

## Bead 501

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

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

Frame size : 12 pixels

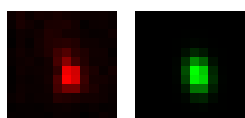
Coordinates : 56.8  $\mu\text{m}$  (x), -50.6  $\mu\text{m}$  (y), 10.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

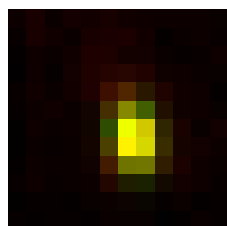
FWHM	Non corrected	Corrected	Theoretical
min	428 nm	445 nm	270 nm
max	639 nm	666 nm	270 nm
z	2.6 $\mu\text{m}$	2.61 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.669		
Theta	-80.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 436.818 (brightness)

B = 123.361 (background)

a = 0.723 px

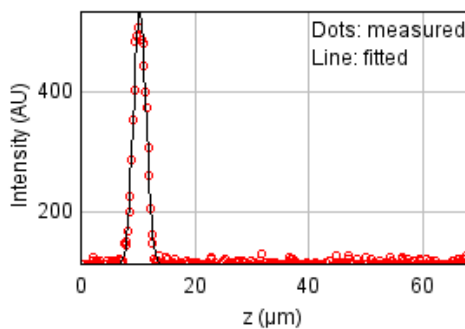
b = -0.065 px

c = 0.339 px

xc = 6.374 px

yc = 6.490 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20993.8370

Standard deviation: 8.26945

$R^2$ : 0.98606

Parameters:

a = 112.86131

b = 533.79623

c = 10.44173

d = 1.10398

## Bead 502

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

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

Frame size : 12 pixels

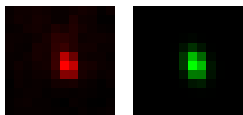
Coordinates : -15.5  $\mu\text{m}$  (x), 43.0  $\mu\text{m}$  (y), 10.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

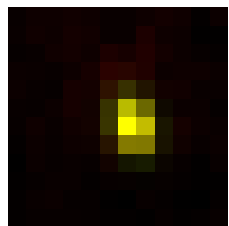
FWHM	Non corrected	Corrected	Theoretical
min	369 nm	385 nm	270 nm
max	529 nm	551 nm	270 nm
z	2.19 $\mu\text{m}$	2.2 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.698		
Theta	-73.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 439.035$  (brightness)

$B = 121.163$  (background)

$a = 0.941$  px

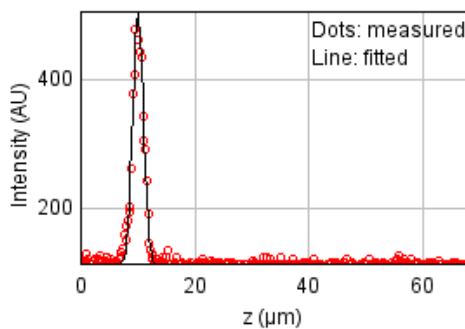
$b = -0.141$  px

$c = 0.522$  px

$x_c = 6.320$  px

$y_c = 5.884$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24747.1827

Standard deviation: 8.97829

$R^2: 0.97780$

Parameters:

$a = 113.68822$

$b = 504.38120$

$c = 10.14978$

$d = 0.93183$

## Bead 503

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

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

Frame size : 12 pixels

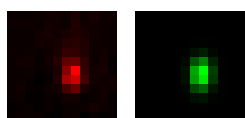
Coordinates : 40.2  $\mu\text{m}$  (x), 32.4  $\mu\text{m}$  (y), 10.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

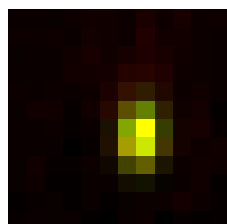
FWHM	Non corrected	Corrected	Theoretical
min	381 nm	396 nm	270 nm
max	583 nm	607 nm	270 nm
z	2.72 $\mu\text{m}$	2.73 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.653		
Theta	87.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 339.021 (brightness)

B = 121.734 (background)

a = 0.926 px

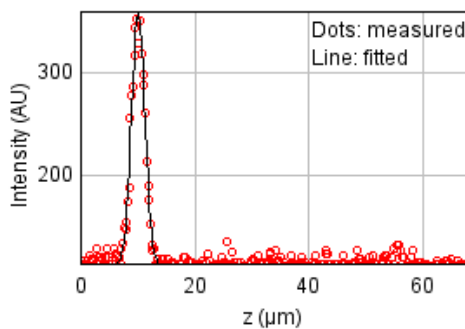
b = 0.020 px

c = 0.395 px

xc = 6.724 px

yc = 6.391 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15912.9725

Standard deviation: 7.19957

$R^2$ : 0.97046

Parameters:

a = 114.15753

b = 358.76454

c = 10.16907

d = 1.15410

## Bead 504

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

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

Frame size : 12 pixels

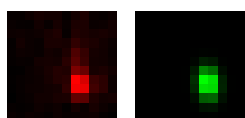
Coordinates : 30.2  $\mu\text{m}$  (x), 6.84  $\mu\text{m}$  (y), 10.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

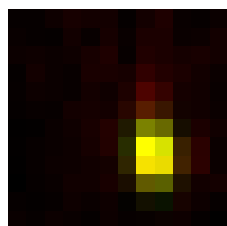
FWHM	Non corrected	Corrected	Theoretical
min	381 nm	397 nm	270 nm
max	583 nm	607 nm	270 nm
z	2.23 $\mu\text{m}$	2.24 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.653		
Theta	-85.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 421.383$  (brightness)

$B = 125.700$  (background)

$a = 0.922$  px

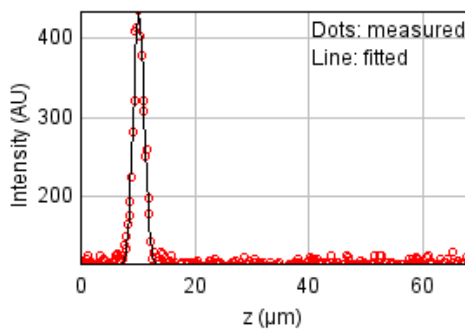
$b = -0.045$  px

$c = 0.398$  px

$x_c = 7.454$  px

$y_c = 7.400$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17102.1825

Standard deviation: 7.46374

$R^2: 0.97765$

Parameters:

$a = 113.75880$

$b = 434.94274$

$c = 10.27226$

$d = 0.94693$

## Bead 505

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

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

Frame size : 12 pixels

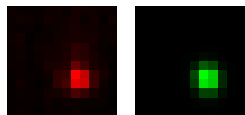
Coordinates : -31.8  $\mu\text{m}$  (x), -5.92  $\mu\text{m}$  (y), 10.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

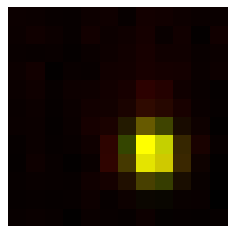
FWHM	Non corrected	Corrected	Theoretical
min	419 nm	437 nm	270 nm
max	485 nm	505 nm	270 nm
z	2.01 $\mu\text{m}$	2.02 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.865		
Theta	-77.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 527.041$  (brightness)

$B = 121.222$  (background)

$a = 0.755$  px

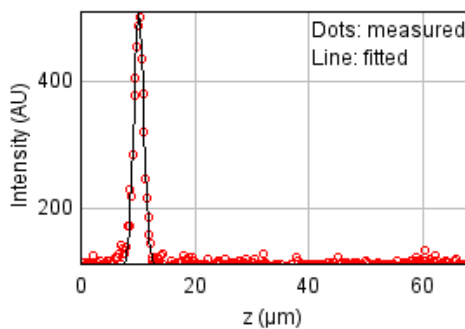
$b = -0.039$  px

$c = 0.579$  px

$x_c = 7.388$  px

$y_c = 7.429$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22093.6477

Standard deviation: 8.48329

$R^2: 0.97890$

Parameters:

$a = 113.98897$

$b = 509.19981$

$c = 10.27513$

$d = 0.85242$

## Bead 506 (Rejected)

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

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

Frame size : 12 pixels

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

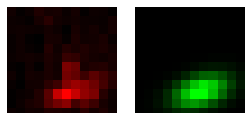
Corresponding bead : Not found

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

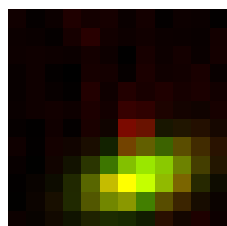
FWHM	Non corrected	Corrected	Theoretical
min	560 nm	583 nm	270 nm
max	1.04 $\mu\text{m}$	1.08 $\mu\text{m}$	270 nm
z	3.89 $\mu\text{m}$	3.91 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.539		
Theta	18.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 184.175 (brightness)

B = 122.216 (background)

a = 0.155 px

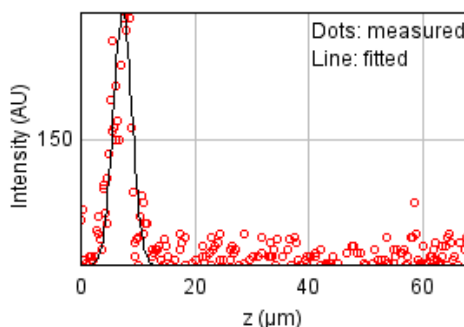
b = 0.091 px

c = 0.398 px

xc = 6.664 px

yc = 8.702 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18141.1911

Standard deviation: 7.68712

$R^2$ : 0.78441

Parameters:

a = 113.37467

b = 187.06172

c = 7.45150

d = 1.65156

## Bead 507

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

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

Frame size : 12 pixels

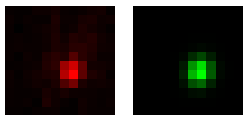
Coordinates : -87.8  $\mu\text{m}$  (x), -35.0  $\mu\text{m}$  (y), 10.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

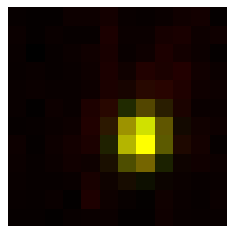
FWHM	Non corrected	Corrected	Theoretical
min	437 nm	455 nm	270 nm
max	510 nm	531 nm	270 nm
z	2.42 $\mu\text{m}$	2.43 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.857		
Theta	76.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 393.424 (brightness)

B = 120.334 (background)

a = 0.694 px

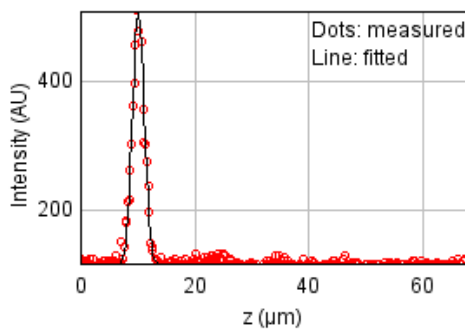
b = 0.042 px

c = 0.527 px

xc = 6.767 px

yc = 6.638 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33535.1042

Standard deviation: 10.45155

$R^2$ : 0.97359

Parameters:

a = 114.33289

b = 511.90276

c = 10.20486

d = 1.02597

## Bead 508 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -95.7  $\mu\text{m}$  (x), -66.6  $\mu\text{m}$  (y), 8.17  $\mu\text{m}$  (z)

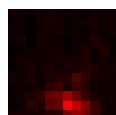
Corresponding bead : Not found

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	3.26 $\mu\text{m}$	3.27 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

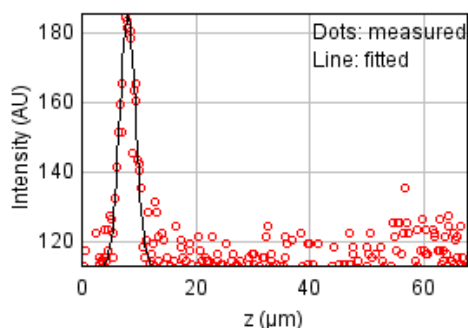
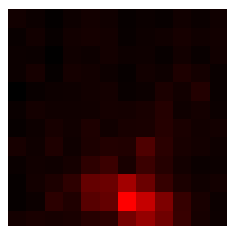
### XY profile & fitting parameters :

(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: 14196.2048

Standard deviation: 6.80013

R<sup>2</sup>: 0.79272

Parameters:

a = 113.14118

b = 185.59133

c = 8.17009

d = 1.38406



## Bead 509 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 132  $\mu\text{m}$  (x), -86.2  $\mu\text{m}$  (y), 10.3  $\mu\text{m}$  (z)

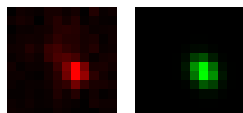
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

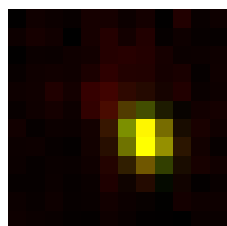
FWHM	Non corrected	Corrected	Theoretical
min	419 nm	436 nm	270 nm
max	531 nm	553 nm	270 nm
z	2.67 $\mu\text{m}$	2.69 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.789		
Theta	-58.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 331.854 (brightness)

B = 122.283 (background)

a = 0.683 px

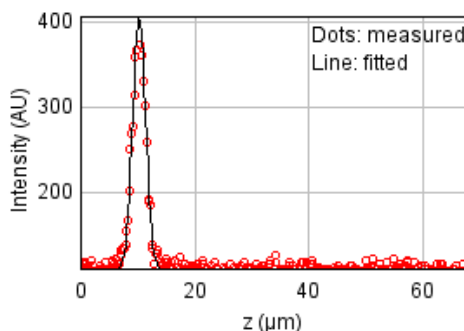
b = -0.129 px

c = 0.557 px

xc = 6.994 px

yc = 6.531 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20365.8756

Standard deviation: 8.14484

$R^2$ : 0.97351

Parameters:

a = 110.83171

b = 405.72368

c = 10.33755

d = 1.13569

## Bead 510 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 61.0  $\mu\text{m}$  (x), -86.6  $\mu\text{m}$  (y), 10.2  $\mu\text{m}$  (z)

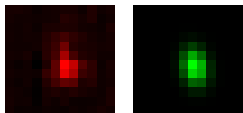
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

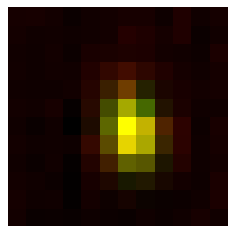
FWHM	Non corrected	Corrected	Theoretical
min	456 nm	475 nm	270 nm
max	681 nm	709 nm	270 nm
z	2.38 $\mu\text{m}$	2.39 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.67		
Theta	-80.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.924$



Parameters:

A = 312.533 (brightness)

B = 120.750 (background)

a = 0.634 px

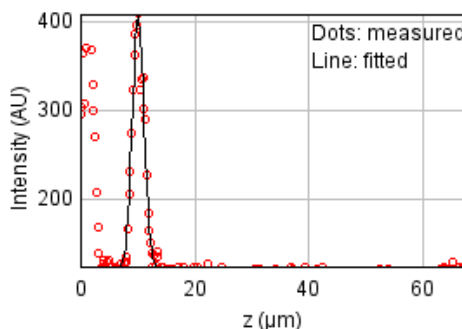
b = -0.060 px

c = 0.300 px

xc = 6.241 px

yc = 6.240 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 723650.937

Standard deviation: 48.55069

$R^2$ : 0.46135

Parameters:

a = 124.37541

b = 407.64867

c = 10.16625

d = 1.01234

## Bead 511

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

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

Frame size : 12 pixels

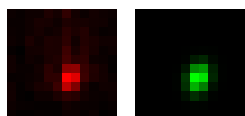
Coordinates : 120  $\mu\text{m}$  (x), 95.4  $\mu\text{m}$  (y), 10.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

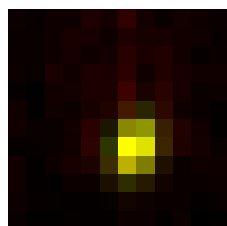
FWHM	Non corrected	Corrected	Theoretical
min	389 nm	406 nm	270 nm
max	536 nm	558 nm	270 nm
z	2.07 $\mu\text{m}$	2.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.727		
Theta	73.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 349.271$  (brightness)

$B = 121.318$  (background)

$a = 0.851$  px

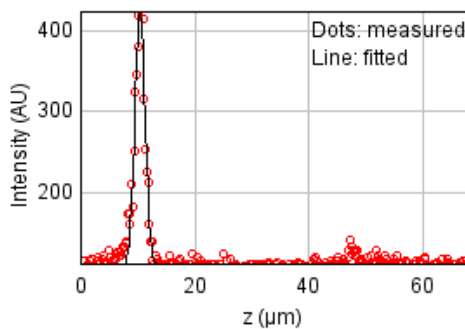
$b = 0.114$  px

$c = 0.502$  px

$x_c = 6.424$  px

$y_c = 7.039$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28039.1774

Standard deviation: 9.55682

$R^2: 0.95879$

Parameters:

$a = 112.52506$

$b = 423.58195$

$c = 10.48770$

$d = 0.87703$

## Bead 512

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

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

Frame size : 12 pixels

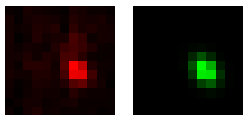
Coordinates : -114  $\mu\text{m}$  (x), 81.6  $\mu\text{m}$  (y), 10.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

