc = 6.079 px

yc = 7.040 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29279.7570

Standard deviation: 9.76595

$R^2$ : 0.99032

Parameters:

a = 113.45135

b = 787.57762

c = 35.44097

d = 0.85655

## Bead 1842 (Rejected)

Date : Mon Oct 17 13:52:47 PDT 2022

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

Frame size : 12 pixels

Coordinates : -82.3  $\mu\text{m}$  (x), 96.5  $\mu\text{m}$  (y), 35.4  $\mu\text{m}$  (z)

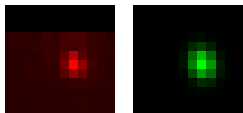
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

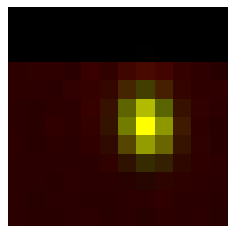
FWHM	Non corrected	Corrected	Theoretical
min	461 nm	480 nm	270 nm
max	587 nm	611 nm	270 nm
z	1.94 $\mu\text{m}$	1.94 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.785		
Theta	-77.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.677$



Parameters:

A = 529.134 (brightness)

B = 83.268 (background)

a = 0.622 px

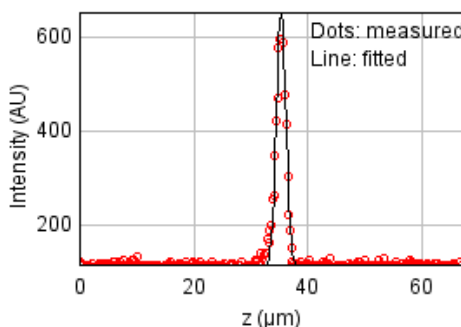
b = -0.051 px

c = 0.401 px

xc = 7.070 px

yc = 5.891 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33714.5887

Standard deviation: 10.47948

$R^2$ : 0.98201

Parameters:

a = 113.10351

b = 651.94141

c = 35.39071

d = 0.82209

## Bead 1843

Date : Mon Oct 17 13:52:47 PDT 2022

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

Frame size : 12 pixels

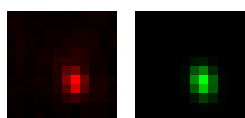
Coordinates : -37.2  $\mu\text{m}$  (x), 66.9  $\mu\text{m}$  (y), 35.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

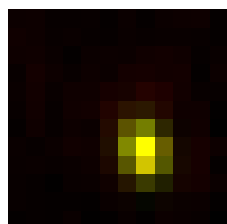
FWHM	Non corrected	Corrected	Theoretical
min	398 nm	415 nm	270 nm
max	543 nm	565 nm	270 nm
z	1.93 $\mu\text{m}$	1.94 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.734		
Theta	-74.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 470.705$  (brightness)

$B = 122.603$  (background)

$a = 0.819$  px

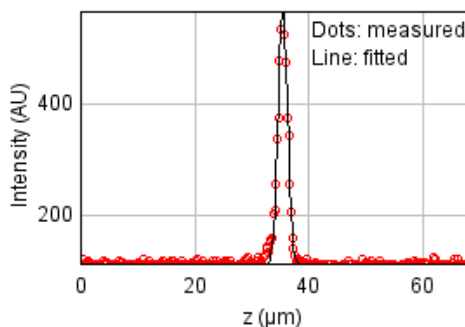
$b = -0.099$  px

$c = 0.483$  px

$x_c = 6.906$  px

$y_c = 7.211$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17595.8151

Standard deviation: 7.57069

$R^2 = 0.98681$

Parameters:

$a = 113.16209$

$b = 569.85582$

$c = 35.51678$

$d = 0.81851$

## Bead 1844

Date : Mon Oct 17 13:52:47 PDT 2022

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

Frame size : 12 pixels

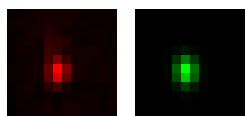
Coordinates : 107  $\mu\text{m}$  (x), 63.4  $\mu\text{m}$  (y), 25.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

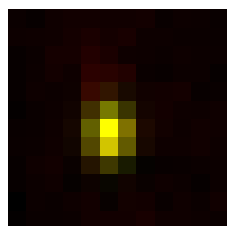
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	402 nm	270 nm
max	517 nm	538 nm	270 nm
z	2.08 $\mu\text{m}$	2.09 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.747		
Theta	-87.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 468.787$  (brightness)

$B = 126.351$  (background)

$a = 0.902$  px

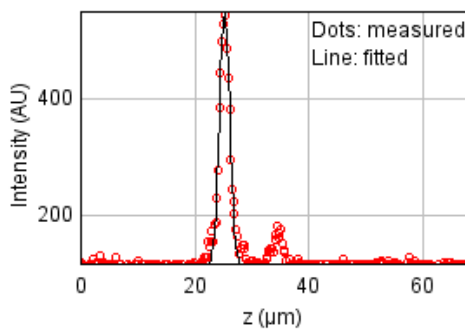
$b = -0.016$  px

$c = 0.504$  px

$x_c = 5.051$  px

$y_c = 6.246$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 51672.9954

Standard deviation: 12.97366

$R^2: 0.96091$

Parameters:

$a = 116.95834$

$b = 549.47274$

$c = 25.31656$

$d = 0.88370$

## Bead 1845

Date : Mon Oct 17 13:52:47 PDT 2022

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

Frame size : 12 pixels

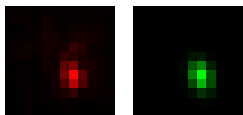
Coordinates : 1.74  $\mu\text{m}$  (x), 54.9  $\mu\text{m}$  (y), 35.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

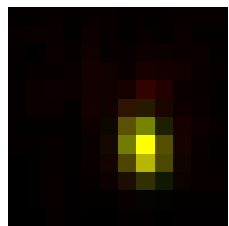
FWHM	Non corrected	Corrected	Theoretical
min	369 nm	385 nm	270 nm
max	535 nm	557 nm	270 nm
z	2.01 $\mu\text{m}$	2.01 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.69		
Theta	-75.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 749.105 (brightness)

B = 129.052 (background)

a = 0.952 px

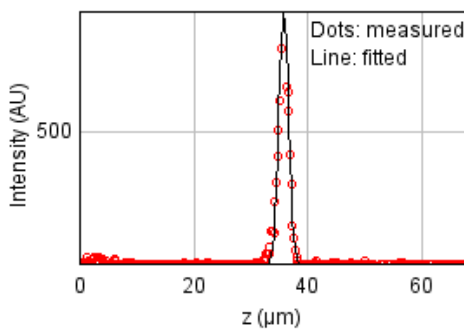
b = -0.123 px

c = 0.500 px

xc = 6.899 px

yc = 7.138 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 66802.4172

Standard deviation: 14.75118

$R^2$ : 0.98144

Parameters:

a = 116.03764

b = 850.04358

c = 35.84808

d = 0.85153

## Bead 1846

Date : Mon Oct 17 13:52:47 PDT 2022

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

Frame size : 12 pixels

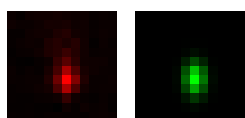
Coordinates : 130 um (x), 32.0 um (y), 35.5 um (z)

Corresponding bead : Not found

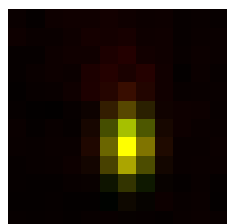
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	414 nm	270 nm
max	612 nm	638 nm	270 nm
z	2.01 um	2.02 um	1.3 um
Asymmetry	0.649		
Theta	-89.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 447.312 (brightness)

B = 119.681 (background)

a = 0.850 px

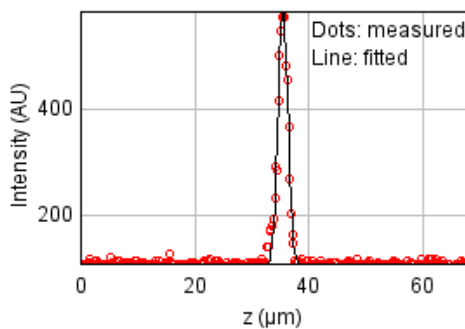
b = -0.006 px

c = 0.358 px

xc = 6.037 px

yc = 6.894 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25459.5551

Standard deviation: 9.10660

$R^2$ : 0.98286

Parameters:

a = 111.17222

b = 582.60934

c = 35.54021

d = 0.85339

## Bead 1847

Date : Mon Oct 17 13:52:47 PDT 2022

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

Frame size : 12 pixels

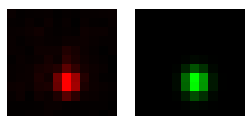
Coordinates : -78.3  $\mu\text{m}$  (x), 25.7  $\mu\text{m}$  (y), 35.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

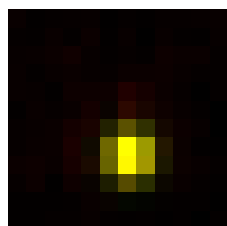
FWHM	Non corrected	Corrected	Theoretical
min	436 nm	454 nm	270 nm
max	478 nm	498 nm	270 nm
z	2.07 $\mu\text{m}$	2.08 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.912		
Theta	-87.2°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 695.180$  (brightness)

$B = 126.068$  (background)

$a = 0.705$  px

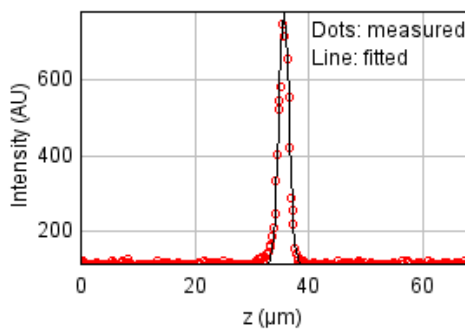
$b = -0.006$  px

$c = 0.587$  px

$x_c = 6.143$  px

$y_c = 7.477$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 54074.0929

Standard deviation: 13.27167

$R^2: 0.98240$

Parameters:

$a = 113.23759$

$b = 782.06605$

$c = 35.71068$

$d = 0.87787$

## Bead 1848

Date : Mon Oct 17 13:52:47 PDT 2022

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

Frame size : 12 pixels

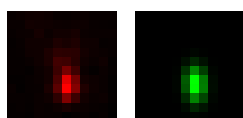
Coordinates : 160  $\mu\text{m}$  (x), 16.7  $\mu\text{m}$  (y), 35.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

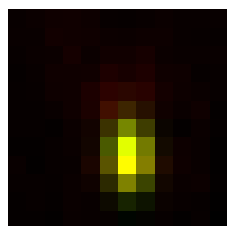
FWHM	Non corrected	Corrected	Theoretical
min	387 nm	403 nm	270 nm
max	643 nm	670 nm	270 nm
z	1.94 $\mu\text{m}$	1.95 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.602		
Theta	-87.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 641.115 (brightness)

B = 123.241 (background)

a = 0.895 px

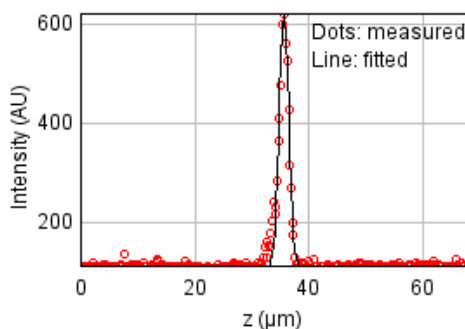
b = -0.026 px

c = 0.326 px

$x_c = 6.099$  px

$y_c = 7.485$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 47580.5532

Standard deviation: 12.44932

$R^2 = 0.97202$

Parameters:

a = 111.37319

b = 621.41408

c = 35.71244

d = 0.82427



## Bead 1849

Date : Mon Oct 17 13:52:47 PDT 2022

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

Frame size : 12 pixels

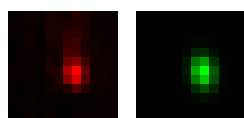
Coordinates : 163  $\mu\text{m}$  (x), -3.44  $\mu\text{m}$  (y), 35.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