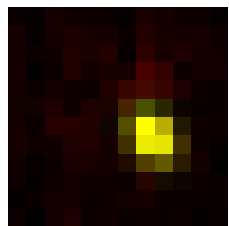
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	520 nm	541 nm	270 nm
z	2.55 $\mu\text{m}$	2.56 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.741		
Theta	-57.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 326.967$  (brightness)

$B = 121.070$  (background)

$a = 0.788$  px

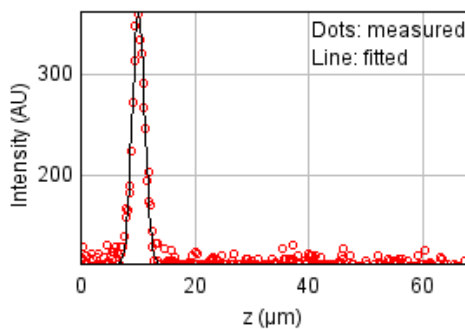
$b = -0.185$  px

$c = 0.614$  px

$x_c = 7.378$  px

$y_c = 6.546$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18866.6638

Standard deviation: 7.83932

$R^2: 0.96490$

Parameters:

$a = 112.33420$

$b = 363.50146$

$c = 10.21902$

$d = 1.08153$

## Bead 513 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 58.5  $\mu\text{m}$  (x), 67.8  $\mu\text{m}$  (y), 13.2  $\mu\text{m}$  (z)

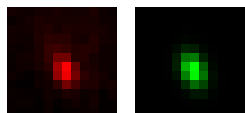
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

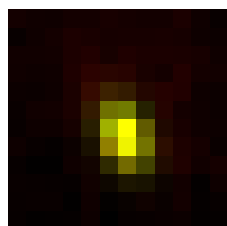
FWHM	Non corrected	Corrected	Theoretical
min	422 nm	440 nm	270 nm
max	632 nm	659 nm	270 nm
z	5.27 $\mu\text{m}$	5.29 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.668		
Theta	-68.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 424.020 (brightness)

B = 129.218 (background)

a = 0.699 px

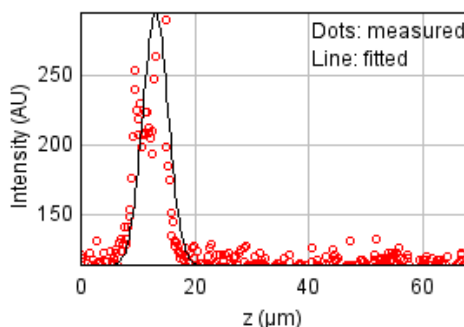
b = -0.140 px

c = 0.390 px

xc = 5.836 px

yc = 6.378 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 145843.428

Standard deviation: 21.79587

$R^2$ : 0.78091

Parameters:

a = 114.15781

b = 294.93118

c = 13.20611

d = 2.23597

## Bead 514

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

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

Frame size : 12 pixels

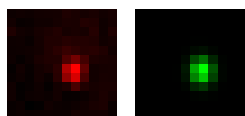
Coordinates : 101 um (x), 60.8 um (y), 10.4 um (z)

Corresponding bead : Not found

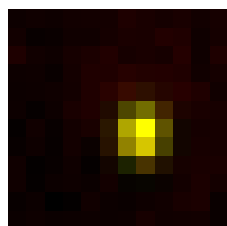
FWHM	Non corrected	Corrected	Theoretical
min	415 nm	433 nm	270 nm
max	495 nm	515 nm	270 nm
z	2.1 um	2.11 um	1.3 um
Asymmetry	0.84		
Theta	89.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 306.191 (brightness)

B = 120.022 (background)

a = 0.778 px

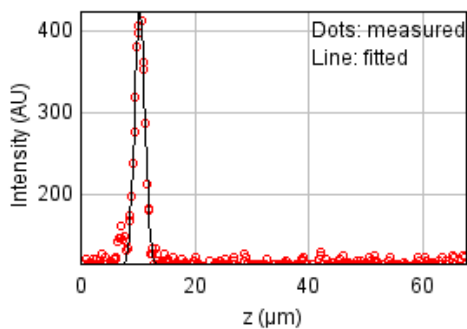
b = 0.004 px

c = 0.549 px

xc = 6.775 px

yc = 6.272 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23559.3089

Standard deviation: 8.76016

$R^2$ : 0.96603

Parameters:

a = 114.12084

b = 426.70080

c = 10.44406

d = 0.89283

## Bead 515

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

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

Frame size : 12 pixels

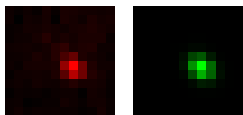
Coordinates : -129  $\mu\text{m}$  (x), 55.7  $\mu\text{m}$  (y), 10.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

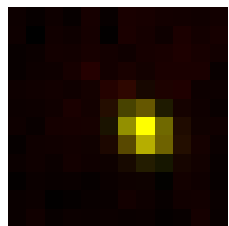
FWHM	Non corrected	Corrected	Theoretical
min	390 nm	406 nm	270 nm
max	483 nm	503 nm	270 nm
z	2.18 $\mu\text{m}$	2.18 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.806		
Theta	-44.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 295.347$  (brightness)

$B = 118.393$  (background)

$a = 0.727$  px

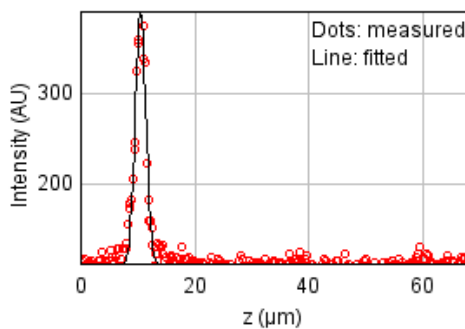
$b = -0.155$  px

$c = 0.732$  px

$x_c = 6.941$  px

$y_c = 6.227$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25694.5280

Standard deviation: 9.14853

$R^2: 0.95499$

Parameters:

$a = 112.93507$

$b = 390.37940$

$c = 10.58647$

$d = 0.92372$

## Bead 516

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

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

Frame size : 12 pixels

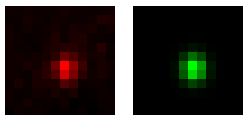
Coordinates : -113  $\mu\text{m}$  (x), 16.5  $\mu\text{m}$  (y), 10.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

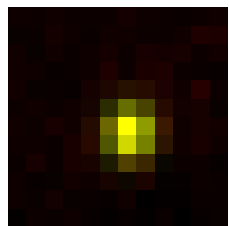
FWHM	Non corrected	Corrected	Theoretical
min	438 nm	456 nm	270 nm
max	513 nm	535 nm	270 nm
z	3.22 $\mu\text{m}$	3.23 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.854		
Theta	88.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 278.779$  (brightness)

$B = 118.975$  (background)

$a = 0.698$  px

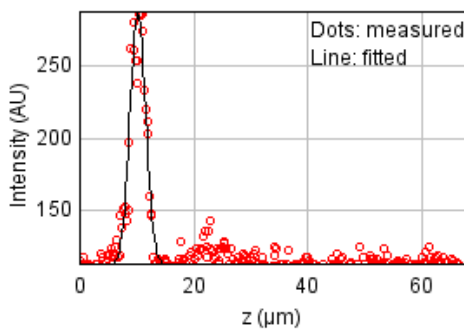
$b = 0.004$  px

$c = 0.509$  px

$xc = 6.144$  px

$yc = 6.329$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31863.4696

Standard deviation: 10.18773

$R^2: 0.90688$

Parameters:

$a = 113.05451$

$b = 287.31728$

$c = 10.29046$

$d = 1.36600$



## Bead 517

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

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

Frame size : 12 pixels

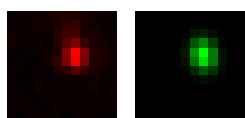
Coordinates : 15.8  $\mu\text{m}$  (x), 15.7  $\mu\text{m}$  (y), 11.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

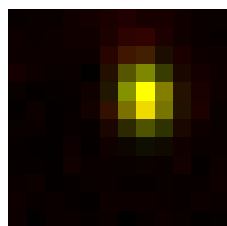
FWHM	Non corrected	Corrected	Theoretical
min	456 nm	475 nm	270 nm
max	586 nm	611 nm	270 nm
z	2.11 $\mu\text{m}$	2.11 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.777		
Theta	-79.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 400.752 (brightness)

B = 121.852 (background)

a = 0.638 px

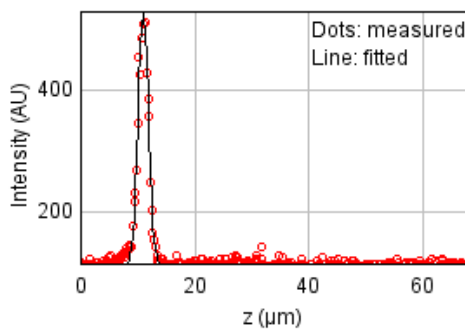
b = -0.046 px

c = 0.399 px

xc = 6.961 px

yc = 4.296 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25438.1503

Standard deviation: 9.10277

$R^2$ : 0.97917

Parameters:

a = 113.96148

b = 531.27247

c = 11.07112

d = 0.89424

## Bead 518 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 145 um (x), 6.92 um (y), 9.98 um (z)

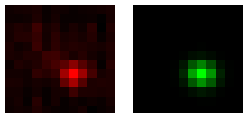
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

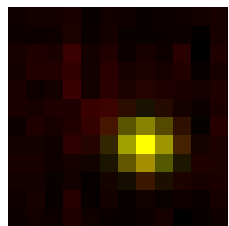
FWHM	Non corrected	Corrected	Theoretical
min	461 nm	481 nm	270 nm
max	523 nm	544 nm	270 nm
z	2.83 um	2.84 um	1.3 um
Asymmetry	0.883		
Theta	-9.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.870$



Parameters:

A = 155.804 (brightness)

B = 117.066 (background)

a = 0.495 px

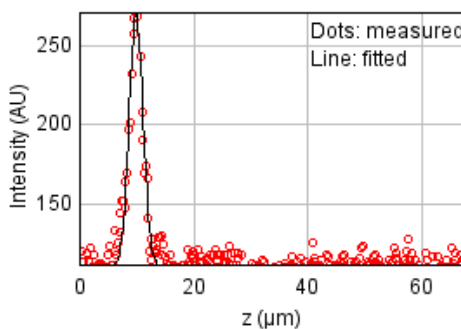
b = -0.023 px

c = 0.627 px

xc = 6.970 px

yc = 7.042 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16127.3104

Standard deviation: 7.24789

$R^2$ : 0.93470

Parameters:

a = 111.38896

b = 270.81815

c = 9.98215

d = 1.20297

## Bead 519

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

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

Frame size : 12 pixels

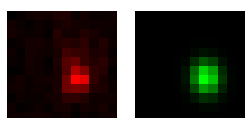
Coordinates : 66.5  $\mu\text{m}$  (x), -11.1  $\mu\text{m}$  (y), 10.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

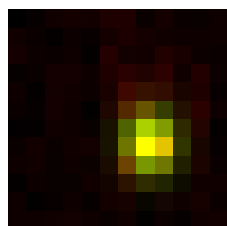
FWHM	Non corrected	Corrected	Theoretical
min	506 nm	527 nm	270 nm
max	612 nm	638 nm	270 nm
z	2.48 $\mu\text{m}$	2.5 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.827		
Theta	-85.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 222.045 (brightness)

B = 116.266 (background)

a = 0.522 px

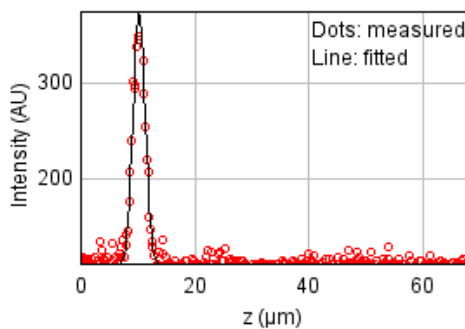
b = -0.013 px

c = 0.359 px

xc = 7.238 px

yc = 6.780 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21290.9836

Standard deviation: 8.32777

$R^2$ : 0.96267

Parameters:

a = 112.28805

b = 373.72122

c = 10.33331

d = 1.05525

## Bead 520 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 31.0  $\mu\text{m}$  (x), -24.7  $\mu\text{m}$  (y), 7.58  $\mu\text{m}$  (z)

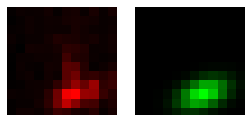
Corresponding bead : Not found

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

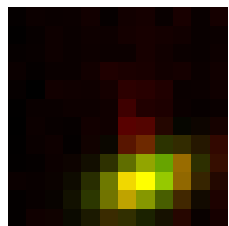
FWHM	Non corrected	Corrected	Theoretical
min	508 nm	529 nm	270 nm
max	914 nm	952 nm	270 nm
z	3.32 $\mu\text{m}$	3.33 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.556		
Theta	20.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 277.261$  (brightness)

$B = 121.565$  (background)

$a = 0.204$  px

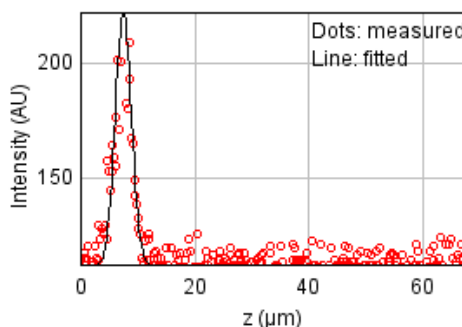
$b = 0.117$  px

$c = 0.477$  px

$xc = 6.922$  px

$yc = 8.977$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18000.9995

Standard deviation: 7.65736

$R^2: 0.87622$

Parameters:

$a = 112.37012$

$b = 222.41786$

$c = 7.57824$

$d = 1.41005$

## Bead 521 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 65.1  $\mu\text{m}$  (x), -29.0  $\mu\text{m}$  (y), 7.67  $\mu\text{m}$  (z)

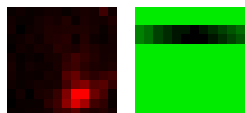
Corresponding bead : Not found

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

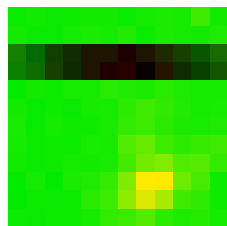
FWHM	Non corrected	Corrected	Theoretical
min	132 nm	138 nm	270 nm
max	2.45 $\mu\text{m}$	2.55 $\mu\text{m}$	270 nm
z	3.29 $\mu\text{m}$	3.3 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.054		
Theta	-0.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.047$



Parameters:

A = -71.878 (brightness)

B = 133.760 (background)

a = -0.022 px

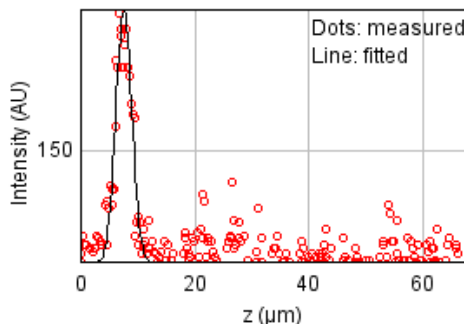
b = -0.007 px

c = 7.655 px

xc = 5.931 px

yc = 2.504 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15192.9731

Standard deviation: 7.03481

$R^2$ : 0.81825

Parameters:

a = 114.14269

b = 195.10385

c = 7.66560

d = 1.39742

## Bead 522 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -94.4  $\mu\text{m}$  (x), -38.7  $\mu\text{m}$  (y), 7.9  $\mu\text{m}$  (z)

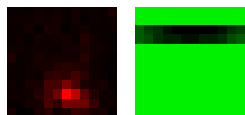
Corresponding bead : Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	131 nm	136 nm	270 nm
max	3.21 $\mu\text{m}$	3.34 $\mu\text{m}$	270 nm
z	3.83 $\mu\text{m}$	3.84 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.041		
Theta	0.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.037$



Parameters:

A = -109.871 (brightness)

B = 135.827 (background)

a = -0.013 px

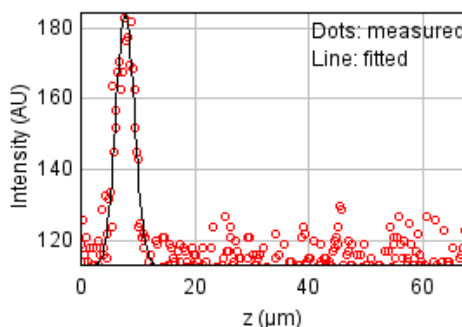
b = 0.008 px

c = 7.857 px

xc = 5.751 px

yc = 2.493 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13526.2498

Standard deviation: 6.63773

$R^2$ : 0.81921

Parameters:

a = 112.88280

b = 184.42340

c = 7.89799

d = 1.62443

## Bead 523 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 123  $\mu\text{m}$  (x), -51.3  $\mu\text{m}$  (y), 10.0  $\mu\text{m}$  (z)