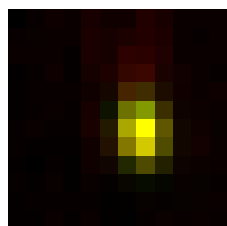
FWHM	Non corrected	Corrected	Theoretical
min	421 nm	438 nm	270 nm
max	606 nm	631 nm	270 nm
z	2.0 $\mu\text{m}$	2.01 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.695		
Theta	-81.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 460.565 (brightness)

B = 118.480 (background)

a = 0.750 px

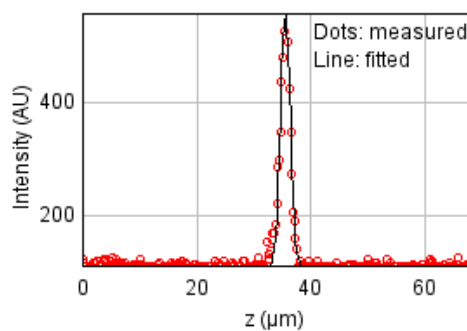
b = -0.055 px

c = 0.374 px

$x_c = 6.789$  px

$y_c = 6.150$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29148.2447

Standard deviation: 9.74399

$R^2$ : 0.97831

Parameters:

a = 110.49299

b = 558.62920

c = 35.60833

d = 0.85041

## Bead 1850 (Rejected)

Date : Mon Oct 17 13:52:48 PDT 2022

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

Frame size : 12 pixels

Coordinates : -7.53  $\mu\text{m}$  (x), -9.84  $\mu\text{m}$  (y), 30.6  $\mu\text{m}$  (z)

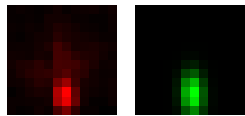
Corresponding bead : Not found

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

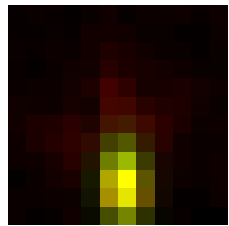
FWHM	Non corrected	Corrected	Theoretical
min	419 nm	436 nm	270 nm
max	790 nm	823 nm	270 nm
z	4.96 $\mu\text{m}$	4.98 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.53		
Theta	-87.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 472.627 (brightness)

B = 137.302 (background)

a = 0.765 px

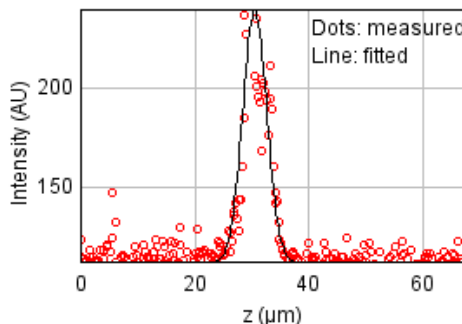
b = -0.024 px

c = 0.216 px

xc = 5.784 px

yc = 9.221 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36018.3084

Standard deviation: 10.83160

$R^2$ : 0.86842

Parameters:

a = 113.09303

b = 238.55459

c = 30.58097

d = 2.10660

## Bead 1851 (Rejected)

Date : Mon Oct 17 13:52:48 PDT 2022

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

Frame size : 12 pixels

Coordinates : 51.2  $\mu\text{m}$  (x), -17.7  $\mu\text{m}$  (y), 35.0  $\mu\text{m}$  (z)

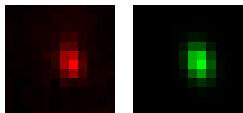
Corresponding bead : Not found

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

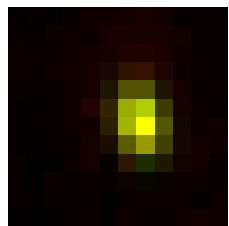
FWHM	Non corrected	Corrected	Theoretical
min	429 nm	447 nm	270 nm
max	633 nm	659 nm	270 nm
z	2.38 $\mu\text{m}$	2.39 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.679		
Theta	-76.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 371.842 (brightness)

B = 122.422 (background)

a = 0.706 px

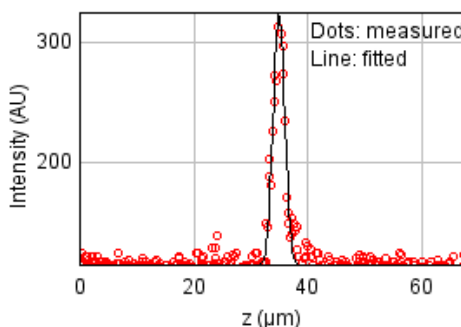
b = -0.089 px

c = 0.357 px

xc = 6.712 px

yc = 5.730 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22022.8922

Standard deviation: 8.46970

$R^2$ : 0.94022

Parameters:

a = 113.66884

b = 325.56874

c = 35.00083

d = 1.01104

## Bead 1852 (Rejected)

Date : Mon Oct 17 13:52:48 PDT 2022

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

Frame size : 12 pixels

Coordinates : -89.1 um (x), -28.7 um (y), 31.8 um (z)

Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	2.09 um	2.1 um	1.3 um
Asymmetry	0.0		
Theta	0.0°		

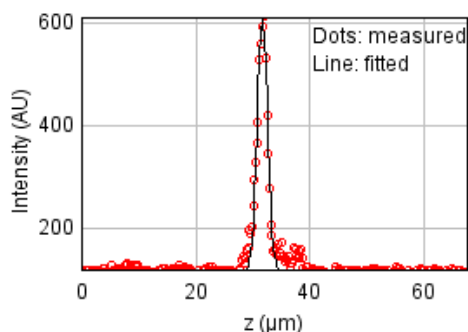
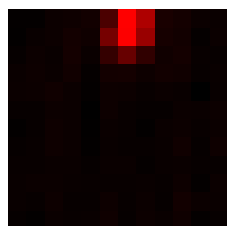
### XY profile & fitting parameters :

(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: 64230.8884

Standard deviation: 14.46448

R<sup>2</sup>: 0.96295

Parameters:

a = 117.37138

b = 611.60254

c = 31.75273

d = 0.88963

## Bead 1853

Date : Mon Oct 17 13:52:48 PDT 2022

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

Frame size : 12 pixels

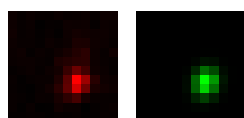
Coordinates : 42.3  $\mu\text{m}$  (x), -40.7  $\mu\text{m}$  (y), 35.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

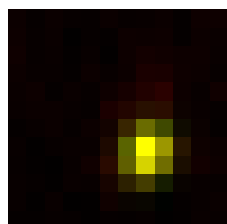
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	440 nm	270 nm
max	517 nm	538 nm	270 nm
z	2.01 $\mu\text{m}$	2.02 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.818		
Theta	73.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 500.478$  (brightness)

$B = 121.813$  (background)

$a = 0.731$  px

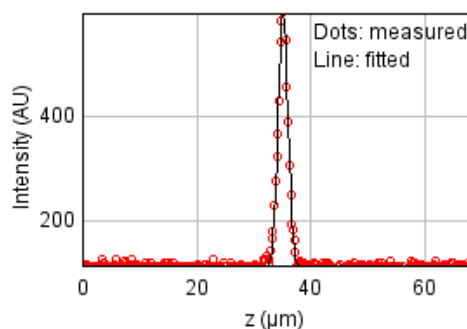
$b = 0.068$  px

$c = 0.523$  px

$x_c = 7.112$  px

$y_c = 7.306$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16400.9858

Standard deviation: 7.30913

$R^2: 0.98940$

Parameters:

$a = 113.28301$

$b = 595.78280$

$c = 35.19968$

$d = 0.85472$

## Bead 1854

Date : Mon Oct 17 13:52:48 PDT 2022

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

Frame size : 12 pixels

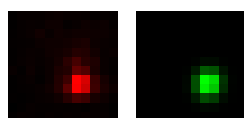
Coordinates : 57.1  $\mu\text{m}$  (x), -67.3  $\mu\text{m}$  (y), 35.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

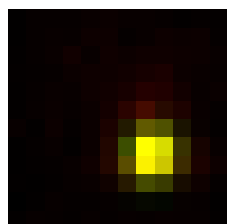
FWHM	Non corrected	Corrected	Theoretical
min	447 nm	466 nm	270 nm
max	495 nm	515 nm	270 nm
z	1.94 $\mu\text{m}$	1.95 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.904		
Theta	79.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 795.134 (brightness)

B = 127.984 (background)

a = 0.667 px

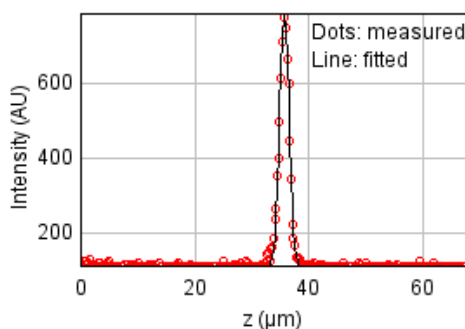
b = 0.023 px

c = 0.552 px

$x_c = 7.373$  px

$y_c = 7.431$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27560.0523

Standard deviation: 9.47482

$R^2$ : 0.99050

Parameters:

a = 114.33842

b = 787.03457

c = 35.78071

d = 0.82376

## Bead 1855

Date : Mon Oct 17 13:52:48 PDT 2022

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

Frame size : 12 pixels

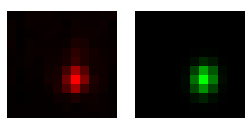
Coordinates : 44.4  $\mu\text{m}$  (x), -92.9  $\mu\text{m}$  (y), 35.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

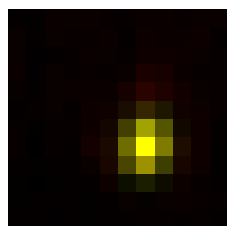
FWHM	Non corrected	Corrected	Theoretical
min	408 nm	425 nm	270 nm
max	519 nm	540 nm	270 nm
z	1.98 $\mu\text{m}$	1.99 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.787		
Theta	81.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 720.393$  (brightness)

$B = 123.751$  (background)

$a = 0.798$  px

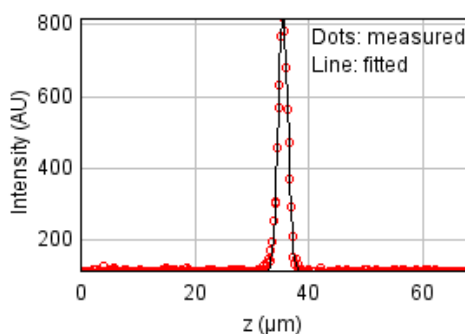
$b = 0.047$  px

$c = 0.506$  px

$x_c = 7.040$  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: 22112.0156

Standard deviation: 8.48682

$R^2: 0.99325$

Parameters:

$a = 112.55754$

$b = 820.92011$

$c = 35.54416$

$d = 0.84232$

## Bead 1856

Date : Mon Oct 17 13:52:49 PDT 2022

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

Frame size : 12 pixels

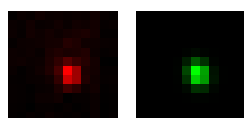
Coordinates : -79.4  $\mu\text{m}$  (x), 74.8  $\mu\text{m}$  (y), 35.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

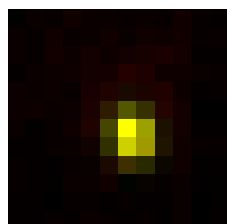
FWHM	Non corrected	Corrected	Theoretical
min	384 nm	400 nm	270 nm
max	468 nm	487 nm	270 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.822		
Theta	-72.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 510.164$  (brightness)

$B = 121.091$  (background)