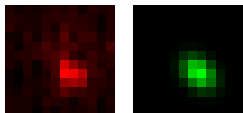
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

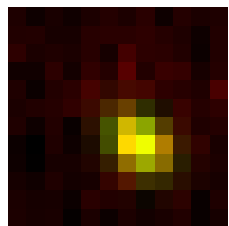
FWHM	Non corrected	Corrected	Theoretical
min	489 nm	510 nm	270 nm
max	672 nm	700 nm	270 nm
z	2.7 $\mu\text{m}$	2.71 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.728		
Theta	-45.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.839$



Parameters:

A = 149.218 (brightness)

B = 117.634 (background)

a = 0.432 px

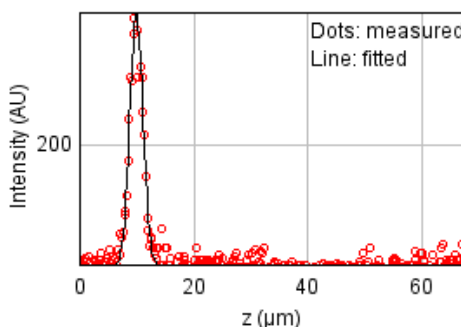
b = -0.132 px

c = 0.425 px

xc = 6.655 px

yc = 6.907 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14921.5310

Standard deviation: 6.97168

$R^2$ : 0.95382

Parameters:

a = 110.87572

b = 299.34454

c = 10.03470

d = 1.14572

## Bead 524

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

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

Frame size : 12 pixels

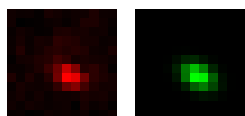
Coordinates : -161  $\mu\text{m}$  (x), 87.9  $\mu\text{m}$  (y), 10.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

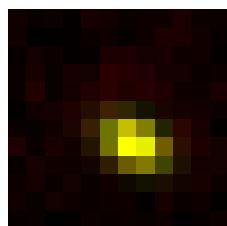
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	440 nm	270 nm
max	625 nm	651 nm	270 nm
z	2.89 $\mu\text{m}$	2.9 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.676		
Theta	-28.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 235.628 (brightness)

B = 115.702 (background)

a = 0.438 px

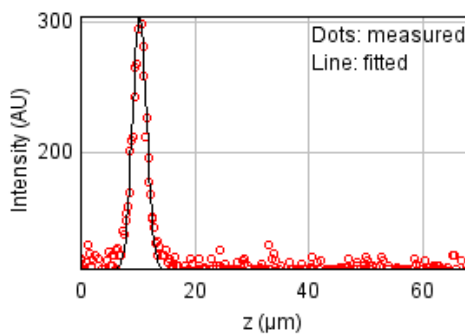
b = -0.172 px

c = 0.657 px

xc = 6.354 px

yc = 6.816 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16766.2237

Standard deviation: 7.39007

$R^2$ : 0.95371

Parameters:

a = 111.21044

b = 304.45760

c = 10.40647

d = 1.22680



## Bead 525

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

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

Frame size : 12 pixels

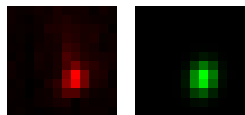
Coordinates : 66.0  $\mu\text{m}$  (x), 71.5  $\mu\text{m}$  (y), 11.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

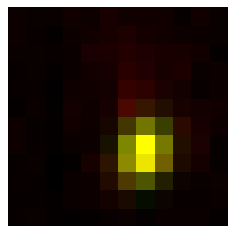
FWHM	Non corrected	Corrected	Theoretical
min	436 nm	454 nm	270 nm
max	561 nm	585 nm	270 nm
z	1.78 $\mu\text{m}$	1.78 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.777		
Theta	76.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 477.898$  (brightness)

$B = 126.804$  (background)

$a = 0.691$  px

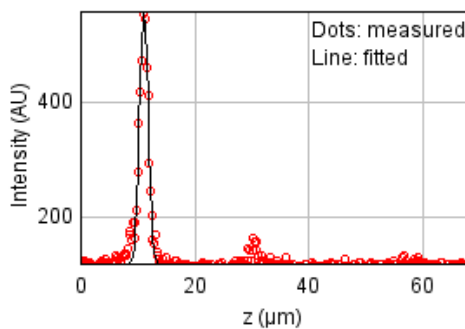
$b = 0.063$  px

$c = 0.441$  px

$x_c = 6.926$  px

$y_c = 7.389$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 43445.2977

Standard deviation: 11.89603

$R^2: 0.96318$

Parameters:

$a = 116.78558$

$b = 557.93774$

$c = 11.17185$

$d = 0.75463$

## Bead 526 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 25.3  $\mu\text{m}$  (x), 60.9  $\mu\text{m}$  (y), 8.89  $\mu\text{m}$  (z)

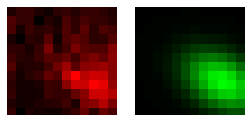
Corresponding bead : Not found

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

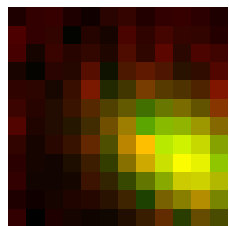
FWHM	Non corrected	Corrected	Theoretical
min	955 nm	994 nm	270 nm
max	1.51 $\mu\text{m}$	1.57 $\mu\text{m}$	270 nm
z	1.87 $\mu\text{m}$	1.88 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.633		
Theta	-29.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 70.519 (brightness)

B = 116.392 (background)

a = 0.080 px

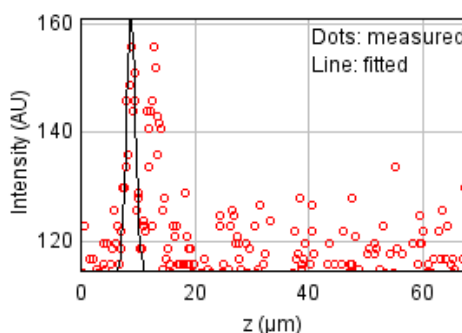
b = -0.038 px

c = 0.126 px

xc = 9.074 px

yc = 7.667 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22943.2867

Standard deviation: 8.64487

$R^2$ : 0.36676

Parameters:

a = 114.59379

b = 161.15285

c = 8.88743

d = 0.79383

## Bead 527

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

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

Frame size : 12 pixels

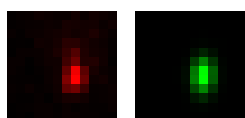
Coordinates : 25.5  $\mu\text{m}$  (x), 61.2  $\mu\text{m}$  (y), 10.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

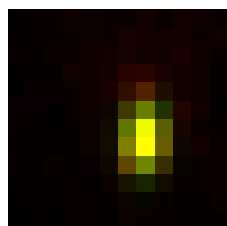
FWHM	Non corrected	Corrected	Theoretical
min	394 nm	410 nm	270 nm
max	634 nm	661 nm	270 nm
z	2.13 $\mu\text{m}$	2.14 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.621		
Theta	87.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 527.276$  (brightness)

$B = 125.244$  (background)

$a = 0.864$  px

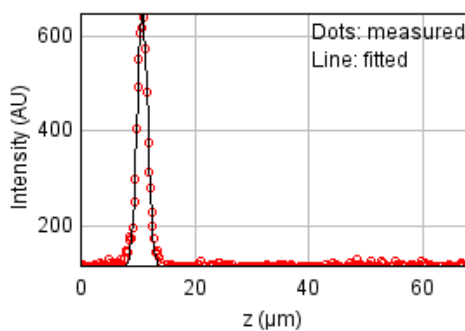
$b = 0.025$  px

$c = 0.335$  px

$x_c = 6.922$  px

$y_c = 6.532$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25541.6598

Standard deviation: 9.12127

$R^2 = 0.98739$

Parameters:

$a = 113.64193$

$b = 650.67099$

$c = 10.91370$

$d = 0.90333$

## Bead 528

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

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

Frame size : 12 pixels

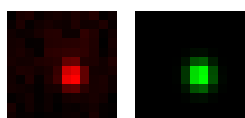
Coordinates : -114  $\mu\text{m}$  (x), 56.5  $\mu\text{m}$  (y), 10.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

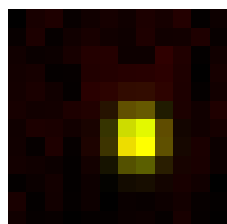
FWHM	Non corrected	Corrected	Theoretical
min	453 nm	472 nm	270 nm
max	517 nm	539 nm	270 nm
z	2.88 $\mu\text{m}$	2.89 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.876		
Theta	-86.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 238.092$  (brightness)

$B = 119.708$  (background)

$a = 0.653$  px

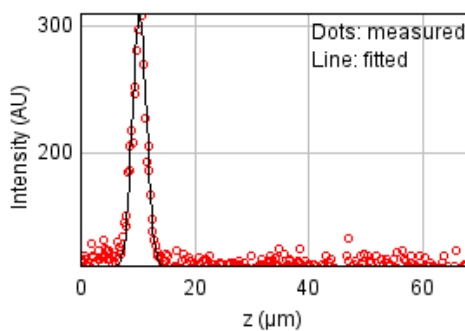
$b = -0.009$  px

$c = 0.502$  px

$x_c = 6.603$  px

$y_c = 6.513$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20179.6094

Standard deviation: 8.10750

$R^2: 0.94641$

Parameters:

$a = 112.54315$

$b = 309.12811$

$c = 10.39192$

$d = 1.22272$

## Bead 529

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

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

Frame size : 12 pixels

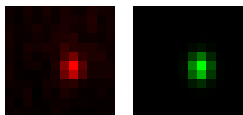
Coordinates : 95.9  $\mu\text{m}$  (x), 55.9  $\mu\text{m}$  (y), 10.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

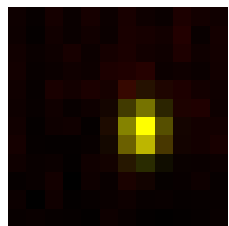
FWHM	Non corrected	Corrected	Theoretical
min	382 nm	398 nm	270 nm
max	488 nm	508 nm	270 nm
z	2.08 $\mu\text{m}$	2.09 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.784		
Theta	88.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 293.700$  (brightness)

$B = 117.966$  (background)

$a = 0.918$  px

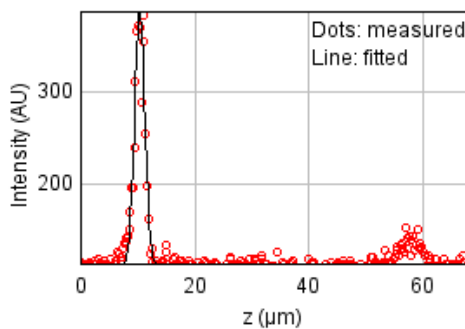
$b = 0.009$  px

$c = 0.565$  px

$x_c = 6.859$  px

$y_c = 6.205$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 39804.3373

Standard deviation: 11.38665

$R^2: 0.92660$

Parameters:

$a = 114.89446$

$b = 386.67773$

$c = 10.43303$

$d = 0.88532$

## Bead 530

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

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

Frame size : 12 pixels

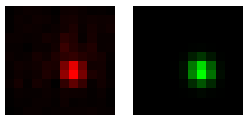
Coordinates : -91.1  $\mu\text{m}$  (x), 27.7  $\mu\text{m}$  (y), 10.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

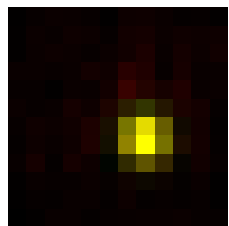
FWHM	Non corrected	Corrected	Theoretical
min	425 nm	443 nm	270 nm
max	463 nm	482 nm	270 nm
z	2.27 $\mu\text{m}$	2.28 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.918		
Theta	-78.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 404.155$  (brightness)

$B = 119.932$  (background)

$a = 0.738$  px

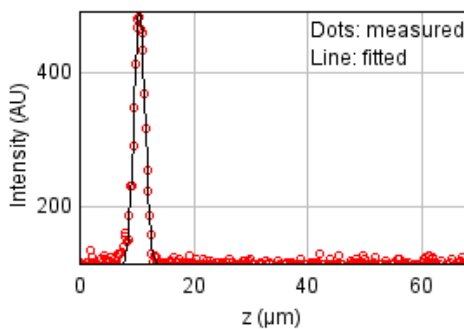
$b = -0.022$  px

$c = 0.630$  px

$x_c = 6.939$  px

$y_c = 6.618$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19115.1154

Standard deviation: 7.89077

$R^2: 0.98207$

Parameters:

$a = 113.99155$

$b = 490.84756$

$c = 10.58330$

$d = 0.96362$

## Bead 531 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -98.2  $\mu\text{m}$  (x), -8.56  $\mu\text{m}$  (y), 10.8  $\mu\text{m}$  (z)

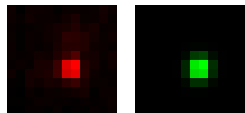
Corresponding bead : Not found

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

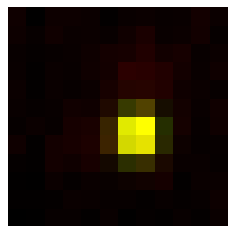
FWHM	Non corrected	Corrected	Theoretical
min	388 nm	404 nm	270 nm
max	428 nm	446 nm	270 nm
z	4.38 $\mu\text{m}$	4.4 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.906		
Theta	82.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 490.585 (brightness)

B = 121.959 (background)

a = 0.891 px

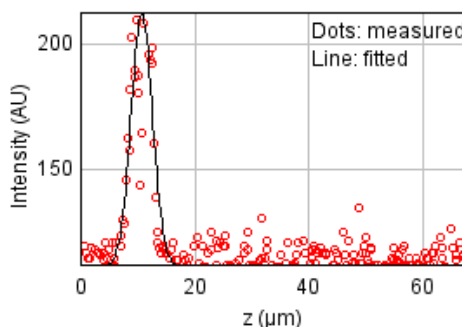
b = 0.021 px

c = 0.736 px

xc = 6.538 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: 30093.5130

Standard deviation: 9.90073

$R^2$ : 0.82051

Parameters:

a = 111.71141

b = 212.53200

c = 10.79970

d = 1.86109

## Bead 532

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

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

Frame size : 12 pixels

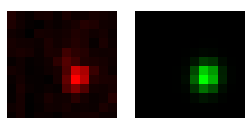
Coordinates : 100  $\mu\text{m}$  (x), -31.7  $\mu\text{m}$  (y), 10.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

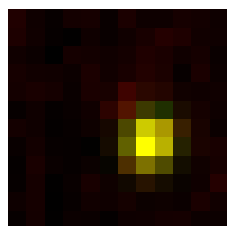
FWHM	Non corrected	Corrected	Theoretical
min	447 nm	465 nm	270 nm
max	513 nm	535 nm	270 nm
z	2.55 $\mu\text{m}$	2.56 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.87		
Theta	77.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 206.331 (brightness)

B = 115.398 (background)

a = 0.665 px

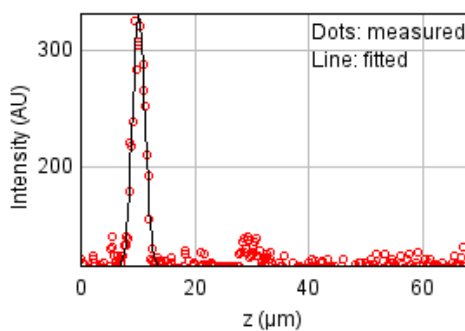
b = 0.033 px

c = 0.516 px

xc = 7.244 px

yc = 6.704 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25311.1408

Standard deviation: 9.08002

$R^2$ : 0.93959

Parameters:

a = 113.89250

b = 332.56400

c = 10.26665

d = 1.08333



## Bead 533

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

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

Frame size : 12 pixels

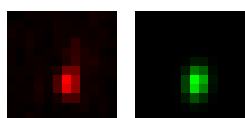
Coordinates : -93.9  $\mu\text{m}$  (x), -44.6  $\mu\text{m}$  (y), 10.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

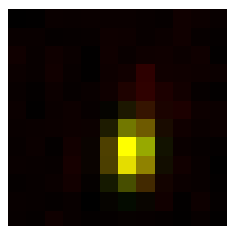
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	402 nm	270 nm
max	553 nm	576 nm	270 nm
z	2.49 $\mu\text{m}$	2.5 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.697		
Theta	82.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 445.918 (brightness)

B = 121.687 (background)

a = 0.893 px

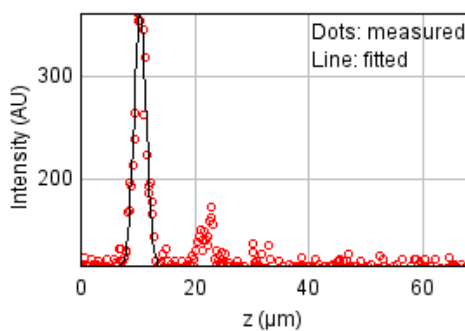
b = 0.060 px

c = 0.446 px

xc = 6.248 px

yc = 7.307 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 46400.1887

Standard deviation: 12.29393

$R^2$ : 0.91328

Parameters:

a = 114.85414

b = 361.18632

c = 10.51389

d = 1.05817

## Bead 534

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

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

Frame size : 12 pixels

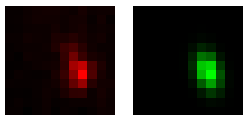
Coordinates : 60.4  $\mu\text{m}$  (x), -52.4  $\mu\text{m}$  (y), 10.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