$a = 0.883$  px

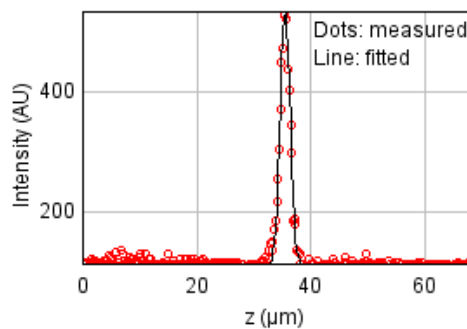
$b = -0.083$  px

$c = 0.639$  px

$x_c = 6.271$  px

$y_c = 6.375$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22481.1509

Standard deviation: 8.55737

$R^2: 0.98099$

Parameters:

$a = 114.72084$

$b = 532.14432$

$c = 35.57315$

$d = 0.86585$



## Bead 1857

Date : Mon Oct 17 13:52:49 PDT 2022

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

Frame size : 12 pixels

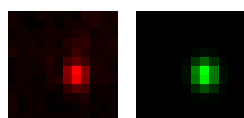
Coordinates : -162  $\mu\text{m}$  (x), 74.4  $\mu\text{m}$  (y), 34.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

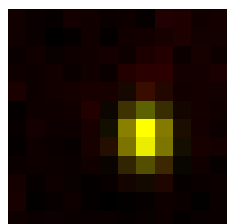
FWHM	Non corrected	Corrected	Theoretical
min	434 nm	452 nm	270 nm
max	510 nm	531 nm	270 nm
z	2.18 $\mu\text{m}$	2.19 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.85		
Theta	-86.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 288.044 (brightness)

B = 116.686 (background)

a = 0.713 px

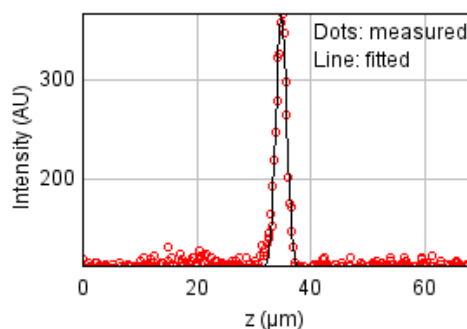
b = -0.013 px

c = 0.517 px

xc = 6.993 px

yc = 6.431 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13958.6467

Standard deviation: 6.74299

$R^2$ : 0.97071

Parameters:

a = 112.04693

b = 367.30126

c = 34.89062

d = 0.92616

## Bead 1858

Date : Mon Oct 17 13:52:49 PDT 2022

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

Frame size : 12 pixels

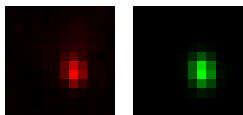
Coordinates : -30.1  $\mu\text{m}$  (x), 56.9  $\mu\text{m}$  (y), 35.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

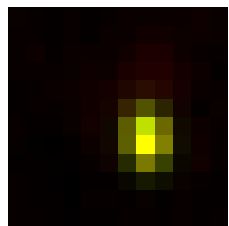
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	417 nm	270 nm
max	557 nm	580 nm	270 nm
z	2.08 $\mu\text{m}$	2.09 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.719		
Theta	-84.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 662.209 (brightness)

B = 123.959 (background)

a = 0.833 px

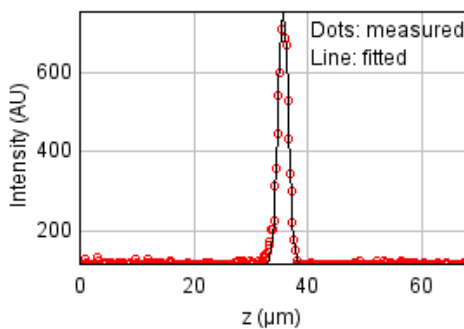
b = -0.038 px

c = 0.436 px

xc = 7.069 px

yc = 6.651 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27200.3544

Standard deviation: 9.41278

$R^2$ : 0.99038

Parameters:

a = 114.37964

b = 756.32981

c = 35.74140

d = 0.88390

## Bead 1859 (Rejected)

Date : Mon Oct 17 13:52:49 PDT 2022

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

Frame size : 12 pixels

Coordinates : -77.0  $\mu\text{m}$  (x), 22.2  $\mu\text{m}$  (y), 32.1  $\mu\text{m}$  (z)

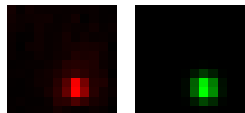
Corresponding bead : Not found

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

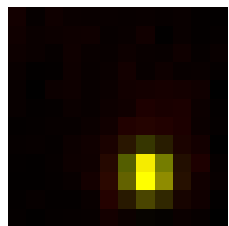
FWHM	Non corrected	Corrected	Theoretical
min	414 nm	431 nm	270 nm
max	441 nm	460 nm	270 nm
z	3.68 $\mu\text{m}$	3.69 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.938		
Theta	-78.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 591.860 (brightness)

B = 126.859 (background)

a = 0.779 px

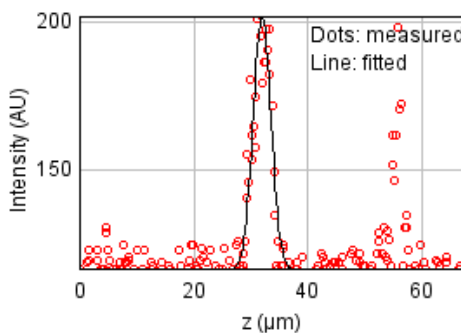
b = -0.018 px

c = 0.692 px

xc = 7.105 px

yc = 8.561 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 55432.7754

Standard deviation: 13.43737

$R^2$ : 0.60456

Parameters:

a = 116.47710

b = 202.11557

c = 32.05414

d = 1.56194

## Bead 1860

Date : Mon Oct 17 13:52:49 PDT 2022

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

Frame size : 12 pixels

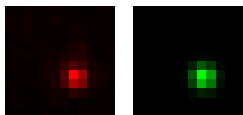
Coordinates : -62.2  $\mu\text{m}$  (x), 11.5  $\mu\text{m}$  (y), 36.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

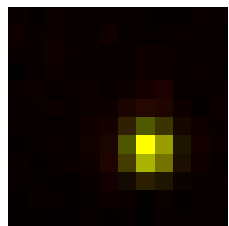
FWHM	Non corrected	Corrected	Theoretical
min	414 nm	431 nm	270 nm
max	438 nm	456 nm	270 nm
z	1.9 $\mu\text{m}$	1.91 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.945		
Theta	-76.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 589.996$  (brightness)

$B = 122.898$  (background)

$a = 0.780$  px

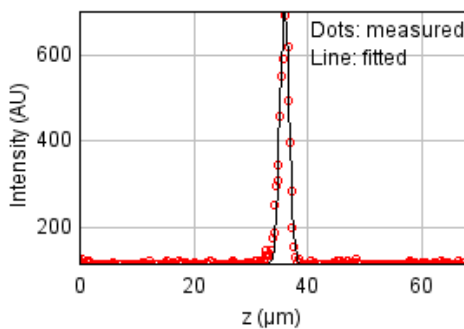
$b = -0.019$  px

$c = 0.705$  px

$x_c = 7.198$  px

$y_c = 7.256$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 41928.2453

Standard deviation: 11.68649

$R^2 = 0.98127$

Parameters:

$a = 112.84644$

$b = 706.49843$

$c = 35.99012$

$d = 0.80801$

## Bead 1861

Date : Mon Oct 17 13:52:49 PDT 2022

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

Frame size : 12 pixels

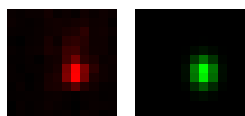
Coordinates : 126  $\mu\text{m}$  (x), -15.4  $\mu\text{m}$  (y), 35.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

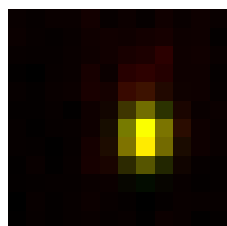
FWHM	Non corrected	Corrected	Theoretical
min	421 nm	439 nm	270 nm
max	535 nm	558 nm	270 nm
z	1.95 $\mu\text{m}$	1.96 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.786		
Theta	89.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.934$



Parameters:

A = 573.968 (brightness)

B = 123.984 (background)

a = 0.757 px

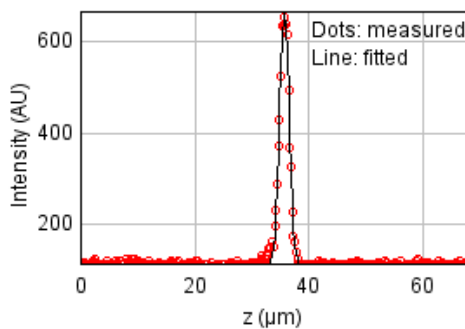
b = 0.003 px

c = 0.468 px

$x_c = 6.978$  px

$y_c = 6.412$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21737.7142

Standard deviation: 8.41468

$R^2$ : 0.98918

Parameters:

a = 110.81928

b = 668.92277

c = 35.79066

d = 0.82776

## Bead 1862

Date : Mon Oct 17 13:52:50 PDT 2022

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

Frame size : 12 pixels

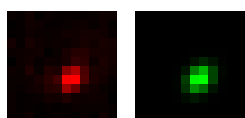
Coordinates : -137  $\mu\text{m}$  (x), -19.0  $\mu\text{m}$  (y), 35.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

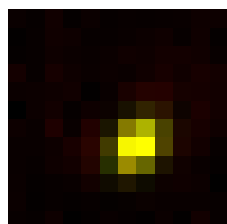
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	416 nm	270 nm
max	524 nm	545 nm	270 nm
z	1.79 $\mu\text{m}$	1.8 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.764		
Theta	49.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 419.109 (brightness)

B = 118.209 (background)

a = 0.692 px

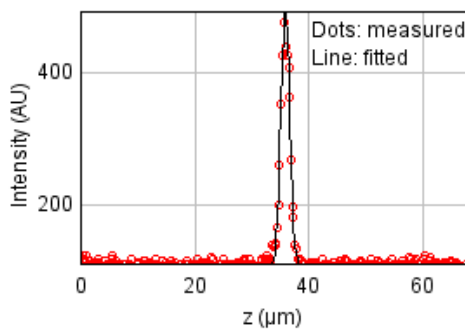
b = 0.173 px

c = 0.637 px

xc = 6.553 px

yc = 6.900 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21076.3960

Standard deviation: 8.28570

$R^2$ : 0.97614

Parameters:

a = 111.71101

b = 494.39871

c = 35.94083

d = 0.76097

## Bead 1863

Date : Mon Oct 17 13:52:50 PDT 2022

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

Frame size : 12 pixels

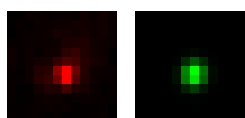
Coordinates : -67.8  $\mu\text{m}$  (x), -72.6  $\mu\text{m}$  (y), 35.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

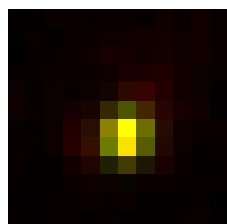
FWHM	Non corrected	Corrected	Theoretical
min	421 nm	439 nm	270 nm
max	468 nm	488 nm	270 nm
z	1.82 $\mu\text{m}$	1.83 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.9		
Theta	77.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 479.379$  (brightness)

$B = 124.645$  (background)

$a = 0.749$  px

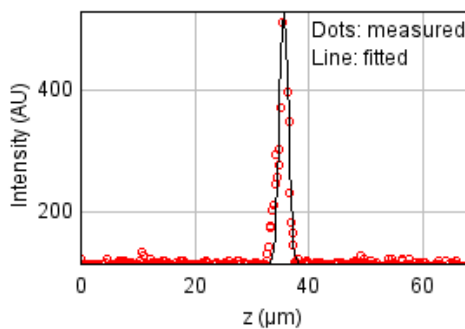
$b = 0.030$  px

$c = 0.618$  px

$x_c = 5.931$  px

$y_c = 6.404$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 72001.4801

Standard deviation: 15.31445

$R^2: 0.93493$

Parameters:

$a = 113.59210$

$b = 529.78001$

$c = 35.69666$

$d = 0.77260$

## Bead 1864 (Rejected)

Date : Mon Oct 17 13:52:50 PDT 2022

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

Frame size : 12 pixels

Coordinates : -93.1  $\mu\text{m}$  (x), 73.1  $\mu\text{m}$  (y), 33.9  $\mu\text{m}$  (z)

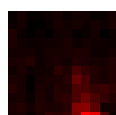
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	1.04 $\mu\text{m}$	1.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

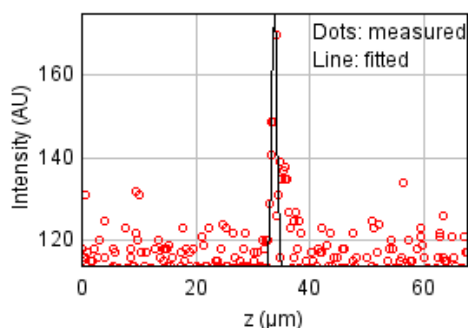
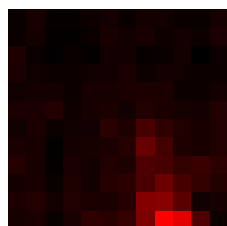
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 15471.4599

Standard deviation: 7.09899

R<sup>2</sup>: 0.45947

Parameters:

a = 113.57840

b = 175.02569

c = 33.85415

d = 0.44257



## Bead 1865 (Rejected)

Date : Mon Oct 17 13:52:50 PDT 2022

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

Frame size : 12 pixels

Coordinates : -105  $\mu\text{m}$  (x), 69.6  $\mu\text{m}$  (y), 33.8  $\mu\text{m}$  (z)

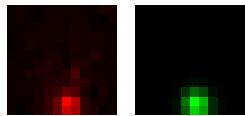
Corresponding bead : Not found

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

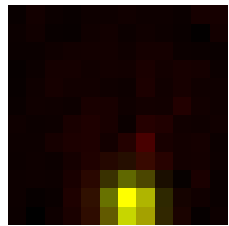
FWHM	Non corrected	Corrected	Theoretical
min	476 nm	496 nm	270 nm
max	508 nm	529 nm	270 nm
z	1.17 $\mu\text{m}$	1.17 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.938		
Theta	-61.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 353.264 (brightness)

B = 122.923 (background)

a = 0.576 px

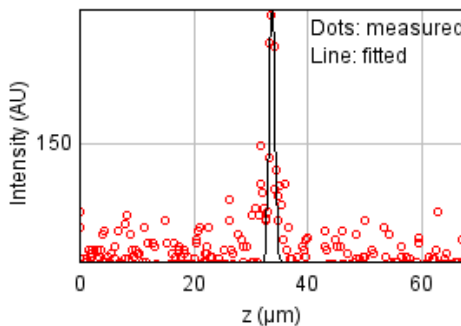
b = -0.030 px

c = 0.537 px

xc = 6.220 px

yc = 10.350 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17826.2418

Standard deviation: 7.62010

$R^2$ : 0.58826

Parameters:

a = 112.86955

b = 193.75064

c = 33.78149

d = 0.49610

## Bead 1866 (Rejected)

Date : Mon Oct 17 13:52:50 PDT 2022

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

Frame size : 12 pixels

Coordinates : 125 um (x), 59.6 um (y), 35.6 um (z)

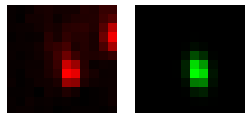
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

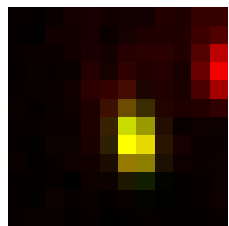
FWHM	Non corrected	Corrected	Theoretical
min	344 nm	359 nm	270 nm
max	555 nm	578 nm	270 nm
z	2.19 um	2.2 um	1.3 um
Asymmetry	0.621		
Theta	-81.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.550$



Parameters:

A = 442.675 (brightness)

B = 138.012 (background)

a = 1.116 px

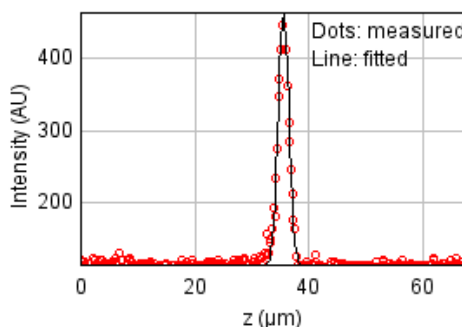
b = -0.101 px

c = 0.451 px

xc = 6.408 px

yc = 6.761 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18909.5127

Standard deviation: 7.84822

$R^2$ : 0.97894

Parameters:

a = 112.37621

b = 463.43664

c = 35.63574

d = 0.93055

## Bead 1867 (Rejected)

Date : Mon Oct 17 13:52:50 PDT 2022

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

Frame size : 12 pixels

Coordinates : 89.4  $\mu\text{m}$  (x), -13.4  $\mu\text{m}$  (y), 32.5  $\mu\text{m}$  (z)

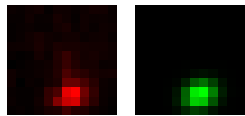
Corresponding bead : Not found

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

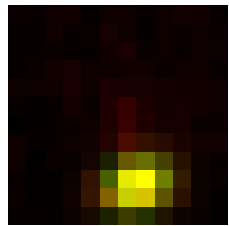
FWHM	Non corrected	Corrected	Theoretical
min	479 nm	499 nm	270 nm
max	603 nm	628 nm	270 nm
z	3.7 $\mu\text{m}$	3.71 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.795		
Theta	22.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 436.106 (brightness)

B = 126.333 (background)

a = 0.399 px

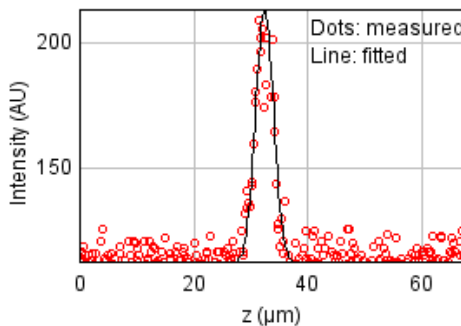
b = 0.075 px

c = 0.554 px

xc = 6.551 px

yc = 9.316 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18100.4098

Standard deviation: 7.67848

$R^2$ : 0.86857

Parameters:

a = 112.18081

b = 213.66025

c = 32.49592

d = 1.57089

## Bead 1868 (Rejected)

Date : Mon Oct 17 13:52:50 PDT 2022

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

Frame size : 12 pixels

Coordinates : 51.2  $\mu\text{m}$  (x), -17.7  $\mu\text{m}$  (y), 35.0  $\mu\text{m}$  (z)

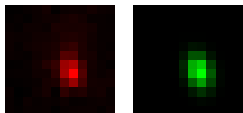
Corresponding bead : Not found

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

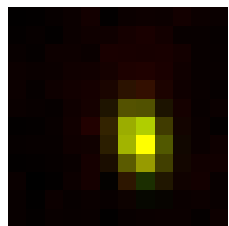
FWHM	Non corrected	Corrected	Theoretical
min	429 nm	447 nm	270 nm
max	632 nm	659 nm	270 nm
z	2.38 $\mu\text{m}$	2.39 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.679		
Theta	-76.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 371.884 (brightness)

B = 122.526 (background)

a = 0.707 px

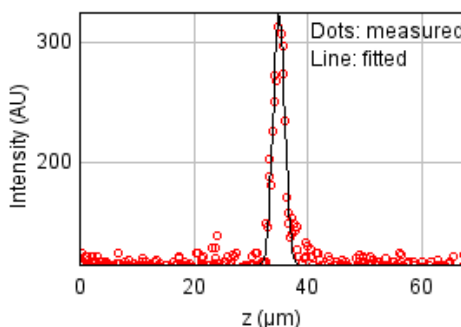
b = -0.090 px

c = 0.357 px

xc = 6.712 px

yc = 6.730 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22022.8922

Standard deviation: 8.46970

$R^2$ : 0.94022

Parameters:

a = 113.66884

b = 325.56874

c = 35.00083

d = 1.01104

## Bead 1869

Date : Mon Oct 17 13:52:51 PDT 2022

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

Frame size : 12 pixels

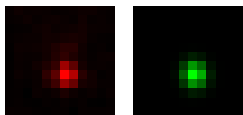
Coordinates : -16.2  $\mu\text{m}$  (x), -21.9  $\mu\text{m}$  (y), 35.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

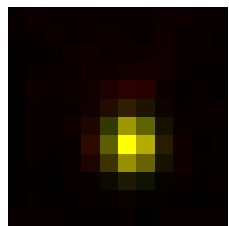
FWHM	Non corrected	Corrected	Theoretical
min	436 nm	454 nm	270 nm
max	493 nm	514 nm	270 nm
z	2.16 $\mu\text{m}$	2.17 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.884		
Theta	-84.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 589.163 (brightness)

B = 123.314 (background)

a = 0.705 px

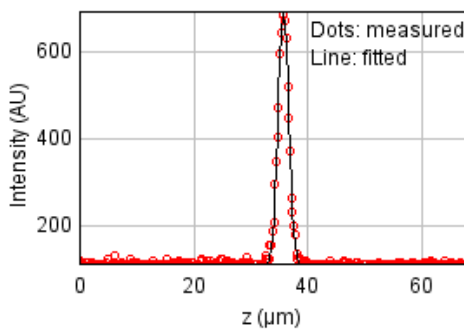
b = -0.014 px

c = 0.553 px

xc = 6.220 px

yc = 6.977 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17187.6490

Standard deviation: 7.48237

$R^2$ : 0.99282

Parameters:

a = 114.08602

b = 695.22567

c = 35.78912

d = 0.91801

## Bead 1870

Date : Mon Oct 17 13:52:51 PDT 2022

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

Frame size : 12 pixels

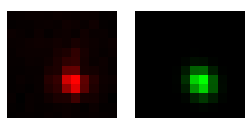
Coordinates : -55.3  $\mu\text{m}$  (x), -53.6  $\mu\text{m}$  (y), 36.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

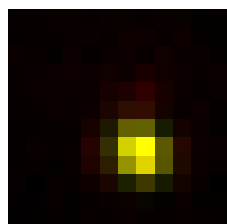
FWHM	Non corrected	Corrected	Theoretical
min	439 nm	457 nm	270 nm
max	510 nm	531 nm	270 nm
z	1.96 $\mu\text{m}$	1.97 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.861		
Theta	-55.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 702.401 (brightness)

B = 125.086 (background)

a = 0.640 px

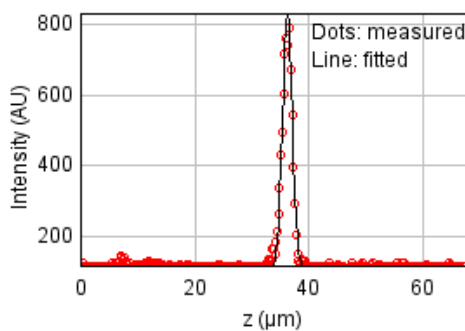
b = -0.084 px

c = 0.575 px

xc = 6.697 px

yc = 7.291 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 54844.0631

Standard deviation: 13.36582

$R^2$ : 0.98367

Parameters:

a = 114.83889

b = 831.82245

c = 36.31728

d = 0.83407

## Bead 1871

Date : Mon Oct 17 13:52:51 PDT 2022

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

Frame size : 12 pixels

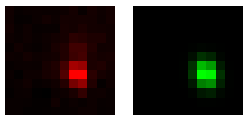
Coordinates : -157  $\mu\text{m}$  (x), 87.9  $\mu\text{m}$  (y), 35.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

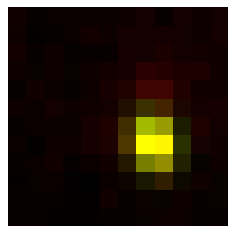
FWHM	Non corrected	Corrected	Theoretical
min	408 nm	425 nm	270 nm
max	524 nm	546 nm	270 nm
z	2.29 $\mu\text{m}$	2.3 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.779		
Theta	-76.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 379.153$  (brightness)

$B = 119.232$  (background)

$a = 0.789$  px

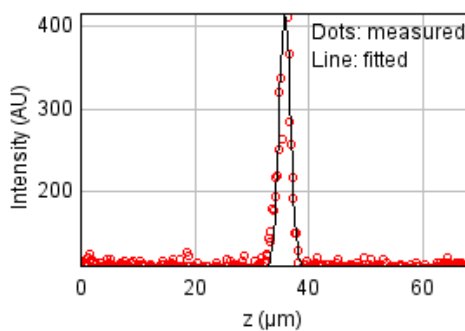
$b = -0.070$  px

$c = 0.505$  px

$x_c = 7.466$  px

$y_c = 6.877$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 38137.9814

Standard deviation: 11.14576

$R^2 = 0.94712$

Parameters:

$a = 111.12943$

$b = 414.11429$

$c = 35.86336$

$d = 0.97306$

## Bead 1872

Date : Mon Oct 17 13:52:51 PDT 2022

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

Frame size : 12 pixels

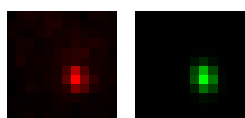
Coordinates : -146  $\mu\text{m}$  (x), 87.3  $\mu\text{m}$  (y), 36.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

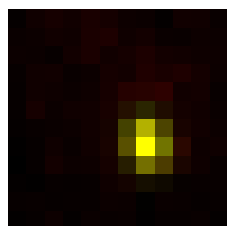
FWHM	Non corrected	Corrected	Theoretical
min	369 nm	384 nm	270 nm
max	481 nm	501 nm	270 nm
z	2.03 $\mu\text{m}$	2.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.767		
Theta	-77.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 391.647 (brightness)

B = 120.833 (background)

a = 0.969 px

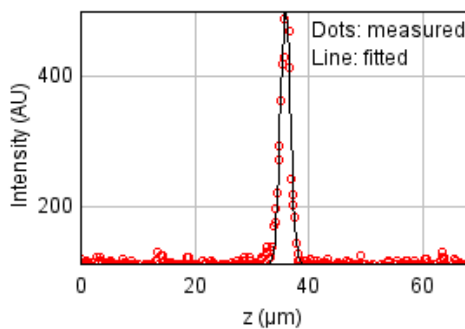
b = -0.086 px

c = 0.600 px

$x_c = 7.078$  px

$y_c = 6.817$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30160.2399

Standard deviation: 9.91170

$R^2$ : 0.97072

Parameters:

a = 112.40103

b = 500.50285

c = 35.97358

d = 0.86308



## Bead 1873 (Rejected)

Date : Mon Oct 17 13:52:51 PDT 2022

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

Frame size : 12 pixels

Coordinates : 139  $\mu\text{m}$  (x), 62.2  $\mu\text{m}$  (y), 33.4  $\mu\text{m}$  (z)

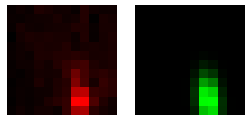
Corresponding bead : Not found

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

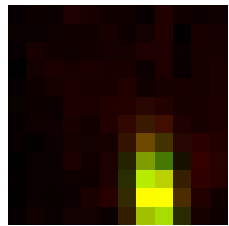
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	407 nm	270 nm
max	900 nm	937 nm	270 nm
z	2.19 $\mu\text{m}$	2.2 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.435		
Theta	-84.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 262.171 (brightness)

B = 120.586 (background)

a = 0.871 px

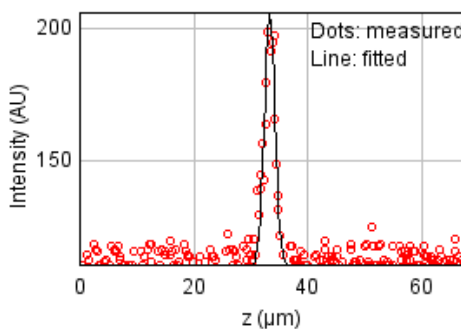
b = -0.064 px

c = 0.172 px

xc = 7.497 px

yc = 9.894 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 10478.5627

Standard deviation: 5.84227

$R^2$ : 0.86198

Parameters:

a = 110.48410

b = 206.33531

c = 33.37883

d = 0.92930

## Bead 1874

Date : Mon Oct 17 13:52:52 PDT 2022

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

Frame size : 12 pixels

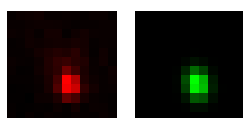
Coordinates : 33.7  $\mu\text{m}$  (x), 31.5  $\mu\text{m}$  (y), 36.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

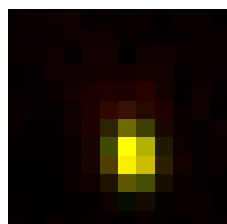
FWHM	Non corrected	Corrected	Theoretical
min	407 nm	424 nm	270 nm
max	538 nm	560 nm	270 nm
z	1.97 $\mu\text{m}$	1.98 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.757		
Theta	-79.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 626.014$  (brightness)

$B = 125.706$  (background)

$a = 0.799$  px

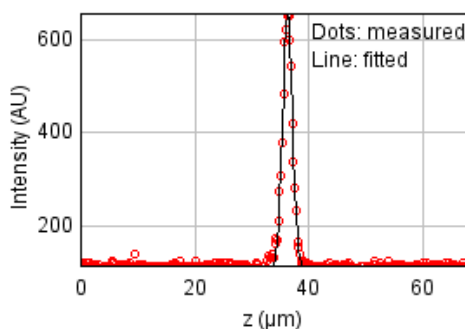
$b = -0.061$  px

$c = 0.475$  px

$x_c = 6.308$  px

$y_c = 7.472$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19939.8885

Standard deviation: 8.05920

$R^2 = 0.98962$

Parameters:

$a = 113.20936$

$b = 655.96730$

$c = 36.34085$

$d = 0.83740$

## Bead 1875

Date : Mon Oct 17 13:52:52 PDT 2022

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

Frame size : 12 pixels

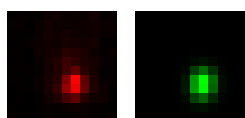
Coordinates : 90.8  $\mu\text{m}$  (x), -11.4  $\mu\text{m}$  (y), 36.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

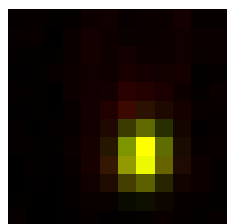
FWHM	Non corrected	Corrected	Theoretical
min	437 nm	455 nm	270 nm
max	541 nm	564 nm	270 nm
z	1.92 $\mu\text{m}$	1.93 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.807		
Theta	84.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 625.241 (brightness)

B = 126.270 (background)

a = 0.700 px

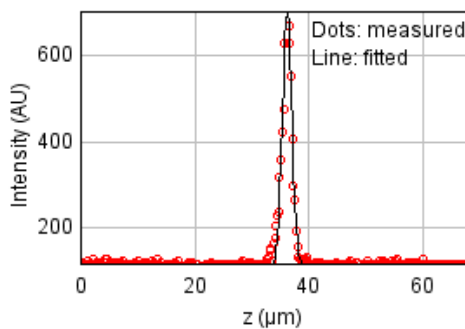
b = 0.024 px

c = 0.460 px

xc = 6.865 px

yc = 7.476 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37515.5125

Standard deviation: 11.05443

$R^2$ : 0.98320

Parameters:

a = 113.31835

b = 704.06150

c = 36.26845

d = 0.81580

## Bead 1876 (Rejected)

Date : Mon Oct 17 13:52:52 PDT 2022

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

Frame size : 12 pixels

Coordinates : -89.1 um (x), -28.7 um (y), 31.8 um (z)

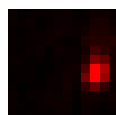
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	2.09 um	2.1 um	1.3 um
Asymmetry	0.0		
Theta	0.0°		

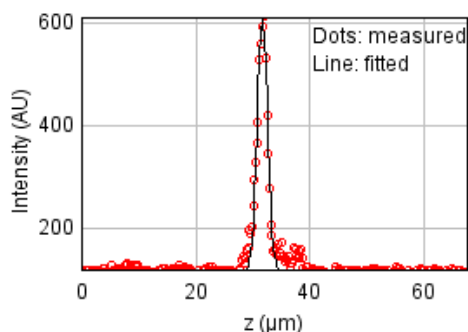
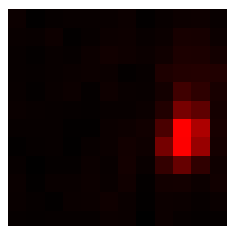
### XY profile & fitting parameters :

(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: 64230.8884

Standard deviation: 14.46448

R<sup>2</sup>: 0.96295

Parameters:

a = 117.37138

b = 611.60254

c = 31.75273

d = 0.88963

## Bead 1877

Date : Mon Oct 17 13:52:52 PDT 2022

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

Frame size : 12 pixels

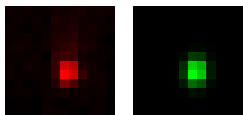
Coordinates : -159  $\mu\text{m}$  (x), -53.5  $\mu\text{m}$  (y), 35.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

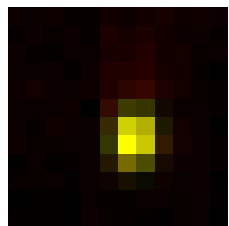
FWHM	Non corrected	Corrected	Theoretical
min	388 nm	404 nm	270 nm
max	503 nm	524 nm	270 nm
z	2.49 $\mu\text{m}$	2.5 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.771		
Theta	84.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 453.774$  (brightness)

$B = 120.673$  (background)

$a = 0.887$  px

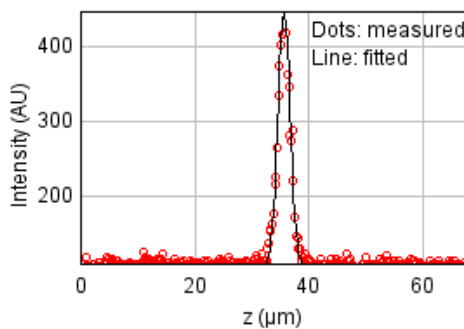
$b = 0.034$  px

$c = 0.533$  px

$x_c = 6.374$  px

$y_c = 6.658$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23762.6945

Standard deviation: 8.79789

$R^2: 0.97442$

Parameters:

$a = 111.12473$

$b = 446.52068$

$c = 35.72004$

$d = 1.05709$

## Bead 1878

Date : Mon Oct 17 13:52:52 PDT 2022

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

Frame size : 12 pixels

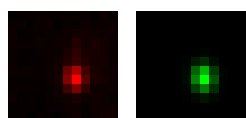
Coordinates : -95.5  $\mu\text{m}$  (x), 60.7  $\mu\text{m}$  (y), 36.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

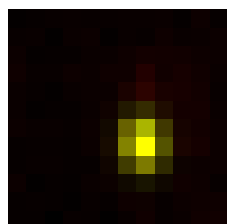
FWHM	Non corrected	Corrected	Theoretical
min	387 nm	403 nm	270 nm
max	498 nm	519 nm	270 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.777		
Theta	-86.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 614.286 (brightness)

B = 123.928 (background)

a = 0.895 px

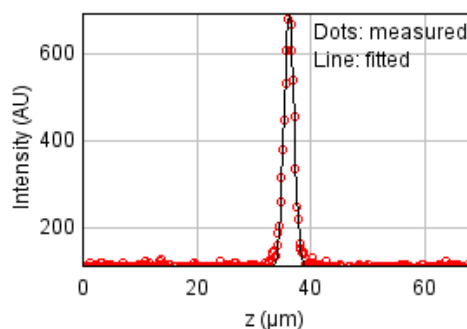
b = -0.025 px

c = 0.543 px

$x_c = 6.866$  px

$y_c = 6.814$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23304.1591

Standard deviation: 8.71260

$R^2$ : 0.98963

Parameters:

a = 114.16507

b = 691.86537

c = 36.26324

d = 0.86661

## Bead 1879 (Rejected)

Date : Mon Oct 17 13:52:52 PDT 2022

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

Frame size : 12 pixels

Coordinates : 126 um (x), 60.4 um (y), 35.9 um (z)

Corresponding bead : Not found

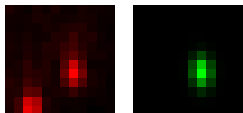
Reason of rejection : R or C parameter off limits.