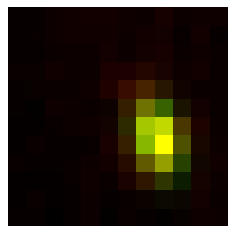
FWHM	Non corrected	Corrected	Theoretical
min	419 nm	436 nm	270 nm
max	688 nm	717 nm	270 nm
z	2.5 $\mu\text{m}$	2.51 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.608		
Theta	-74.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 486.787$  (brightness)

$B = 123.699$  (background)

$a = 0.732$  px

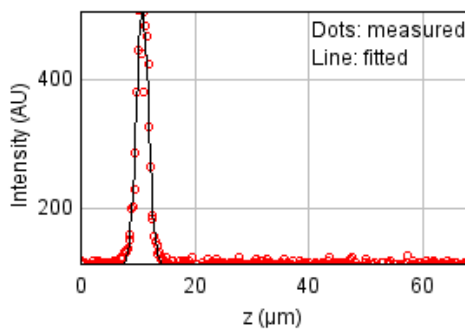
$b = -0.122$  px

$c = 0.317$  px

$x_c = 7.665$  px

$y_c = 6.626$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 46485.0380

Standard deviation: 12.30516

$R^2: 0.96434$

Parameters:

$a = 112.98988$

$b = 507.46657$

$c = 10.91922$

$d = 1.06175$

## Bead 535 (Rejected)

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

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

Frame size : 12 pixels

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

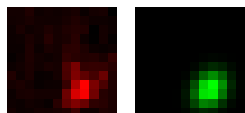
Corresponding bead : Not found

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

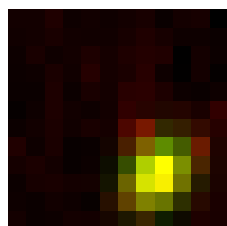
FWHM	Non corrected	Corrected	Theoretical
min	551 nm	574 nm	270 nm
max	697 nm	726 nm	270 nm
z	3.53 $\mu\text{m}$	3.54 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.791		
Theta	55.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.869$



Parameters:

A = 195.733 (brightness)

B = 118.720 (background)

a = 0.387 px

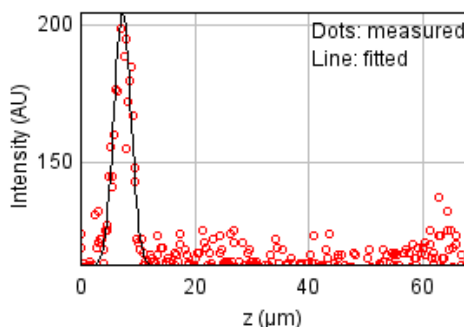
b = 0.077 px

c = 0.330 px

xc = 7.665 px

yc = 8.481 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18591.5716

Standard deviation: 7.78196

$R^2$ : 0.83605

Parameters:

a = 112.16644

b = 204.49198

c = 7.42147

d = 1.49794

## Bead 536

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

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

Frame size : 12 pixels

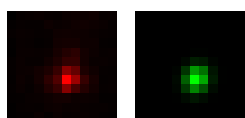
Coordinates : -58.5  $\mu\text{m}$  (x), -56.9  $\mu\text{m}$  (y), 11.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

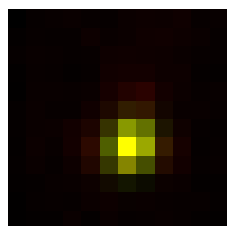
FWHM	Non corrected	Corrected	Theoretical
min	430 nm	448 nm	270 nm
max	489 nm	509 nm	270 nm
z	2.05 $\mu\text{m}$	2.06 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.88		
Theta	68.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 703.277$  (brightness)

$B = 128.642$  (background)

$a = 0.702$  px

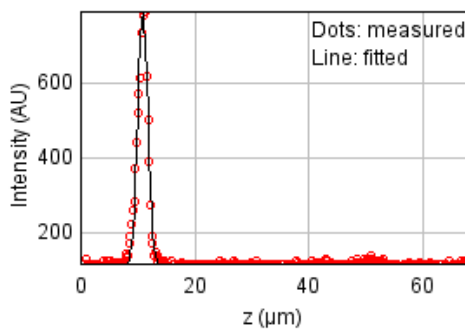
$b = 0.056$  px

$c = 0.584$  px

$x_c = 6.208$  px

$y_c = 6.917$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 64090.2313

Standard deviation: 14.44863

$R^2: 0.97950$

Parameters:

$a = 114.57504$

$b = 790.83094$

$c = 10.98172$

$d = 0.87071$

## Bead 537

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

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

Frame size : 12 pixels

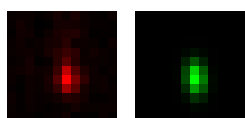
Coordinates : -635 nm (x), -59.0  $\mu\text{m}$  (y), 10.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

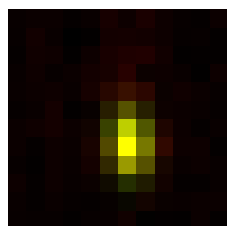
FWHM	Non corrected	Corrected	Theoretical
min	365 nm	380 nm	270 nm
max	617 nm	643 nm	270 nm
z	2.14 $\mu\text{m}$	2.15 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.591		
Theta	-85.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 362.329$  (brightness)

$B = 120.305$  (background)

$a = 1.005$  px

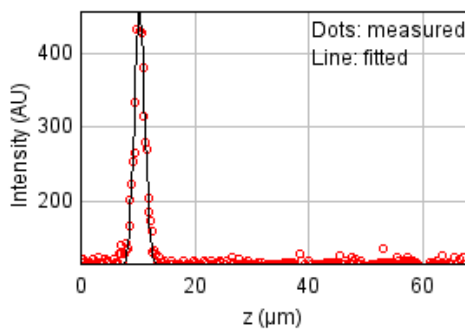
$b = -0.056$  px

$c = 0.357$  px

$x_c = 6.114$  px

$y_c = 6.812$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21358.8654

Standard deviation: 8.34103

$R^2 = 0.97499$

Parameters:

$a = 113.43389$

$b = 459.08859$

$c = 10.41191$

$d = 0.90835$

## Bead 538 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 52.0  $\mu\text{m}$  (x), -60.6  $\mu\text{m}$  (y), 6.99  $\mu\text{m}$  (z)

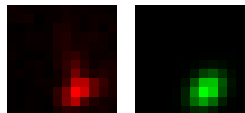
Corresponding bead : Not found

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

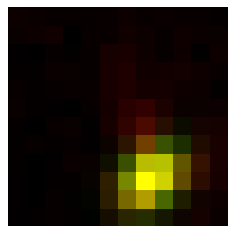
FWHM	Non corrected	Corrected	Theoretical
min	508 nm	529 nm	270 nm
max	675 nm	703 nm	270 nm
z	3.3 $\mu\text{m}$	3.31 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.753		
Theta	48.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 416.104 (brightness)

B = 124.085 (background)

a = 0.420 px

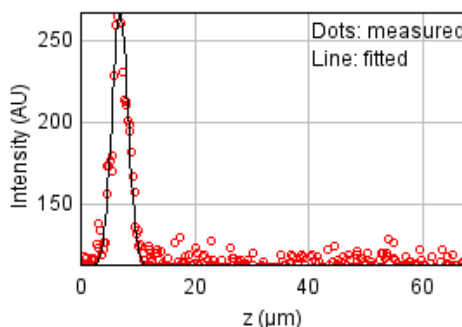
b = 0.112 px

c = 0.395 px

xc = 7.316 px

yc = 8.796 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19703.1861

Standard deviation: 8.01123

$R^2$ : 0.92718

Parameters:

a = 112.12136

b = 267.00337

c = 6.98846

d = 1.40060

## Bead 539

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

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

Frame size : 12 pixels

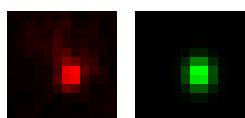
Coordinates : 109  $\mu\text{m}$  (x), -80.5  $\mu\text{m}$  (y), 10.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

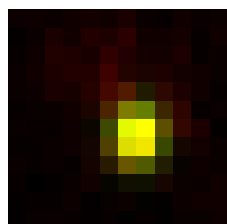
FWHM	Non corrected	Corrected	Theoretical
min	473 nm	493 nm	270 nm
max	573 nm	597 nm	270 nm
z	2.25 $\mu\text{m}$	2.26 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.826		
Theta	-88.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 339.611$  (brightness)

$B = 121.162$  (background)

$a = 0.600$  px

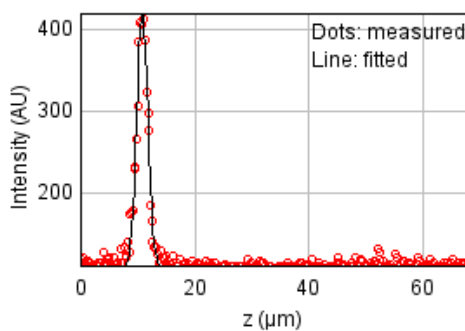
$b = -0.005$  px

$c = 0.409$  px

$x_c = 6.522$  px

$y_c = 6.363$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20631.4041

Standard deviation: 8.19776

$R^2: 0.97138$

Parameters:

$a = 111.74263$

$b = 420.91608$

$c = 10.90366$

$d = 0.95731$

## Bead 540 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -139  $\mu\text{m}$  (x), -90.3  $\mu\text{m}$  (y), 10.5  $\mu\text{m}$  (z)

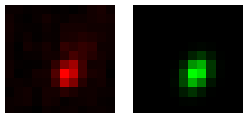
Corresponding bead : Not found

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

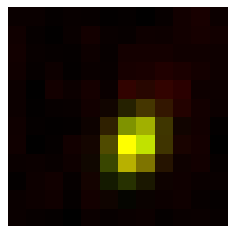
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	441 nm	270 nm
max	593 nm	618 nm	270 nm
z	3.92 $\mu\text{m}$	3.94 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.713		
Theta	62.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 370.452 (brightness)

B = 119.507 (background)

a = 0.672 px

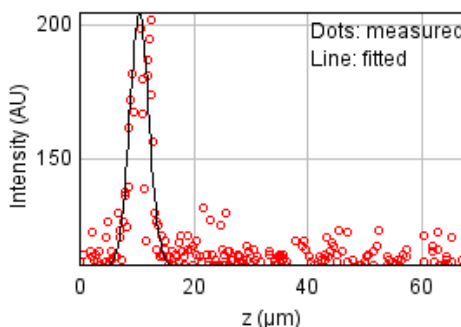
b = 0.150 px

c = 0.459 px

xc = 6.417 px

yc = 6.966 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29334.9340

Standard deviation: 9.77515

$R^2$ : 0.78575

Parameters:

a = 110.56130

b = 204.24825

c = 10.53918

d = 1.66671



## Bead 541 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -164  $\mu\text{m}$  (x), 91.0  $\mu\text{m}$  (y), 10.1  $\mu\text{m}$  (z)

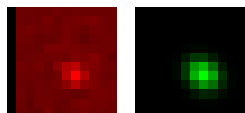
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

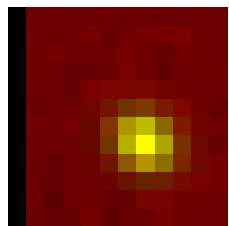
FWHM	Non corrected	Corrected	Theoretical
min	523 nm	544 nm	270 nm
max	626 nm	652 nm	270 nm
z	2.56 $\mu\text{m}$	2.57 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.835		
Theta	-39.6°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.313$



Parameters:

A = 144.173 (brightness)

B = 105.535 (background)

a = 0.403 px

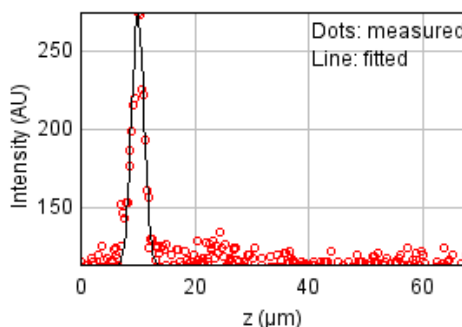
b = -0.073 px

c = 0.431 px

xc = 6.938 px

yc = 6.848 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19643.8811

Standard deviation: 7.99916

$R^2$ : 0.91620

Parameters:

a = 112.77101

b = 273.99251

c = 10.10472

d = 1.08743

## Bead 542

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

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

Frame size : 12 pixels

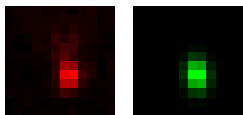
Coordinates : -328 nm (x), 86.6 um (y), 11.3 um (z)

Corresponding bead : Not found

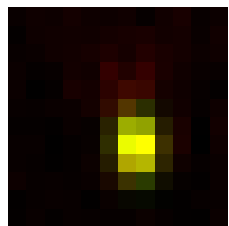
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	414 nm	270 nm
max	585 nm	609 nm	270 nm
z	2.11 um	2.12 um	1.3 um
Asymmetry	0.68		
Theta	-85.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 501.334 (brightness)

B = 125.829 (background)

a = 0.846 px

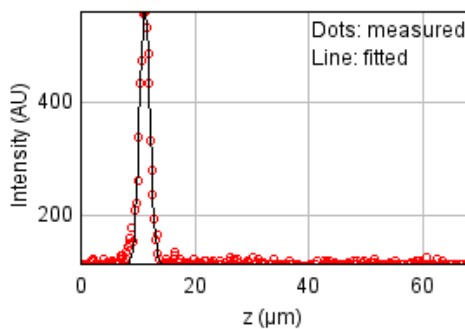
b = -0.039 px

c = 0.396 px

xc = 6.508 px

yc = 7.026 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24597.3224

Standard deviation: 8.95107

$R^2$ : 0.98248

Parameters:

a = 114.41565

b = 561.71322

c = 11.32292

d = 0.89808

## Bead 543

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

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

Frame size : 12 pixels

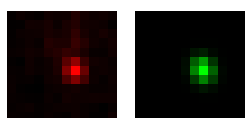
Coordinates : -52.2  $\mu\text{m}$  (x), 85.9  $\mu\text{m}$  (y), 10.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

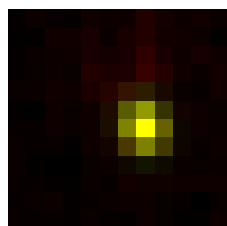
FWHM	Non corrected	Corrected	Theoretical
min	399 nm	416 nm	270 nm
max	485 nm	505 nm	270 nm
z	1.92 $\mu\text{m}$	1.93 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.822		
Theta	-73.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 377.779$  (brightness)

$B = 122.957$  (background)

$a = 0.819$  px

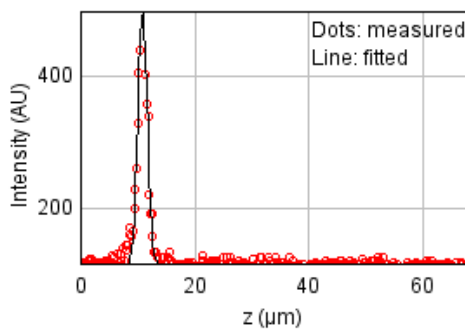
$b = -0.076$  px

$c = 0.593$  px

$x_c = 6.899$  px

$y_c = 5.909$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 26581.6143

Standard deviation: 9.30511

$R^2: 0.97199$

Parameters:

$a = 115.34192$

$b = 498.50864$

$c = 10.94525$

$d = 0.81469$

## Bead 544 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 30.2  $\mu\text{m}$  (x), 78.0  $\mu\text{m}$  (y), 11.7  $\mu\text{m}$  (z)

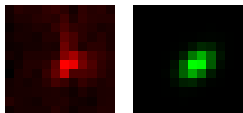
Corresponding bead : Not found

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

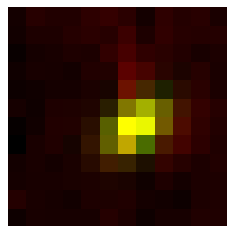
FWHM	Non corrected	Corrected	Theoretical
min	420 nm	438 nm	270 nm
max	633 nm	659 nm	270 nm
z	3.71 $\mu\text{m}$	3.73 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.664		
Theta	39.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 224.503 (brightness)