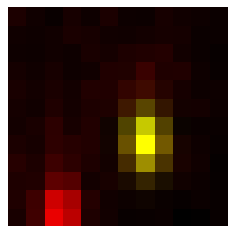
FWHM	Non corrected	Corrected	Theoretical
min	348 nm	362 nm	270 nm
max	570 nm	594 nm	270 nm
z	2.03 um	2.04 um	1.3 um
Asymmetry	0.61		
Theta	-87.7°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.439$



Parameters:

A = 384.110 (brightness)

B = 147.119 (background)

a = 1.109 px

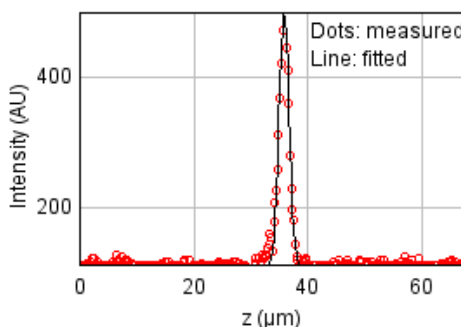
b = -0.028 px

c = 0.414 px

xc = 7.012 px

yc = 6.791 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20572.2543

Standard deviation: 8.18600

$R^2$ : 0.97981

Parameters:

a = 111.57708

b = 499.14421

c = 35.91193

d = 0.86399

## Bead 1880 (Rejected)

Date : Mon Oct 17 13:52:52 PDT 2022

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

Frame size : 12 pixels

Coordinates : -164  $\mu\text{m}$  (x), 43.5  $\mu\text{m}$  (y), 35.2  $\mu\text{m}$  (z)

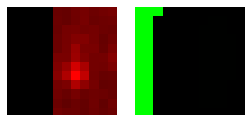
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

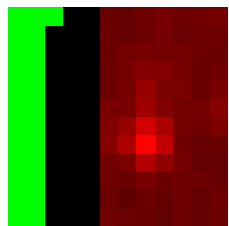
FWHM	Non corrected	Corrected	Theoretical
min	1.53 $\mu\text{m}$	1.59 $\mu\text{m}$	270 nm
max	3.94 $\mu\text{m}$	4.11 $\mu\text{m}$	270 nm
z	2.44 $\mu\text{m}$	2.45 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.387		
Theta	88.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.817$



Parameters:

A = 183.138 (brightness)

B = -15.406 (background)

a = 0.057 px

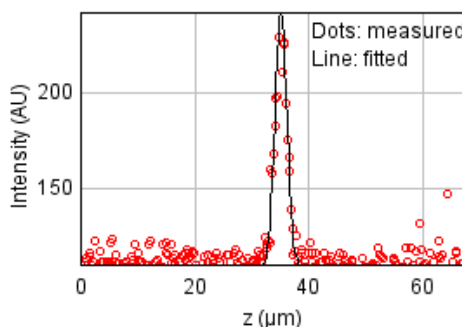
b = 0.002 px

c = 0.009 px

xc = 8.146 px

yc = 5.548 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15048.2322

Standard deviation: 7.00122

$R^2$ : 0.90188

Parameters:

a = 109.96602

b = 242.32984

c = 35.17680

d = 1.03603



## Bead 1881 (Rejected)

Date : Mon Oct 17 13:52:52 PDT 2022

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

Frame size : 12 pixels

Coordinates : -24.7  $\mu\text{m}$  (x), 32.7  $\mu\text{m}$  (y), 32.8  $\mu\text{m}$  (z)

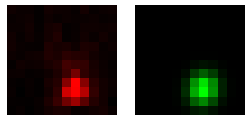
Corresponding bead : Not found

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

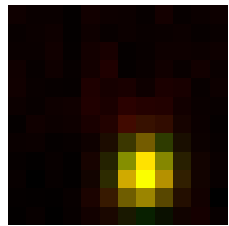
FWHM	Non corrected	Corrected	Theoretical
min	523 nm	544 nm	270 nm
max	594 nm	618 nm	270 nm
z	3.01 $\mu\text{m}$	3.03 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.88		
Theta	75.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 393.625 (brightness)

B = 123.913 (background)

a = 0.484 px

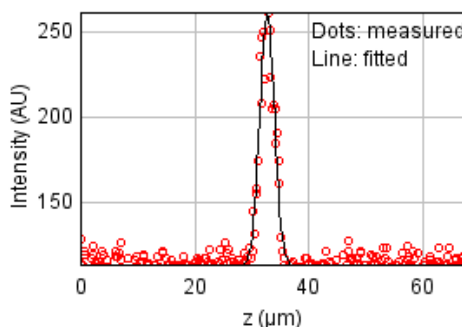
b = 0.027 px

c = 0.388 px

xc = 6.936 px

yc = 8.661 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17133.2007

Standard deviation: 7.47051

$R^2$ : 0.92446

Parameters:

a = 113.15252

b = 260.76704

c = 32.76024

d = 1.28012

## Bead 1882

Date : Mon Oct 17 13:52:52 PDT 2022

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

Frame size : 12 pixels

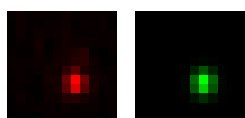
Coordinates : -70.0  $\mu\text{m}$  (x), 28.6  $\mu\text{m}$  (y), 36.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

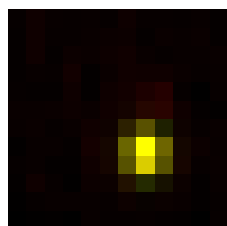
FWHM	Non corrected	Corrected	Theoretical
min	382 nm	398 nm	270 nm
max	444 nm	463 nm	270 nm
z	1.99 $\mu\text{m}$	2.0 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.86		
Theta	-89.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 605.919$  (brightness)

$B = 120.792$  (background)

$a = 0.920$  px

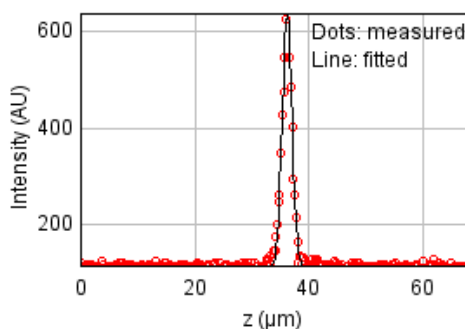
$b = -0.001$  px

$c = 0.680$  px

$x_c = 6.998$  px

$y_c = 7.340$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24984.1761

Standard deviation: 9.02118

$R^2 = 0.98614$

Parameters:

$a = 114.34537$

$b = 637.14426$

$c = 36.27065$

$d = 0.84437$

## Bead 1883

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

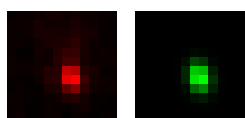
Coordinates : 103  $\mu\text{m}$  (x), 12.9  $\mu\text{m}$  (y), 36.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

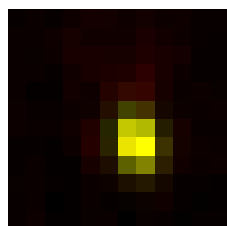
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	534 nm	557 nm	270 nm
z	2.03 $\mu\text{m}$	2.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.721		
Theta	-77.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 594.393 (brightness)

B = 123.643 (background)

a = 0.883 px

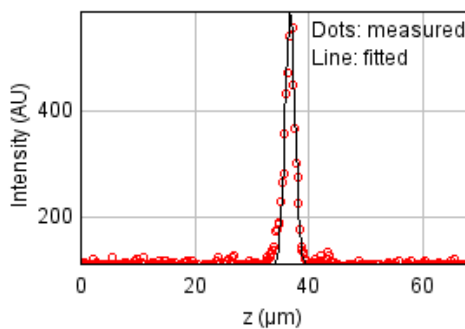
b = -0.094 px

c = 0.491 px

xc = 6.537 px

yc = 6.735 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 39949.4785

Standard deviation: 11.40739

$R^2$ : 0.97352

Parameters:

a = 113.86221

b = 584.59399

c = 36.78094

d = 0.86166

## Bead 1884

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

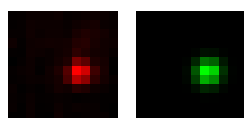
Coordinates : -69.2  $\mu\text{m}$  (x), 7.77  $\mu\text{m}$  (y), 36.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

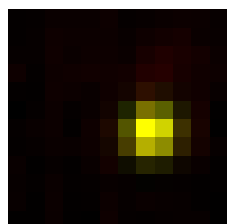
FWHM	Non corrected	Corrected	Theoretical
min	455 nm	473 nm	270 nm
max	475 nm	495 nm	270 nm
z	2.1 $\mu\text{m}$	2.11 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.957		
Theta	71.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 586.658 (brightness)

B = 121.654 (background)

a = 0.644 px

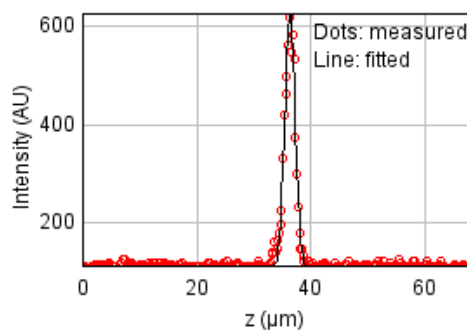
b = 0.017 px

c = 0.600 px

xc = 7.346 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: 32306.7044

Standard deviation: 10.25834

$R^2$ : 0.98252

Parameters:

a = 113.44121

b = 628.34789

c = 36.42058

d = 0.89166

## Bead 1885

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

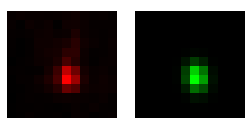
Coordinates : 43.2  $\mu\text{m}$  (x), 392 nm (y), 36.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

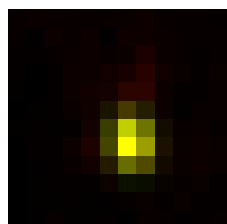
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	505 nm	526 nm	270 nm
z	2.06 $\mu\text{m}$	2.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.762		
Theta	-82.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 721.042 (brightness)

B = 124.016 (background)

a = 0.897 px

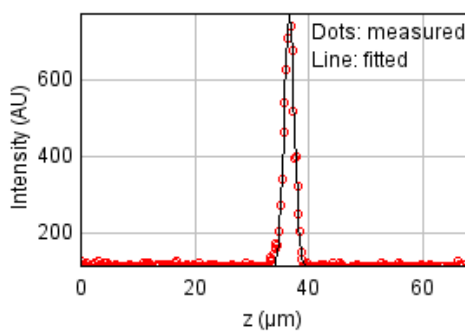
b = -0.051 px

c = 0.532 px

xc = 6.217 px

yc = 6.719 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31785.2475

Standard deviation: 10.17522

$R^2$ : 0.98925

Parameters:

a = 113.71423

b = 773.67356

c = 36.64632

d = 0.87361

## Bead 1886

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

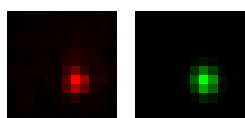
Coordinates : -101  $\mu\text{m}$  (x), -13.8  $\mu\text{m}$  (y), 36.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

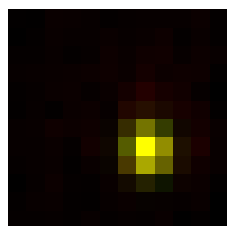
FWHM	Non corrected	Corrected	Theoretical
min	406 nm	423 nm	270 nm
max	472 nm	491 nm	270 nm
z	1.88 $\mu\text{m}$	1.88 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.86		
Theta	-82.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 578.422$  (brightness)

$B = 121.882$  (background)

$a = 0.811$  px

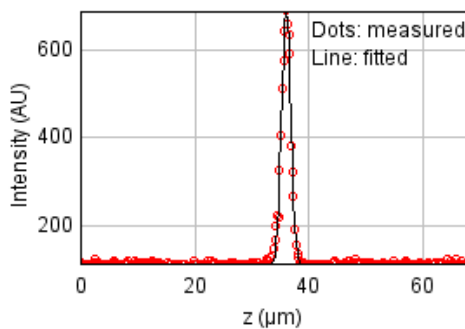
$b = -0.029$  px

$c = 0.607$  px

$x_c = 7.138$  px

$y_c = 7.160$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23563.3858

Standard deviation: 8.76092

$R^2 = 0.98846$

Parameters:

$a = 113.17661$

$b = 686.00036$

$c = 36.10568$

$d = 0.79668$

## Bead 1887

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

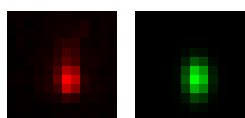
Coordinates : 117 um (x), -14.8 um (y), 36.2 um (z)

Corresponding bead : Not found

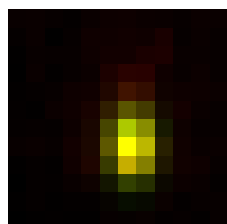
FWHM	Non corrected	Corrected	Theoretical
min	437 nm	455 nm	270 nm
max	658 nm	685 nm	270 nm
z	2.17 um	2.18 um	1.3 um
Asymmetry	0.665		
Theta	-88.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 580.131 (brightness)

B = 121.723 (background)

a = 0.702 px

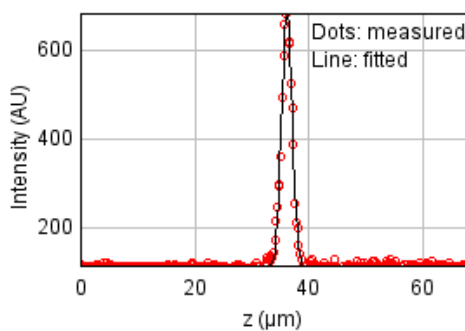
b = -0.007 px

c = 0.310 px

xc = 6.260 px

yc = 6.892 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23990.0453

Standard deviation: 8.83988

$R^2$ : 0.98974

Parameters:

a = 112.11781

b = 684.55550

c = 36.23298

d = 0.92081

## Bead 1888

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

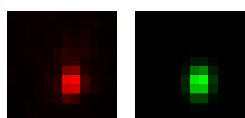
Coordinates : 51.4  $\mu\text{m}$  (x), -20.6  $\mu\text{m}$  (y), 36.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

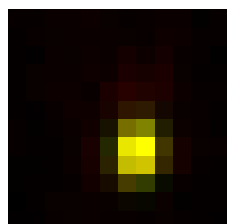
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	418 nm	270 nm
max	537 nm	559 nm	270 nm
z	1.96 $\mu\text{m}$	1.97 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.747		
Theta	85.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 834.373$  (brightness)

$B = 128.210$  (background)

$a = 0.831$  px

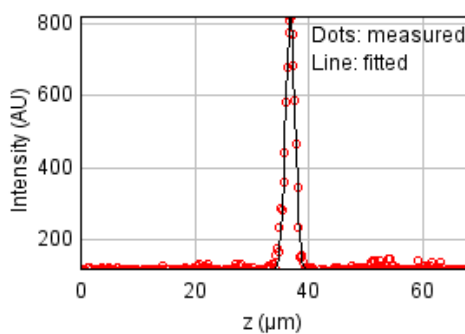
$b = 0.029$  px

$c = 0.468$  px

$x_c = 6.554$  px

$y_c = 7.245$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 38632.1358

Standard deviation: 11.21773

$R^2: 0.98811$

Parameters:

$a = 116.88484$

$b = 823.77048$

$c = 36.82715$

$d = 0.83417$



## Bead 1889

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

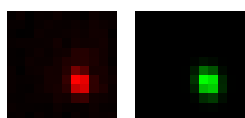
Coordinates : -86.4  $\mu\text{m}$  (x), -22.2  $\mu\text{m}$  (y), 36.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

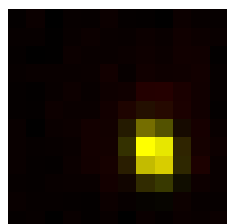
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	494 nm	515 nm	270 nm
z	2.1 $\mu\text{m}$	2.11 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.779		
Theta	-73.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 654.917$  (brightness)

$B = 124.875$  (background)

$a = 0.876$  px

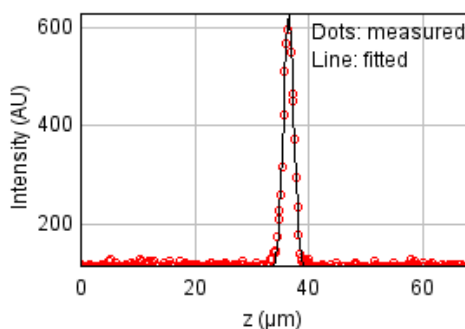
$b = -0.098$  px

$c = 0.578$  px

$x_c = 7.476$  px

$y_c = 7.309$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22850.1547

Standard deviation: 8.62731

$R^2 = 0.98755$

Parameters:

$a = 114.24004$

$b = 628.74414$

$c = 36.53497$

$d = 0.89132$

## Bead 1890

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

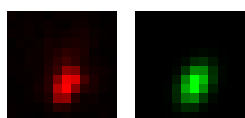
Coordinates : 17.4  $\mu\text{m}$  (x), -24.9  $\mu\text{m}$  (y), 36.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

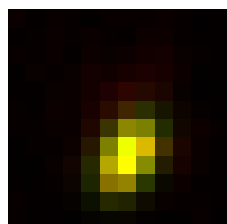
FWHM	Non corrected	Corrected	Theoretical
min	482 nm	502 nm	270 nm
max	729 nm	759 nm	270 nm
z	2.66 $\mu\text{m}$	2.67 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.661		
Theta	61.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 784.689$  (brightness)

$B = 131.833$  (background)

$a = 0.505$  px

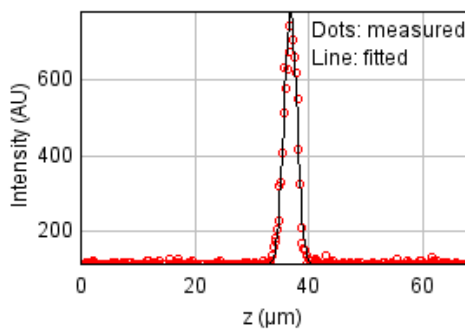
$b = 0.135$  px

$c = 0.325$  px

$x_c = 6.058$  px

$y_c = 7.459$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 65808.5459

Standard deviation: 14.64104

$R^2: 0.98307$

Parameters:

$a = 113.54911$

$b = 782.07537$

$c = 36.86090$

$d = 1.12798$

## Bead 1891

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

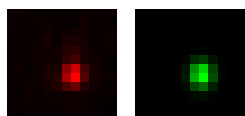
Coordinates : -72.2  $\mu\text{m}$  (x), -40.1  $\mu\text{m}$  (y), 36.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

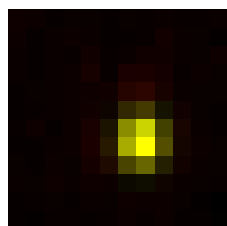
FWHM	Non corrected	Corrected	Theoretical
min	411 nm	428 nm	270 nm
max	492 nm	513 nm	270 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.834		
Theta	89.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 675.830 (brightness)

B = 122.378 (background)

a = 0.795 px

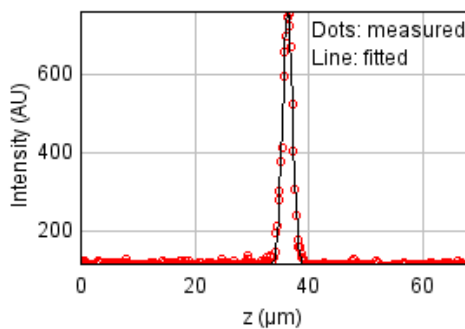
b = 0.001 px

c = 0.554 px

xc = 6.753 px

yc = 6.671 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29475.2685

Standard deviation: 9.79850

$R^2$ : 0.98961

Parameters:

a = 113.82352

b = 763.13916

c = 36.35480

d = 0.86567

## Bead 1892 (Rejected)

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

Coordinates : -96.1  $\mu\text{m}$  (x), -53.2  $\mu\text{m}$  (y), 36.3  $\mu\text{m}$  (z)

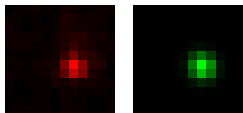
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

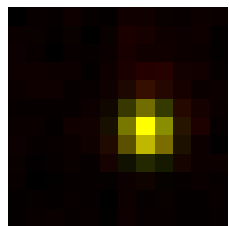
FWHM	Non corrected	Corrected	Theoretical
min	442 nm	461 nm	270 nm
max	481 nm	501 nm	270 nm
z	2.04 $\mu\text{m}$	2.05 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.92		
Theta	-70.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 478.275 (brightness)

B = 120.342 (background)

a = 0.674 px

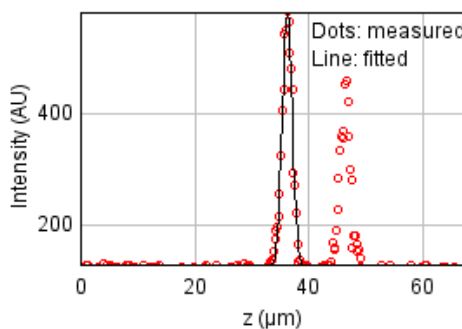
b = -0.033 px

c = 0.592 px

xc = 7.075 px

yc = 6.222 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 755423.325

Standard deviation: 49.60506

$R^2$ : 0.64989

Parameters:

a = 125.68147

b = 584.33596

c = 36.29949

d = 0.86668

## Bead 1893 (Rejected)

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

Coordinates : -81.0 um (x), -54.7 um (y), 33.1 um (z)

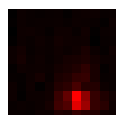
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
z	3.34 um	3.36 um	1.3 um
Asymmetry	0.0		
Theta	0.0°		

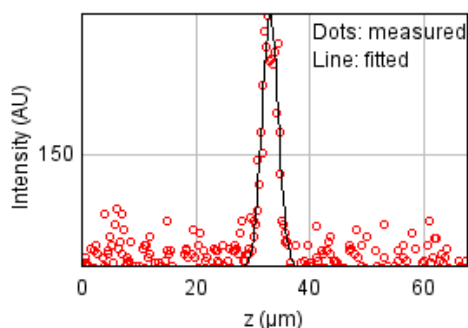
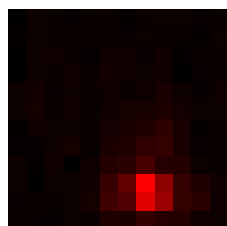
### XY profile & fitting parameters :