B = 120.444 (background)

a = 0.504 px

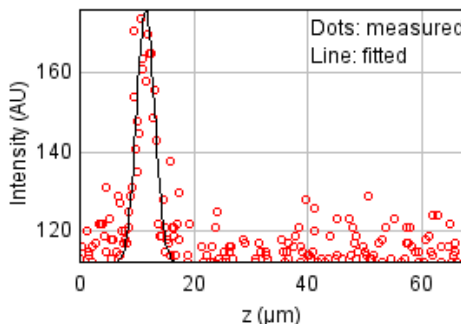
b = 0.208 px

c = 0.590 px

xc = 6.483 px

yc = 5.972 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16158.7664

Standard deviation: 7.25496

$R^2$ : 0.74757

Parameters:

a = 111.95000

b = 176.01286

c = 11.65487

d = 1.57744

## Bead 545

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

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

Frame size : 12 pixels

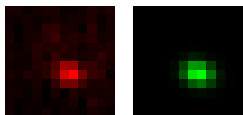
Coordinates : -162  $\mu\text{m}$  (x), 66.6  $\mu\text{m}$  (y), 9.98  $\mu\text{m}$  (z)

Corresponding bead : Not found

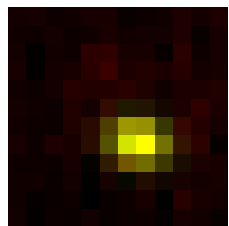
FWHM	Non corrected	Corrected	Theoretical
min	431 nm	449 nm	270 nm
max	553 nm	576 nm	270 nm
z	2.82 $\mu\text{m}$	2.83 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.779		
Theta	-15.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 163.718$  (brightness)

$B = 115.092$  (background)

$a = 0.460$  px

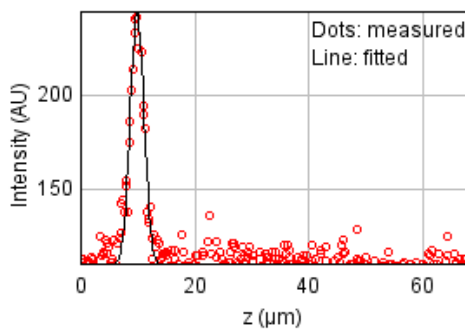
$b = -0.074$  px

$c = 0.702$  px

$x_c = 6.591$  px

$y_c = 6.858$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16329.7333

Standard deviation: 7.29324

$R^2: 0.90810$

Parameters:

$a = 110.80446$

$b = 244.33575$

$c = 9.98388$

$d = 1.19837$

## Bead 546 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -48.1  $\mu\text{m}$  (x), 65.3  $\mu\text{m}$  (y), 11.8  $\mu\text{m}$  (z)

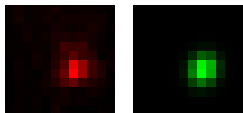
Corresponding bead : Not found

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

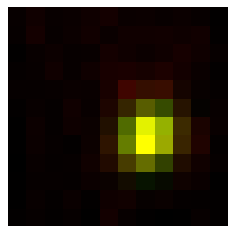
FWHM	Non corrected	Corrected	Theoretical
min	480 nm	500 nm	270 nm
max	557 nm	580 nm	270 nm
z	4.14 $\mu\text{m}$	4.16 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.862		
Theta	68.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 436.327$  (brightness)

$B = 123.005$  (background)

$a = 0.563$  px

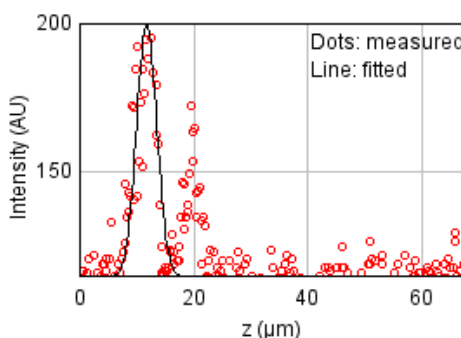
$b = 0.051$  px

$c = 0.452$  px

$xc = 7.173$  px

$yc = 6.541$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 44337.3319

Standard deviation: 12.01754

$R^2: 0.67984$

Parameters:

$a = 114.67576$

$b = 200.23307$

$c = 11.84260$

$d = 1.75814$

## Bead 547

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

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

Frame size : 12 pixels

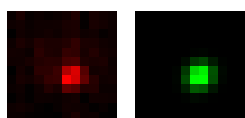
Coordinates : 148 um (x), 33.4 um (y), 10.9 um (z)

Corresponding bead : Not found

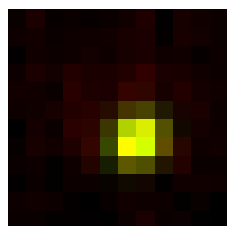
FWHM	Non corrected	Corrected	Theoretical
min	448 nm	467 nm	270 nm
max	494 nm	514 nm	270 nm
z	3.06 um	3.08 um	1.3 um
Asymmetry	0.908		
Theta	44.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 251.211 (brightness)

B = 118.512 (background)

a = 0.608 px

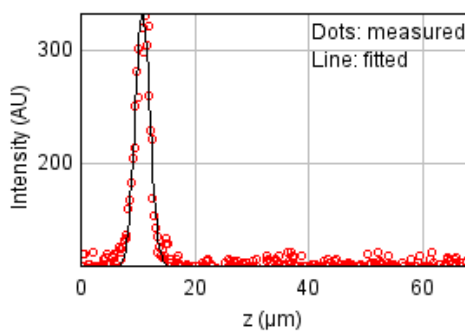
b = 0.059 px

c = 0.610 px

xc = 6.549 px

yc = 6.594 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20188.4674

Standard deviation: 8.10928

$R^2$ : 0.95984

Parameters:

a = 110.42934

b = 332.64496

c = 10.93136

d = 1.30131

## Bead 548 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -68.2  $\mu\text{m}$  (x), 21.3  $\mu\text{m}$  (y), 11.6  $\mu\text{m}$  (z)

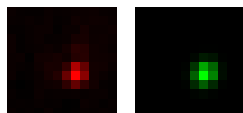
Corresponding bead : Not found

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

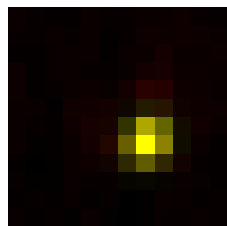
FWHM	Non corrected	Corrected	Theoretical
min	390 nm	406 nm	270 nm
max	445 nm	464 nm	270 nm
z	4.27 $\mu\text{m}$	4.28 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.875		
Theta	60.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 673.746 (brightness)

B = 124.848 (background)

a = 0.833 px

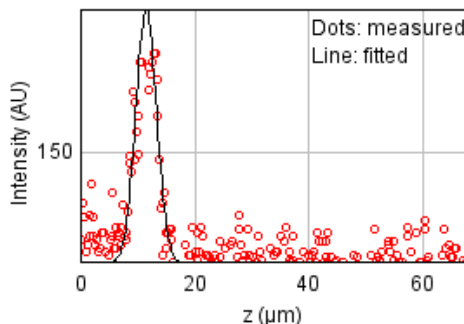
b = 0.088 px

c = 0.726 px

xc = 7.117 px

yc = 6.778 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18412.7195

Standard deviation: 7.74444

$R^2$ : 0.83067

Parameters:

a = 114.15362

b = 196.83592

c = 11.57086

d = 1.81165



## Bead 549

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

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

Frame size : 12 pixels

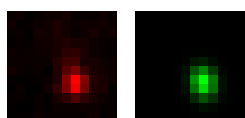
Coordinates : 15.8  $\mu\text{m}$  (x), 15.7  $\mu\text{m}$  (y), 11.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

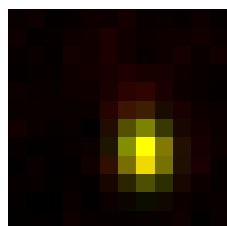
FWHM	Non corrected	Corrected	Theoretical
min	448 nm	466 nm	270 nm
max	574 nm	598 nm	270 nm
z	2.11 $\mu\text{m}$	2.11 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.78		
Theta	-79.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 402.259$  (brightness)

$B = 124.999$  (background)

$a = 0.661$  px

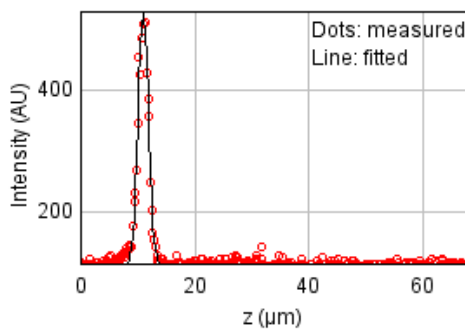
$b = -0.047$  px

$c = 0.416$  px

$x_c = 6.962$  px

$y_c = 7.301$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25438.1503

Standard deviation: 9.10277

$R^2: 0.97917$

Parameters:

$a = 113.96148$

$b = 531.27247$

$c = 11.07112$

$d = 0.89424$

## Bead 550

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

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

Frame size : 12 pixels

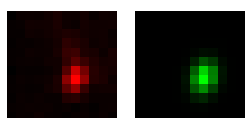
Coordinates : 50.4  $\mu\text{m}$  (x), 14.5  $\mu\text{m}$  (y), 11.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

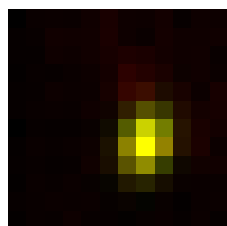
FWHM	Non corrected	Corrected	Theoretical
min	440 nm	458 nm	270 nm
max	596 nm	621 nm	270 nm
z	2.31 $\mu\text{m}$	2.32 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.738		
Theta	75.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 460.694$  (brightness)

$B = 123.181$  (background)

$a = 0.675$  px

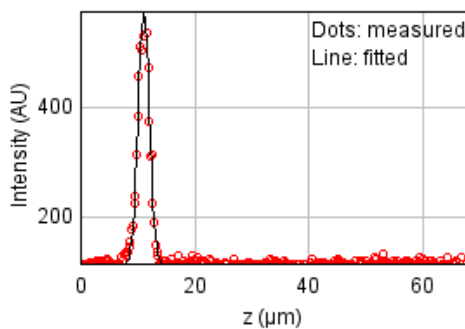
$b = 0.076$  px

$c = 0.397$  px

$x_c = 7.028$  px

$y_c = 6.738$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24574.2743

Standard deviation: 8.94687

$R^2: 0.98480$

Parameters:

$a = 113.56476$

$b = 574.32892$

$c = 11.15207$

$d = 0.98137$

## Bead 551 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -40.9  $\mu\text{m}$  (x), 13.4  $\mu\text{m}$  (y), 11.9  $\mu\text{m}$  (z)

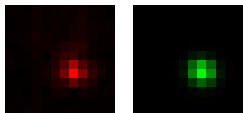
Corresponding bead : Not found

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

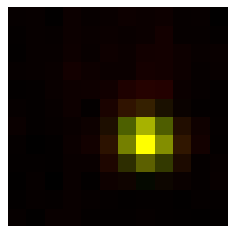
FWHM	Non corrected	Corrected	Theoretical
min	440 nm	458 nm	270 nm
max	466 nm	486 nm	270 nm
z	4.16 $\mu\text{m}$	4.18 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.944		
Theta	-32.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 588.794 (brightness)

B = 124.463 (background)

a = 0.639 px

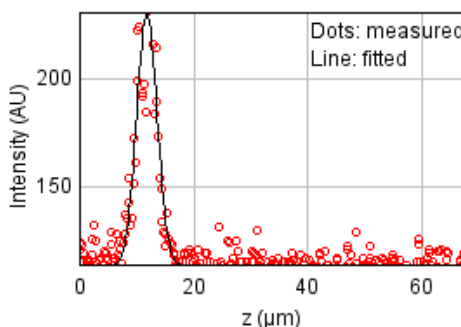
b = -0.034 px

c = 0.671 px

xc = 7.029 px

yc = 6.771 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23058.6207

Standard deviation: 8.66657

$R^2$ : 0.88634

Parameters:

a = 113.00867

b = 230.93106

c = 11.86838

d = 1.76865

## Bead 552 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -52.6  $\mu\text{m}$  (x), 12.6  $\mu\text{m}$  (y), 11.5  $\mu\text{m}$  (z)

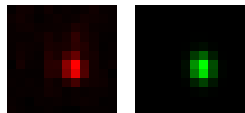
Corresponding bead : Not found

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

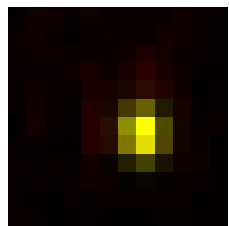
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	402 nm	270 nm
max	491 nm	512 nm	270 nm
z	4.47 $\mu\text{m}$	4.49 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.785		
Theta	-85.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 531.730 (brightness)

B = 125.964 (background)

a = 0.900 px

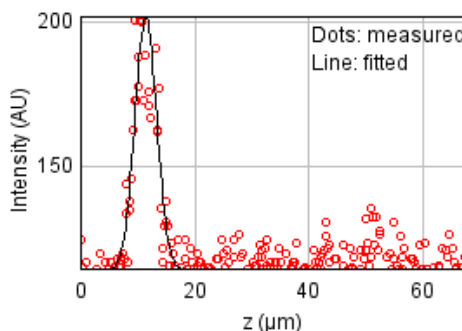
b = -0.027 px

c = 0.558 px

xc = 6.830 px

yc = 6.363 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19609.9365

Standard deviation: 7.99225

$R^2$ : 0.84272

Parameters:

a = 114.37588

b = 201.70468

c = 11.50222

d = 1.89871

## Bead 553

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

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

Frame size : 12 pixels

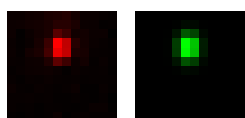
Coordinates : -18.8  $\mu\text{m}$  (x), 10.1  $\mu\text{m}$  (y), 17.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

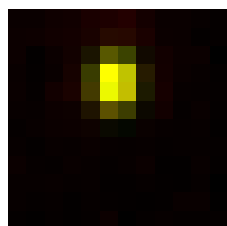
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	411 nm	270 nm
max	495 nm	515 nm	270 nm
z	2.31 $\mu\text{m}$	2.32 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.798		
Theta	89.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 688.166 (brightness)

B = 121.951 (background)

a = 0.861 px

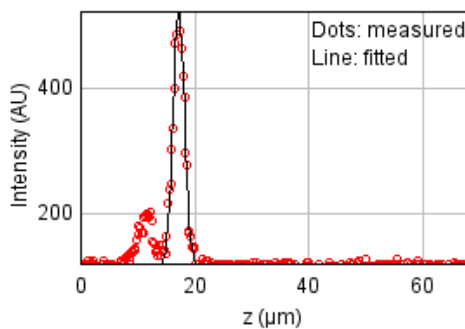
b = 0.002 px

c = 0.548 px

xc = 5.344 px

yc = 3.476 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 92225.5033

Standard deviation: 17.33231

$R^2$ : 0.93115

Parameters:

a = 118.16493

b = 525.86064

c = 17.27625

d = 0.98192

## Bead 554

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

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

Frame size : 12 pixels

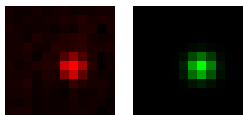
Coordinates : -144  $\mu\text{m}$  (x), -5.43  $\mu\text{m}$  (y), 11.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

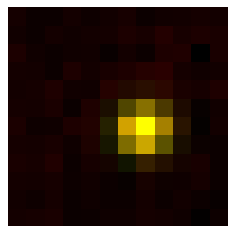
FWHM	Non corrected	Corrected	Theoretical
min	463 nm	482 nm	270 nm
max	485 nm	505 nm	270 nm
z	2.39 $\mu\text{m}$	2.4 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.954		
Theta	7.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 297.483 (brightness)

B = 115.996 (background)

a = 0.571 px

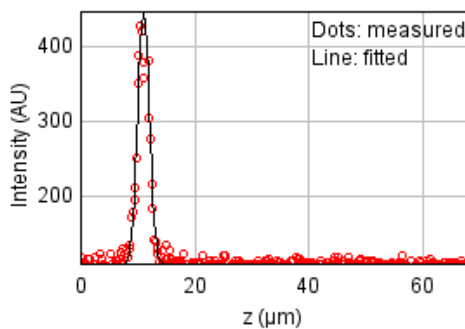
b = 0.007 px

c = 0.625 px

xc = 6.893 px

yc = 6.160 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 39740.9429

Standard deviation: 11.37758

$R^2$ : 0.95694

Parameters:

a = 110.31466

b = 447.75141

c = 11.11452

d = 1.01675

## Bead 555

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

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

Frame size : 12 pixels

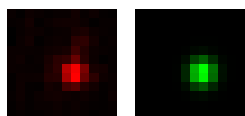
Coordinates : -65.8  $\mu\text{m}$  (x), -77.0  $\mu\text{m}$  (y), 10.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

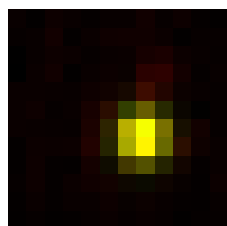
FWHM	Non corrected	Corrected	Theoretical
min	472 nm	492 nm	270 nm
max	504 nm	525 nm	270 nm
z	2.08 $\mu\text{m}$	2.09 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.937		
Theta	86.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 516.907 (brightness)