(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: 14212.5428

Standard deviation: 6.80404

R<sup>2</sup>: 0.83570

Parameters:

a = 113.79460

b = 196.44031

c = 33.12089

d = 1.41907

## Bead 1894

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

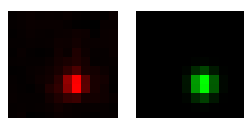
Coordinates : -74.8  $\mu\text{m}$  (x), -71.1  $\mu\text{m}$  (y), 36.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

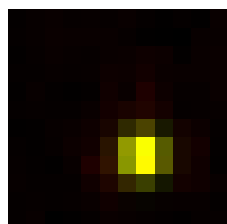
FWHM	Non corrected	Corrected	Theoretical
min	418 nm	435 nm	270 nm
max	445 nm	464 nm	270 nm
z	1.99 $\mu\text{m}$	2.0 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.938		
Theta	-89.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 698.146 (brightness)

B = 122.578 (background)

a = 0.770 px

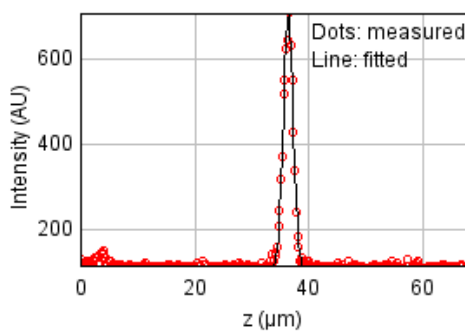
b = -0.001 px

c = 0.678 px

xc = 6.828 px

yc = 7.483 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29695.5764

Standard deviation: 9.83505

$R^2$ : 0.98709

Parameters:

a = 114.17681

b = 705.29482

c = 36.46690

d = 0.84387

## Bead 1895

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

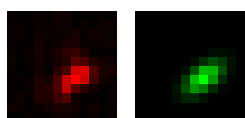
Coordinates : -130  $\mu\text{m}$  (x), -78.8  $\mu\text{m}$  (y), 37.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

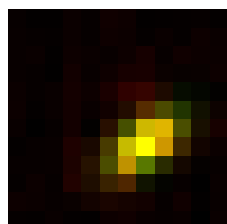
FWHM	Non corrected	Corrected	Theoretical
min	425 nm	442 nm	270 nm
max	785 nm	818 nm	270 nm
z	1.99 $\mu\text{m}$	2.0 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.541		
Theta	38.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 429.185$  (brightness)

$B = 118.831$  (background)

$a = 0.419$  px

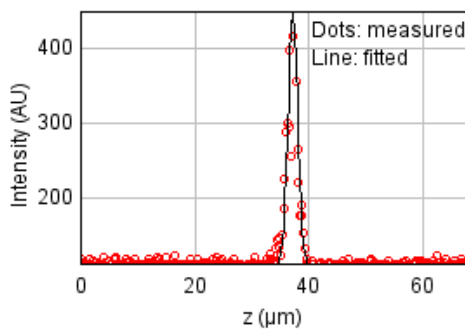
$b = 0.256$  px

$c = 0.543$  px

$x_c = 6.992$  px

$y_c = 6.808$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 116563.545

Standard deviation: 19.48553

$R^2: 0.86448$

Parameters:

$a = 111.87360$

$b = 449.87741$

$c = 37.27157$

$d = 0.84519$

## Bead 1896

Date : Mon Oct 17 13:52:53 PDT 2022

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

Frame size : 12 pixels

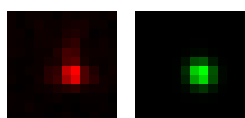
Coordinates : 83.7  $\mu\text{m}$  (x), -94.1  $\mu\text{m}$  (y), 36.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

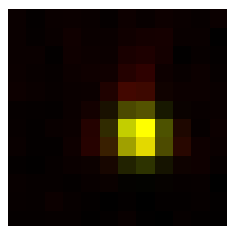
FWHM	Non corrected	Corrected	Theoretical
min	436 nm	454 nm	270 nm
max	467 nm	487 nm	270 nm
z	1.87 $\mu\text{m}$	1.88 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.932		
Theta	-56.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 555.390 (brightness)

B = 124.205 (background)

a = 0.678 px

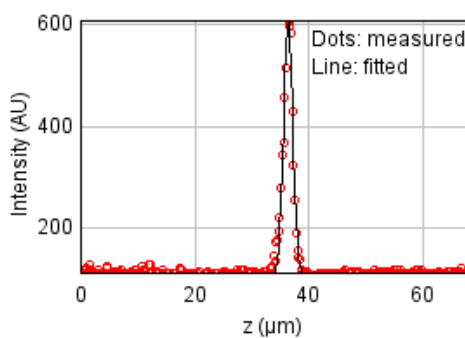
b = -0.043 px

c = 0.643 px

xc = 6.681 px

yc = 6.351 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31188.1874

Standard deviation: 10.07920

$R^2$ : 0.97969

Parameters:

a = 112.88738

b = 608.43387

c = 36.45278

d = 0.79323



## Bead 1897

Date : Mon Oct 17 13:52:54 PDT 2022

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

Frame size : 12 pixels

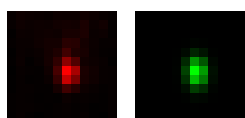
Coordinates : 8.19  $\mu\text{m}$  (x), 79.5  $\mu\text{m}$  (y), 37.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

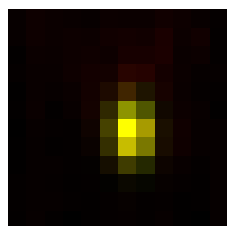
FWHM	Non corrected	Corrected	Theoretical
min	380 nm	396 nm	270 nm
max	563 nm	586 nm	270 nm
z	2.14 $\mu\text{m}$	2.15 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.675		
Theta	-87.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 807.217$  (brightness)

$B = 129.287$  (background)

$a = 0.927$  px

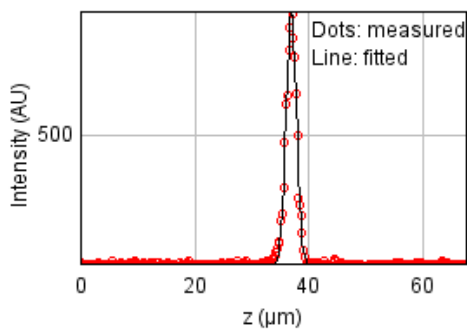
$b = -0.022$  px

$c = 0.424$  px

$x_c = 6.233$  px

$y_c = 6.154$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27690.0233

Standard deviation: 9.49713

$R^2 = 0.99305$

Parameters:

$a = 113.42680$

$b = 866.72607$

$c = 36.99792$

$d = 0.90803$

## Bead 1898

Date : Mon Oct 17 13:52:54 PDT 2022

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

Frame size : 12 pixels

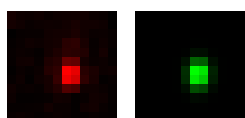
Coordinates : 13.1  $\mu\text{m}$  (x), 48.2  $\mu\text{m}$  (y), 36.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

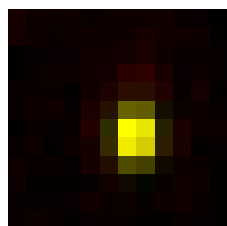
FWHM	Non corrected	Corrected	Theoretical
min	382 nm	397 nm	270 nm
max	509 nm	530 nm	270 nm
z	2.03 $\mu\text{m}$	2.04 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.749		
Theta	87.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 579.274$  (brightness)

$B = 125.178$  (background)

$a = 0.921$  px

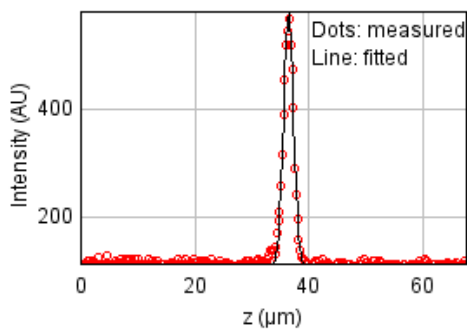
$b = 0.018$  px

$c = 0.518$  px

$x_c = 6.435$  px

$y_c = 6.398$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17560.5488

Standard deviation: 7.56310

$R^2: 0.98773$

Parameters:

$a = 115.41487$

$b = 576.83957$

$c = 36.51520$

$d = 0.86340$

## Bead 1899

Date : Mon Oct 17 13:52:54 PDT 2022

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

Frame size : 12 pixels

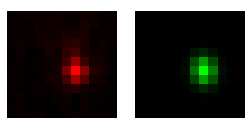
Coordinates : 66.7  $\mu\text{m}$  (x), 21.0  $\mu\text{m}$  (y), 36.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

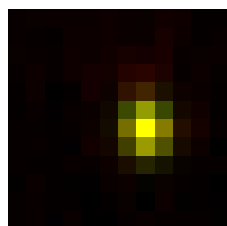
FWHM	Non corrected	Corrected	Theoretical
min	412 nm	429 nm	270 nm
max	524 nm	546 nm	270 nm
z	2.01 $\mu\text{m}$	2.02 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.787		
Theta	-83.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 489.761$  (brightness)

$B = 121.166$  (background)

$a = 0.786$  px

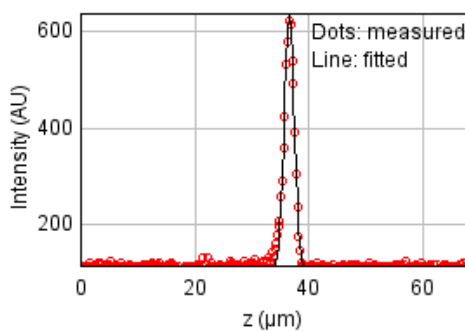
$b = -0.034$  px

$c = 0.492$  px

$x_c = 7.036$  px

$y_c = 5.996$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23779.3809

Standard deviation: 8.80098

$R^2 = 0.98711$

Parameters:

$a = 114.08787$

$b = 640.44400$

$c = 36.64593$

$d = 0.85406$

## Bead 1900 (Rejected)

Date : Mon Oct 17 13:52:54 PDT 2022

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

Frame size : 12 pixels

Coordinates : -4.41  $\mu\text{m}$  (x), 17.6  $\mu\text{m}$  (y), 15.1  $\mu\text{m}$  (z)

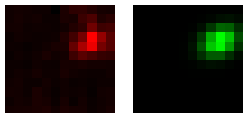
Corresponding bead : Not found

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

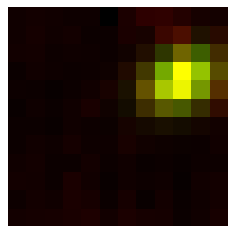
FWHM	Non corrected	Corrected	Theoretical
min	497 nm	517 nm	270 nm
max	680 nm	709 nm	270 nm
z	3.68 $\mu\text{m}$	3.7 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.73		
Theta	27.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 313.998 (brightness)

B = 116.232 (background)

a = 0.344 px

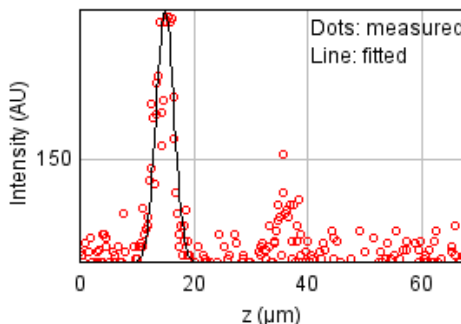
b = 0.104 px

c = 0.490 px

xc = 8.961 px

yc = 3.467 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23078.9083

Standard deviation: 8.67039

$R^2$ : 0.78174

Parameters:

a = 115.48727

b = 200.02930

c = 15.05731

d = 1.56337