B = 121.144 (background)

a = 0.602 px

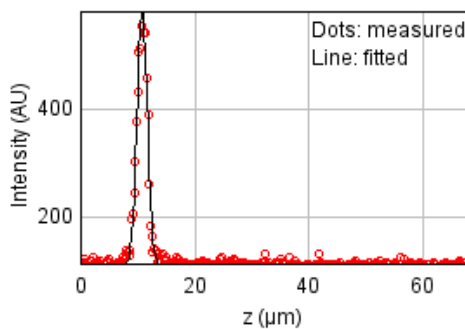
b = 0.004 px

c = 0.529 px

xc = 6.809 px

yc = 6.457 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25935.8767

Standard deviation: 9.19139

$R^2$ : 0.98315

Parameters:

a = 112.89167

b = 584.80834

c = 10.87786

d = 0.88459

## Bead 556 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 92.3  $\mu\text{m}$  (x), -86.5  $\mu\text{m}$  (y), 7.77  $\mu\text{m}$  (z)

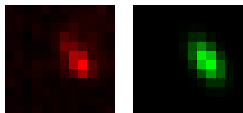
Corresponding bead : Not found

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

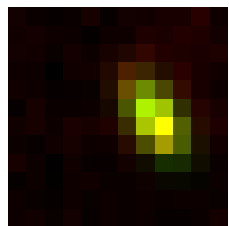
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	441 nm	270 nm
max	753 nm	784 nm	270 nm
z	3.27 $\mu\text{m}$	3.28 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.562		
Theta	-58.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 240.170 (brightness)

B = 116.549 (background)

a = 0.611 px

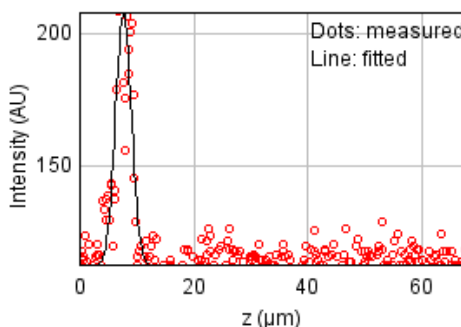
b = -0.228 px

c = 0.375 px

xc = 7.545 px

yc = 5.569 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25928.9838

Standard deviation: 9.19017

$R^2$ : 0.78425

Parameters:

a = 112.56422

b = 207.86622

c = 7.77401

d = 1.38898



## Bead 557 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -147  $\mu\text{m}$  (x), -93.9  $\mu\text{m}$  (y), 10.0  $\mu\text{m}$  (z)

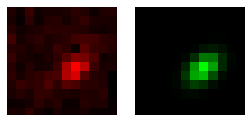
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

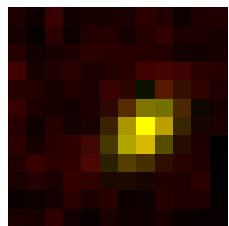
FWHM	Non corrected	Corrected	Theoretical
min	429 nm	447 nm	270 nm
max	662 nm	689 nm	270 nm
z	2.55 $\mu\text{m}$	2.56 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.648		
Theta	41.4°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.856$



Parameters:

A = 117.661 (brightness)

B = 115.037 (background)

a = 0.492 px

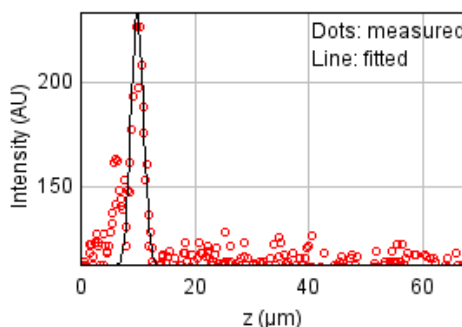
b = 0.210 px

c = 0.545 px

xc = 6.934 px

yc = 6.239 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30772.4336

Standard deviation: 10.01179

$R^2$ : 0.79744

Parameters:

a = 112.56229

b = 233.89256

c = 10.00120

d = 1.08276

## Bead 558

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

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

Frame size : 12 pixels

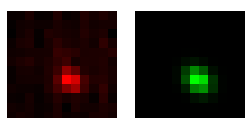
Coordinates : -114  $\mu\text{m}$  (x), 92.1  $\mu\text{m}$  (y), 10.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

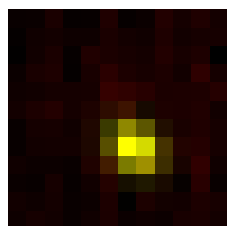
FWHM	Non corrected	Corrected	Theoretical
min	402 nm	419 nm	270 nm
max	510 nm	531 nm	270 nm
z	2.06 $\mu\text{m}$	2.07 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.788		
Theta	-43.5°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 242.464$  (brightness)

$B = 120.257$  (background)

$a = 0.664$  px

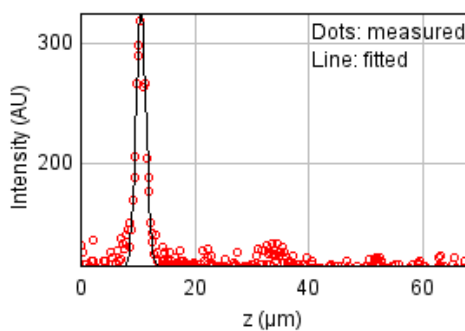
$b = -0.157$  px

$c = 0.680$  px

$x_c = 6.396$  px

$y_c = 7.053$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22330.8833

Standard deviation: 8.52872

$R^2: 0.93199$

Parameters:

$a = 113.24525$

$b = 326.60933$

$c = 10.67443$

$d = 0.87431$

## Bead 559

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

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

Frame size : 12 pixels

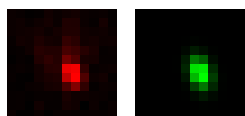
Coordinates : -53.1  $\mu\text{m}$  (x), 79.2  $\mu\text{m}$  (y), 10.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

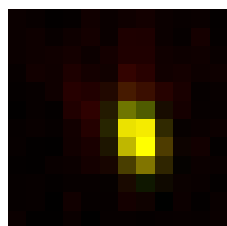
FWHM	Non corrected	Corrected	Theoretical
min	378 nm	394 nm	270 nm
max	589 nm	613 nm	270 nm
z	1.87 $\mu\text{m}$	1.88 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.642		
Theta	-73.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 369.366 (brightness)

B = 121.841 (background)

a = 0.895 px

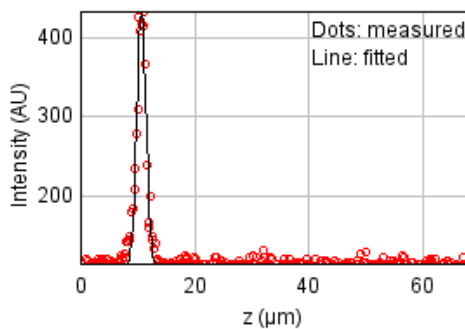
b = -0.149 px

c = 0.431 px

xc = 6.597 px

yc = 6.458 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29473.2240

Standard deviation: 9.79816

$R^2$ : 0.95492

Parameters:

a = 114.09744

b = 432.86369

c = 10.74385

d = 0.79571

## Bead 560

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

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

Frame size : 12 pixels

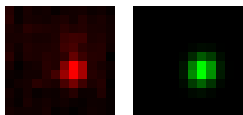
Coordinates : 159  $\mu\text{m}$  (x), 74.4  $\mu\text{m}$  (y), 10.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

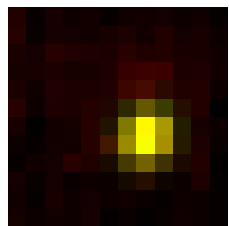
FWHM	Non corrected	Corrected	Theoretical
min	470 nm	490 nm	270 nm
max	530 nm	552 nm	270 nm
z	2.86 $\mu\text{m}$	2.87 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.886		
Theta	68.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 227.649$  (brightness)

$B = 117.576$  (background)

$a = 0.590$  px

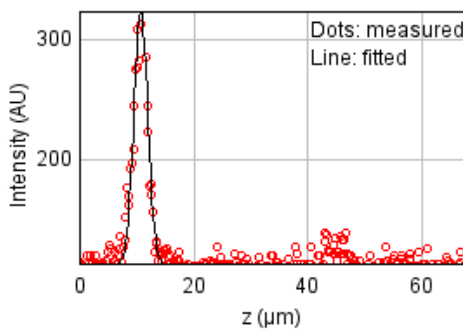
$b = 0.044$  px

$c = 0.494$  px

$x_c = 7.054$  px

$y_c = 6.524$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28043.2396

Standard deviation: 9.55751

$R^2: 0.93553$

Parameters:

$a = 112.66543$

$b = 323.53172$

$c = 10.80813$

$d = 1.21289$

## Bead 561 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 153 um (x), 55.8 um (y), 8.83 um (z)

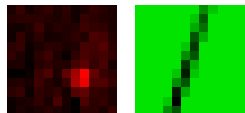
Corresponding bead : Not found

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

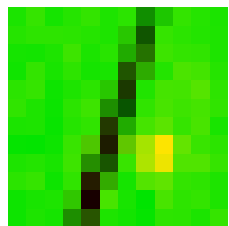
FWHM	Non corrected	Corrected	Theoretical
min	221 nm	230 nm	270 nm
max	4.4 um	4.59 um	270 nm
z	2.29 um	2.3 um	1.3 um
Asymmetry	0.05		
Theta	71.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.048$



Parameters:

A = -7.677 (brightness)

B = 116.931 (background)

a = 2.472 px

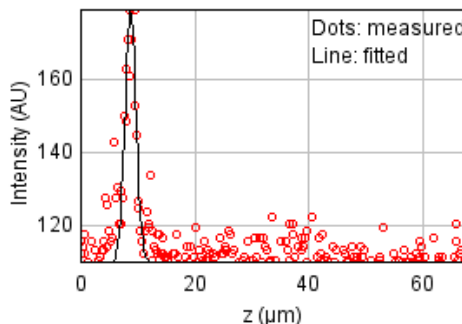
b = 0.840 px

c = 0.278 px

xc = 4.287 px

yc = 8.892 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 12441.5811

Standard deviation: 6.36603

$R^2$ : 0.73701

Parameters:

a = 110.30613

b = 178.78087

c = 8.82593

d = 0.97248

## Bead 562

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

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

Frame size : 12 pixels

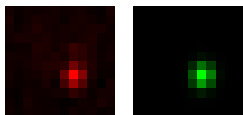
Coordinates : 135  $\mu\text{m}$  (x), 39.5  $\mu\text{m}$  (y), 11.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

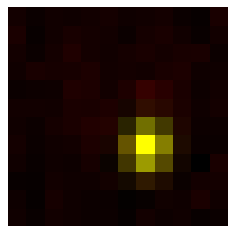
FWHM	Non corrected	Corrected	Theoretical
min	384 nm	400 nm	270 nm
max	450 nm	468 nm	270 nm
z	2.16 $\mu\text{m}$	2.17 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.854		
Theta	84.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 291.283 (brightness)

B = 120.072 (background)

a = 0.906 px

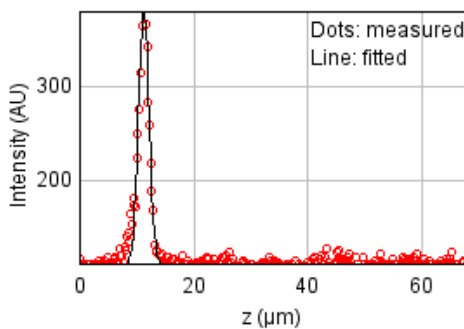
b = 0.025 px

c = 0.666 px

xc = 7.108 px

yc = 7.121 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21549.0556

Standard deviation: 8.37809

$R^2$ : 0.95946

Parameters:

a = 112.23591

b = 381.44712

c = 11.32856

d = 0.91752

## Bead 563 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 62.9  $\mu\text{m}$  (x), 32.0  $\mu\text{m}$  (y), 12.2  $\mu\text{m}$  (z)

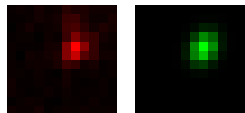
Corresponding bead : Not found

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

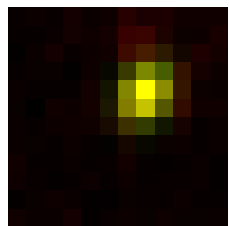
FWHM	Non corrected	Corrected	Theoretical
min	447 nm	466 nm	270 nm
max	579 nm	603 nm	270 nm
z	3.44 $\mu\text{m}$	3.45 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.772		
Theta	64.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 300.093 (brightness)

B = 118.823 (background)

a = 0.622 px

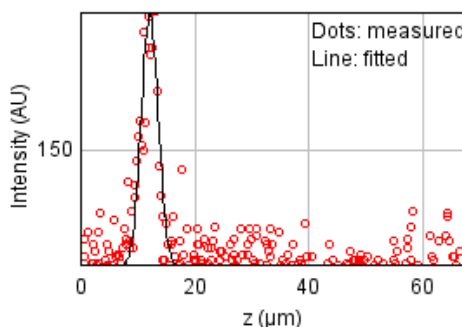
b = 0.104 px

c = 0.450 px

xc = 6.986 px

yc = 4.197 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17493.6690

Standard deviation: 7.54868

$R^2$ : 0.80321

Parameters:

a = 113.17096

b = 194.25073

c = 12.19938

d = 1.45956

## Bead 564

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

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

Frame size : 12 pixels

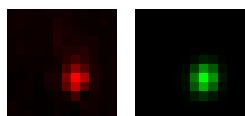
Coordinates : -33.6  $\mu\text{m}$  (x), 29.8  $\mu\text{m}$  (y), 12.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

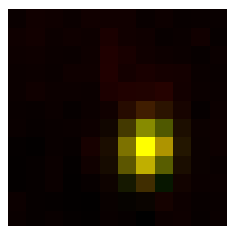
FWHM	Non corrected	Corrected	Theoretical
min	442 nm	460 nm	270 nm
max	527 nm	549 nm	270 nm
z	2.19 $\mu\text{m}$	2.2 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.838		
Theta	77.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 507.943$  (brightness)

$B = 124.850$  (background)

$a = 0.677$  px

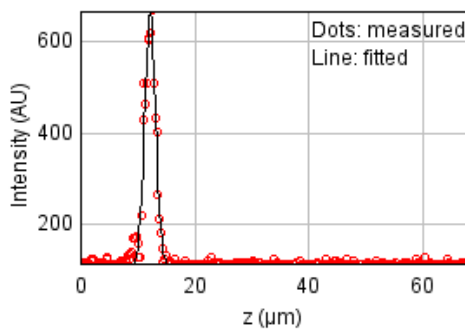
$b = 0.044$  px

$c = 0.492$  px

$x_c = 7.088$  px

$y_c = 7.108$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 75194.8684

Standard deviation: 15.65038

$R^2: 0.96656$

Parameters:

$a = 113.53678$

$b = 665.31108$

$c = 12.26673$

$d = 0.93143$



## Bead 565

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

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

Frame size : 12 pixels

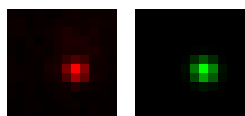
Coordinates : -130  $\mu\text{m}$  (x), 24.9  $\mu\text{m}$  (y), 11.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

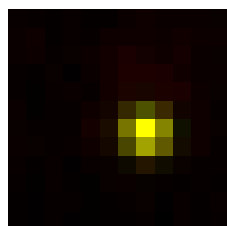
FWHM	Non corrected	Corrected	Theoretical
min	409 nm	426 nm	270 nm
max	436 nm	454 nm	270 nm
z	2.11 $\mu\text{m}$	2.12 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.937		
Theta	-20.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 492.357$  (brightness)

$B = 121.610$  (background)

$a = 0.718$  px

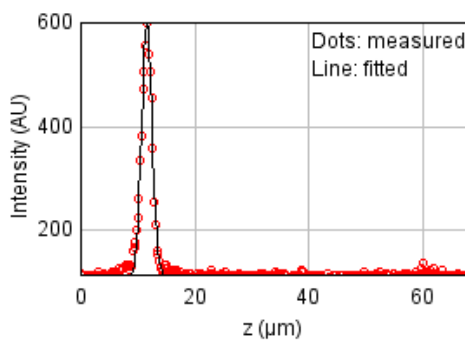
$b = -0.032$  px

$c = 0.791$  px

$x_c = 7.050$  px

$y_c = 6.216$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25013.7747

Standard deviation: 9.02652

$R^2: 0.98502$

Parameters:

$a = 112.78066$

$b = 601.11398$

$c = 11.69923$

$d = 0.89802$

## Bead 566 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -8.22  $\mu\text{m}$  (x), 22.2  $\mu\text{m}$  (y), 12.1  $\mu\text{m}$  (z)

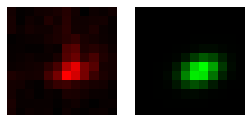
Corresponding bead : Not found

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

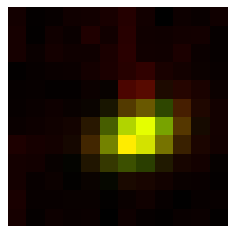
FWHM	Non corrected	Corrected	Theoretical
min	461 nm	480 nm	270 nm
max	696 nm	725 nm	270 nm
z	4.23 $\mu\text{m}$	4.25 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.661		
Theta	19.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 265.343 (brightness)

B = 121.466 (background)

a = 0.316 px

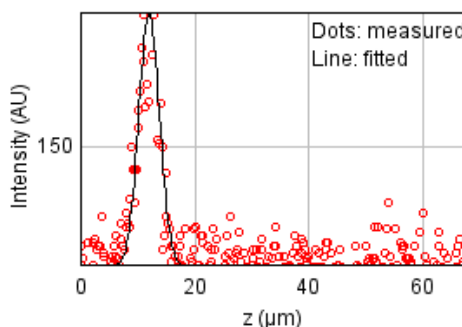
b = 0.112 px

c = 0.593 px

xc = 6.621 px

yc = 6.472 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16440.7973

Standard deviation: 7.31800

$R^2$ : 0.82374

Parameters:

a = 113.87127

b = 190.42248

c = 12.08217

d = 1.79619

## Bead 567 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 46.7  $\mu\text{m}$  (x), 6.29  $\mu\text{m}$  (y), 11.3  $\mu\text{m}$  (z)

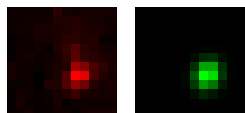
Corresponding bead : Not found

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

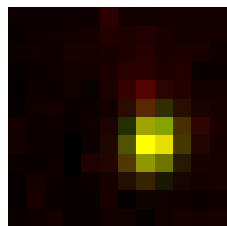
FWHM	Non corrected	Corrected	Theoretical
min	453 nm	472 nm	270 nm
max	543 nm	565 nm	270 nm
z	3.47 $\mu\text{m}$	3.48 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.835		
Theta	68.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 277.860 (brightness)

B = 120.635 (background)

a = 0.627 px

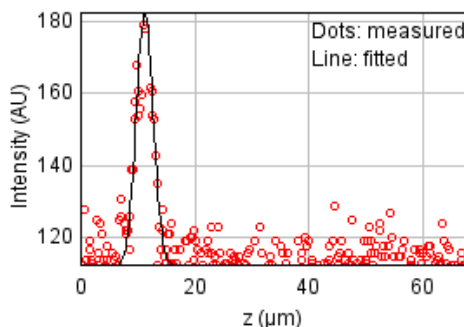
b = 0.067 px

c = 0.481 px

xc = 7.398 px

yc = 6.908 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 12499.8827

Standard deviation: 6.38093

$R^2$ : 0.81205

Parameters:

a = 112.22744

b = 182.47580

c = 11.32283

d = 1.47171

## Bead 568 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 37.5  $\mu\text{m}$  (x), -42.0  $\mu\text{m}$  (y), 8.22  $\mu\text{m}$  (z)

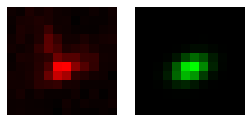
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

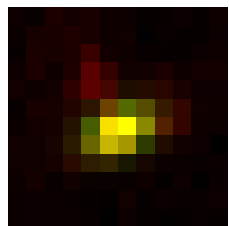
FWHM	Non corrected	Corrected	Theoretical
min	418 nm	435 nm	270 nm
max	651 nm	678 nm	270 nm
z	2.23 $\mu\text{m}$	2.24 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.643		
Theta	22.0°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.863$



Parameters:

A = 301.563 (brightness)

B = 125.151 (background)

a = 0.380 px

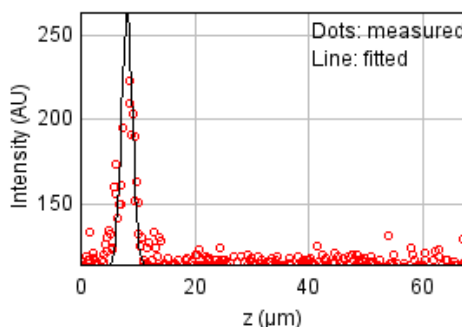
b = 0.157 px

c = 0.704 px

xc = 5.578 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: 28587.4067

Standard deviation: 9.64980

$R^2$ : 0.85075

Parameters:

a = 113.91007

b = 263.70677

c = 8.22432

d = 0.94841

## Bead 569

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

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

Frame size : 12 pixels

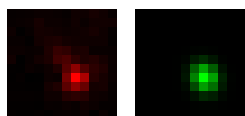
Coordinates : 118  $\mu\text{m}$  (x), -85.7  $\mu\text{m}$  (y), 11.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

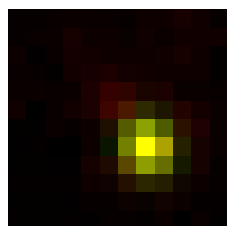
FWHM	Non corrected	Corrected	Theoretical
min	476 nm	496 nm	270 nm
max	547 nm	570 nm	270 nm
z	2.53 $\mu\text{m}$	2.54 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.87		
Theta	-66.4°		

### 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:

$A = 297.782$  (brightness)

$B = 122.172$  (background)

$a = 0.568$  px

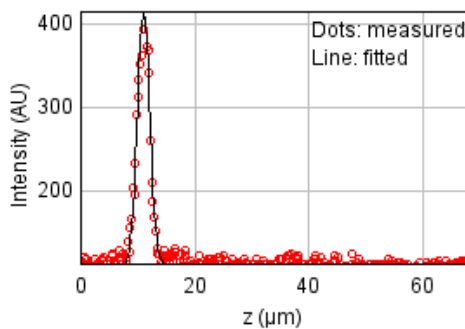
$b = -0.053$  px

$c = 0.471$  px

$x_c = 7.099$  px

$y_c = 6.994$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21963.9337

Standard deviation: 8.45835

$R^2: 0.97159$

Parameters:

$a = 112.29149$

$b = 415.59234$

$c = 11.12124$

$d = 1.07393$

## Bead 570

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

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

Frame size : 12 pixels

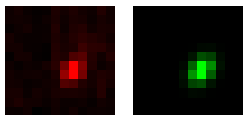
Coordinates : -145  $\mu\text{m}$  (x), -89.3  $\mu\text{m}$  (y), 10.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

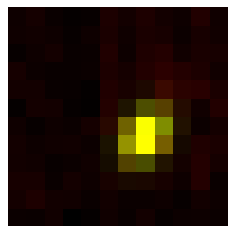
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	537 nm	560 nm	270 nm
z	2.41 $\mu\text{m}$	2.42 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.717		
Theta	56.9°		

### 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 = 268.166 (brightness)

B = 116.993 (background)

a = 0.773 px

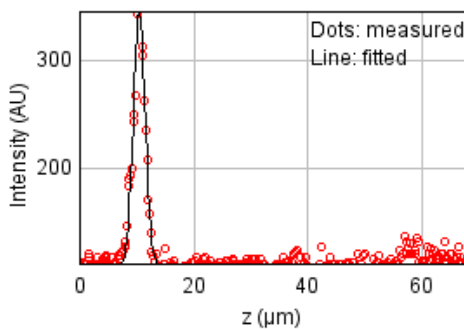
b = 0.201 px

c = 0.596 px

xc = 6.984 px

yc = 6.502 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22777.0359

Standard deviation: 8.61350

$R^2$ : 0.94873

Parameters:

a = 112.15294

b = 344.69286

c = 10.52882

d = 1.02204

## Bead 571

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

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

Frame size : 12 pixels

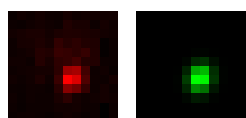
Coordinates : 164  $\mu\text{m}$  (x), 83.5  $\mu\text{m}$  (y), 11.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

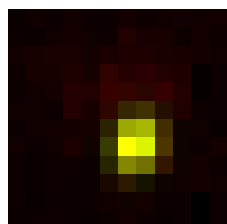
FWHM	Non corrected	Corrected	Theoretical
min	420 nm	438 nm	270 nm
max	514 nm	536 nm	270 nm
z	2.72 $\mu\text{m}$	2.73 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.817		
Theta	74.0°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 329.094$  (brightness)

$B = 120.721$  (background)

$a = 0.741$  px

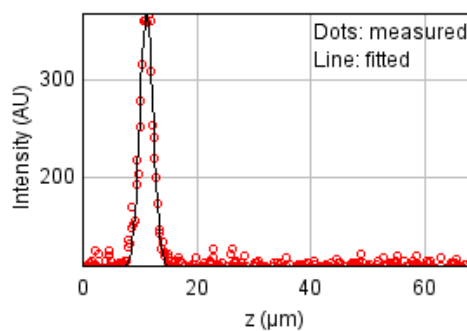
$b = 0.067$  px

$c = 0.527$  px

$x_c = 6.487$  px

$y_c = 6.838$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18073.6588

Standard deviation: 7.67280

$R^2: 0.96938$

Parameters:

$a = 110.99402$

$b = 366.88830$

$c = 11.28286$

$d = 1.15442$

## Bead 572 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -66.1  $\mu\text{m}$  (x), 43.1  $\mu\text{m}$  (y), 7.81  $\mu\text{m}$  (z)

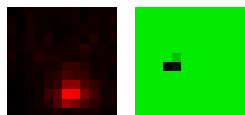
Corresponding bead : Not found

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

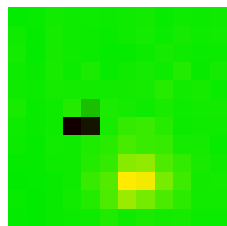
FWHM	Non corrected	Corrected	Theoretical
min	102 nm	106 nm	270 nm
max	183 nm	191 nm	270 nm
z	5.38 $\mu\text{m}$	5.41 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.554		
Theta	29.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.049$



Parameters:

A = -105.006 (brightness)

B = 136.681 (background)

a = 6.179 px

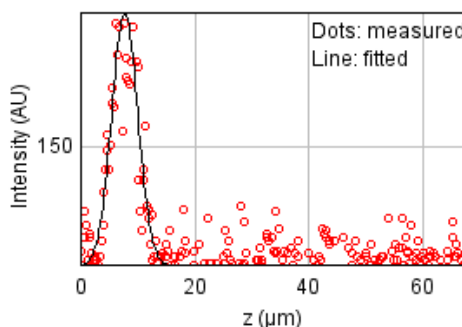
b = 3.860 px

c = 10.835 px

xc = 3.683 px

yc = 5.694 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19249.4916

Standard deviation: 7.91845

$R^2$ : 0.83930

Parameters:

a = 113.14497

b = 191.88513

c = 7.81494

d = 2.28601



## Bead 573

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

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

Frame size : 12 pixels

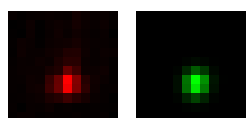
Coordinates : -30.6  $\mu\text{m}$  (x), -47.3  $\mu\text{m}$  (y), 11.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

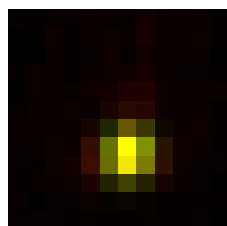
FWHM	Non corrected	Corrected	Theoretical
min	438 nm	457 nm	270 nm
max	487 nm	508 nm	270 nm
z	1.98 $\mu\text{m}$	1.99 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.9		
Theta	76.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 749.072 (brightness)

B = 127.885 (background)

a = 0.691 px

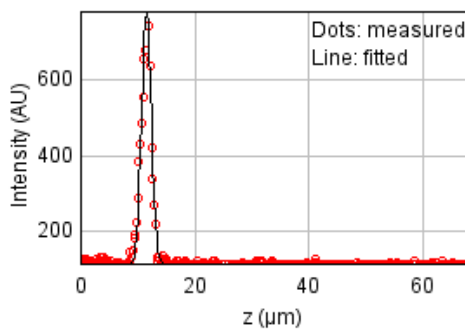
b = 0.030 px

c = 0.572 px

xc = 6.068 px

yc = 7.405 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 65604.4716

Standard deviation: 14.61832

$R^2$ : 0.97749

Parameters:

a = 115.29954

b = 778.19067

c = 11.63203

d = 0.84190

## Bead 574

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

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

Frame size : 12 pixels

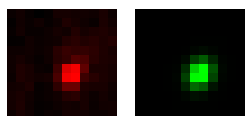
Coordinates : -156  $\mu\text{m}$  (x), -51.5  $\mu\text{m}$  (y), 11.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

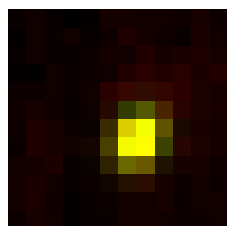
FWHM	Non corrected	Corrected	Theoretical
min	429 nm	447 nm	270 nm
max	529 nm	551 nm	270 nm
z	2.67 $\mu\text{m}$	2.68 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.812		
Theta	62.7°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 361.154$  (brightness)

$B = 118.465$  (background)

$a = 0.676$  px

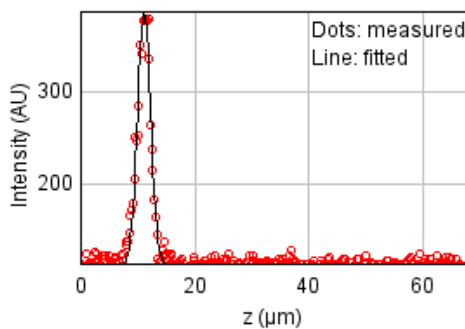
$b = 0.101$  px

$c = 0.532$  px

$x_c = 6.575$  px

$y_c = 6.574$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20270.6485

Standard deviation: 8.12577

$R^2: 0.97043$

Parameters:

$a = 110.81978$

$b = 388.95511$

$c = 11.21550$

$d = 1.13458$

## Bead 575

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

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

Frame size : 12 pixels

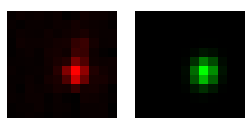
Coordinates : -87.8  $\mu\text{m}$  (x), -65.9  $\mu\text{m}$  (y), 11.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

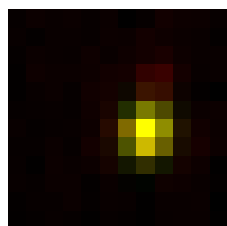
FWHM	Non corrected	Corrected	Theoretical
min	426 nm	443 nm	270 nm
max	507 nm	528 nm	270 nm
z	2.37 $\mu\text{m}$	2.38 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.84		
Theta	79.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 411.614$  (brightness)

$B = 121.625$  (background)

$a = 0.733$  px

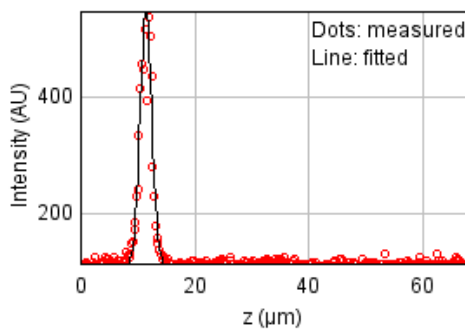
$b = 0.040$  px

$c = 0.529$  px

$x_c = 7.087$  px

$y_c = 6.191$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 62965.9091

Standard deviation: 14.32134

$R^2: 0.95842$

Parameters:

$a = 113.80086$

$b = 548.75994$

$c = 11.53574$

$d = 1.00515$

## Bead 576

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

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

Frame size : 12 pixels

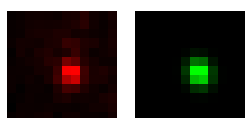
Coordinates : 159  $\mu\text{m}$  (x), -78.7  $\mu\text{m}$  (y), 11.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

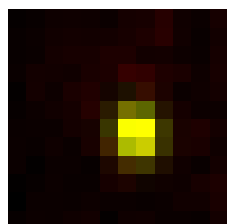
FWHM	Non corrected	Corrected	Theoretical
min	415 nm	432 nm	270 nm
max	491 nm	511 nm	270 nm
z	2.15 $\mu\text{m}$	2.16 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.845		
Theta	-77.3°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 303.504$  (brightness)

$B = 116.703$  (background)

$a = 0.768$  px

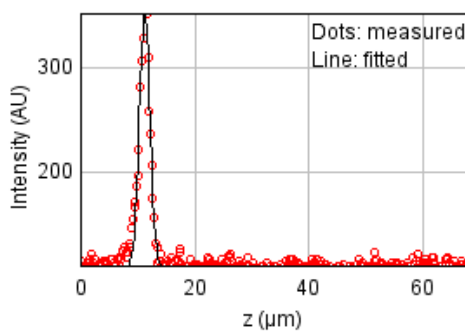
$b = -0.048$  px

$c = 0.568$  px

$x_c = 6.517$  px

$y_c = 6.268$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15851.8782

Standard deviation: 7.18573

$R^2: 0.96303$

Parameters:

$a = 110.27387$

$b = 353.15426$

$c = 11.31246$

$d = 0.91231$

## Bead 577

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

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

Frame size : 12 pixels

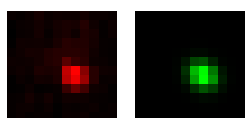
Coordinates : 150  $\mu\text{m}$  (x), -84.5  $\mu\text{m}$  (y), 11.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

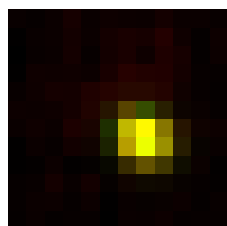
FWHM	Non corrected	Corrected	Theoretical
min	457 nm	476 nm	270 nm
max	539 nm	561 nm	270 nm
z	2.57 $\mu\text{m}$	2.58 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.848		
Theta	-36.6°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 343.099$  (brightness)

$B = 115.280$  (background)

$a = 0.526$  px

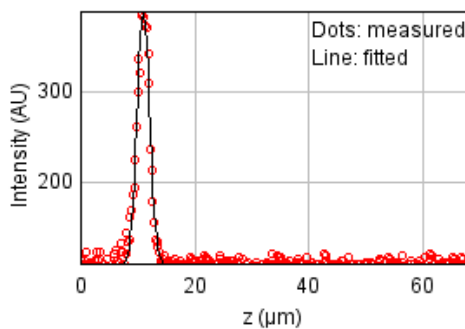
$b = -0.086$  px

$c = 0.578$  px

$x_c = 6.872$  px

$y_c = 6.500$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16911.8877

Standard deviation: 7.42210

$R^2: 0.97453$

Parameters:

$a = 109.63977$

$b = 388.77840$

$c = 11.07785$

$d = 1.09323$

## Bead 578 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -96.6  $\mu\text{m}$  (x), -95.7  $\mu\text{m}$  (y), 9.37  $\mu\text{m}$  (z)

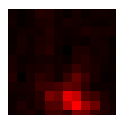
Corresponding bead : Not found

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	3.65 $\mu\text{m}$	3.66 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.0		
Theta	0.0°		

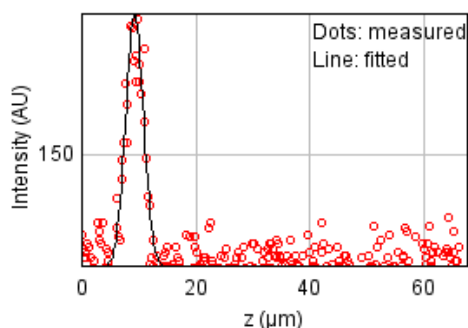
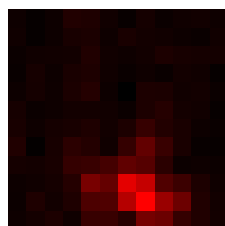
### XY profile & fitting parameters :

(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: 16434.4226

Standard deviation: 7.31658

R<sup>2</sup>: 0.83711

Parameters:

a = 111.93551

b = 197.73765

c = 9.37045

d = 1.54956

## Bead 579

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

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

Frame size : 12 pixels

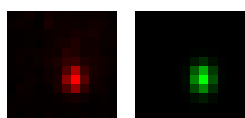
Coordinates : 86.7  $\mu\text{m}$  (x), 89.0  $\mu\text{m}$  (y), 11.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

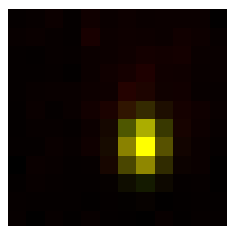
FWHM	Non corrected	Corrected	Theoretical
min	384 nm	400 nm	270 nm
max	511 nm	533 nm	270 nm
z	2.02 $\mu\text{m}$	2.03 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.751		
Theta	89.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 546.791$  (brightness)

$B = 125.391$  (background)

$a = 0.909$  px

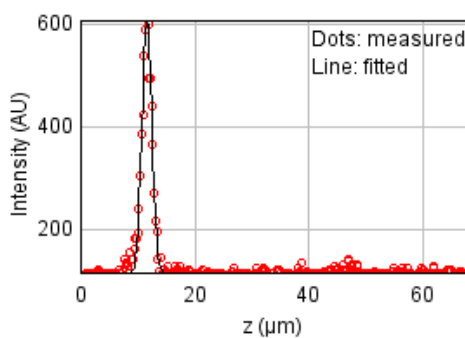
$b = 0.006$  px

$c = 0.513$  px

$x_c = 6.871$  px

$y_c = 6.880$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 35561.6090

Standard deviation: 10.76271

$R^2: 0.97845$

Parameters:

$a = 114.17471$

$b = 608.30652$

$c = 11.71238$

$d = 0.85936$

## Bead 580 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 17.1  $\mu\text{m}$  (x), 82.3  $\mu\text{m}$  (y), 11.3  $\mu\text{m}$  (z)

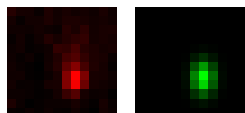
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

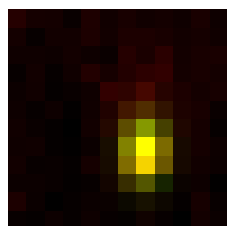
FWHM	Non corrected	Corrected	Theoretical
min	415 nm	433 nm	270 nm
max	617 nm	642 nm	270 nm
z	2.05 $\mu\text{m}$	2.06 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.673		
Theta	89.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 275.574 (brightness)

B = 122.753 (background)

a = 0.778 px

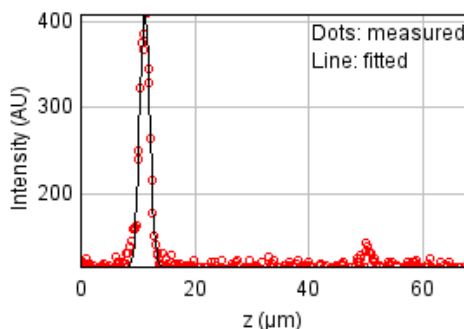
b = 0.003 px

c = 0.353 px

xc = 6.933 px

yc = 7.232 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21537.0159

Standard deviation: 8.37575

$R^2$ : 0.96450

Parameters:

a = 114.38968

b = 410.09235

c = 11.32761

d = 0.87024



## Bead 581

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

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

Frame size : 12 pixels

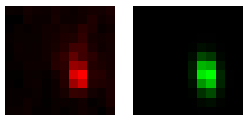
Coordinates : 16.2  $\mu\text{m}$  (x), 72.5  $\mu\text{m}$  (y), 11.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

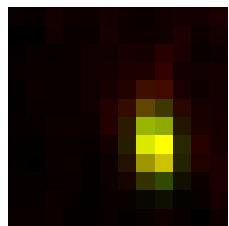
FWHM	Non corrected	Corrected	Theoretical
min	366 nm	381 nm	270 nm
max	633 nm	660 nm	270 nm
z	2.25 $\mu\text{m}$	2.26 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.577		
Theta	-82.8°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.915$



Parameters:

$A = 390.344$  (brightness)

$B = 123.712$  (background)

$a = 0.993$  px

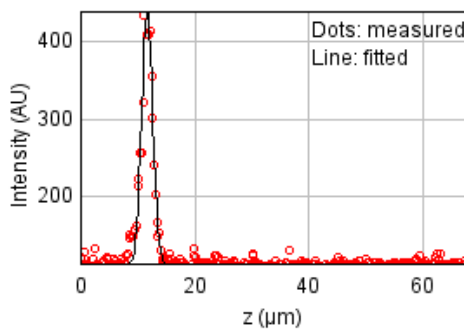
$b = -0.083$  px

$c = 0.345$  px

$x_c = 7.546$  px

$y_c = 6.993$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 27273.0582

Standard deviation: 9.42536

$R^2: 0.96626$

Parameters:

$a = 113.64661$

$b = 440.36680$

$c = 11.75851$

$d = 0.95602$

## Bead 582

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

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

Frame size : 12 pixels

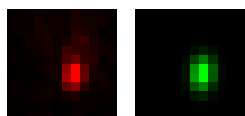
Coordinates : 1.73  $\mu\text{m}$  (x), 68.0  $\mu\text{m}$  (y), 15.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

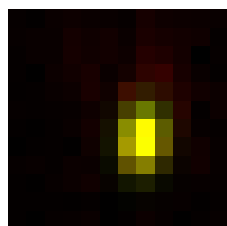
FWHM	Non corrected	Corrected	Theoretical
min	412 nm	429 nm	270 nm
max	613 nm	638 nm	270 nm
z	2.21 $\mu\text{m}$	2.22 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.673		
Theta	85.4°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 539.977$  (brightness)

$B = 123.622$  (background)

$a = 0.787$  px

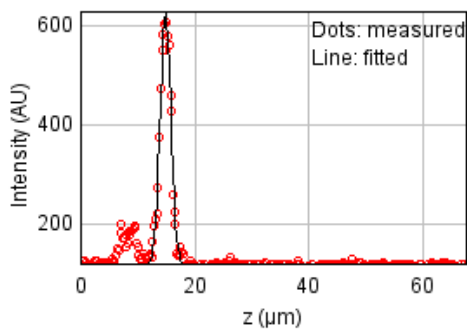
$b = 0.035$  px

$c = 0.360$  px

$x_c = 6.842$  px

$y_c = 6.540$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 99521.6605

Standard deviation: 18.00485

$R^2: 0.94968$

Parameters:

$a = 118.51983$

$b = 629.38299$

$c = 14.95429$

$d = 0.93957$

## Bead 583

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

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

Frame size : 12 pixels

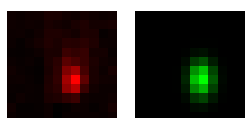
Coordinates : 23.5  $\mu\text{m}$  (x), 65.0  $\mu\text{m}$  (y), 12.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

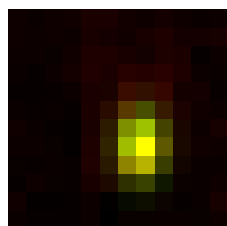
FWHM	Non corrected	Corrected	Theoretical
min	446 nm	464 nm	270 nm
max	650 nm	677 nm	270 nm
z	2.17 $\mu\text{m}$	2.17 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.686		
Theta	89.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 394.708$  (brightness)

$B = 126.702$  (background)

$a = 0.675$  px

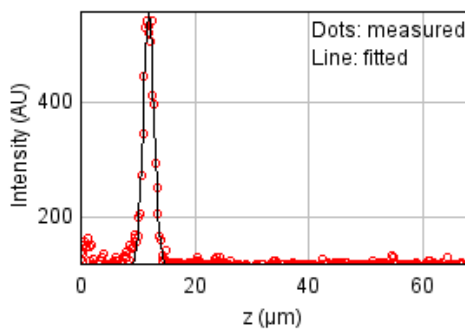
$b = 0.001$  px

$c = 0.318$  px

$x_c = 6.723$  px

$y_c = 6.936$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 40620.1976

Standard deviation: 11.50275

$R^2: 0.97197$

Parameters:

$a = 115.94571$

$b = 562.79653$

$c = 12.01011$

$d = 0.91975$

## Bead 584

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

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

Frame size : 12 pixels

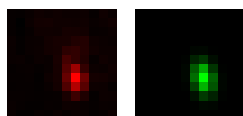
Coordinates : 4.17  $\mu\text{m}$  (x), 60.4  $\mu\text{m}$  (y), 12.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

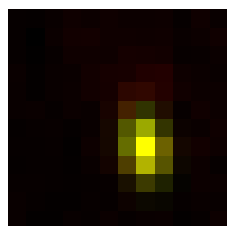
FWHM	Non corrected	Corrected	Theoretical
min	380 nm	395 nm	270 nm
max	605 nm	630 nm	270 nm
z	1.93 $\mu\text{m}$	1.93 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.627		
Theta	-79.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 548.363 (brightness)

B = 126.676 (background)

a = 0.912 px

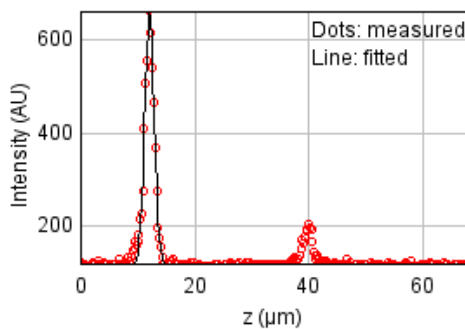
b = -0.104 px

c = 0.386 px

xc = 6.972 px

yc = 7.030 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 79081.0573

Standard deviation: 16.04970

$R^2$ : 0.95882

Parameters:

a = 119.20815

b = 659.36742

c = 12.14321

d = 0.81825

## Bead 585

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

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

Frame size : 12 pixels

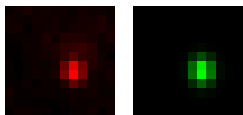
Coordinates : 98.6  $\mu\text{m}$  (x), 59.4  $\mu\text{m}$  (y), 11.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

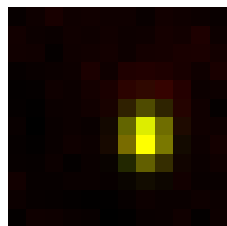
FWHM	Non corrected	Corrected	Theoretical
min	407 nm	424 nm	270 nm
max	503 nm	524 nm	270 nm
z	2.02 $\mu\text{m}$	2.03 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.809		
Theta	-88.9°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 351.192$  (brightness)

$B = 120.662$  (background)

$a = 0.811$  px

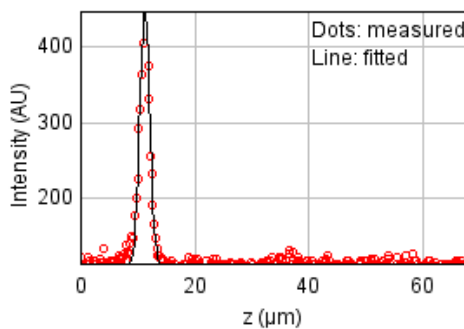
$b = -0.005$  px

$c = 0.531$  px

$x_c = 7.029$  px

$y_c = 6.571$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 21097.7061

Standard deviation: 8.28988

$R^2: 0.97212$

Parameters:

$a = 114.28987$

$b = 448.23021$

$c = 11.32959$

$d = 0.85726$

## Bead 586 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 62.9  $\mu\text{m}$  (x), 32.0  $\mu\text{m}$  (y), 12.2  $\mu\text{m}$  (z)

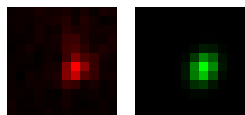
Corresponding bead : Not found

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

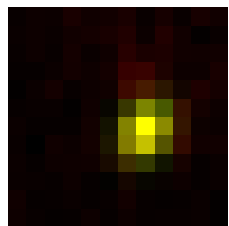
FWHM	Non corrected	Corrected	Theoretical
min	440 nm	459 nm	270 nm
max	569 nm	593 nm	270 nm
z	3.44 $\mu\text{m}$	3.45 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.773		
Theta	64.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 301.133 (brightness)

B = 120.666 (background)

a = 0.640 px

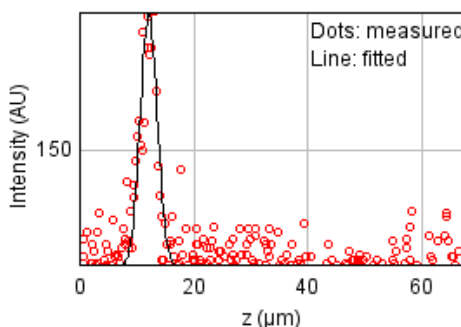
b = 0.108 px

c = 0.466 px

xc = 6.985 px

yc = 6.201 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17493.6690

Standard deviation: 7.54868

$R^2$ : 0.80321

Parameters:

a = 113.17096

b = 194.25073

c = 12.19938

d = 1.45956

## Bead 587 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 48.8  $\mu\text{m}$  (x), 21.8  $\mu\text{m}$  (y), 12.4  $\mu\text{m}$  (z)

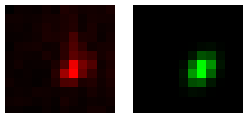
Corresponding bead : Not found

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

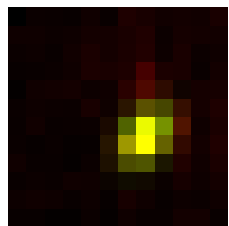
FWHM	Non corrected	Corrected	Theoretical
min	394 nm	410 nm	270 nm
max	563 nm	586 nm	270 nm
z	3.65 $\mu\text{m}$	3.67 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.7		
Theta	56.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 295.298 (brightness)

B = 119.581 (background)

a = 0.731 px

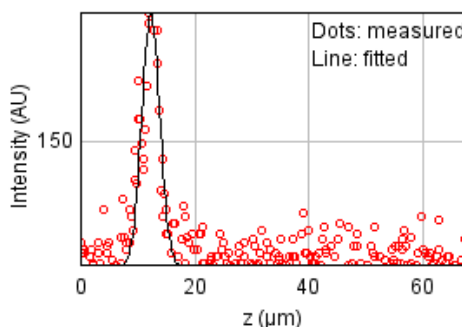
b = 0.203 px

c = 0.557 px

xc = 6.985 px

yc = 6.520 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18014.7145

Standard deviation: 7.66028

$R^2$ : 0.78512

Parameters:

a = 113.16281

b = 188.88481

c = 12.37866

d = 1.55067

## Bead 588

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

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

Frame size : 12 pixels

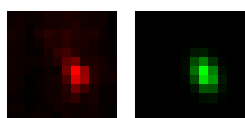
Coordinates : 41.4  $\mu\text{m}$  (x), 6.63  $\mu\text{m}$  (y), 11.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

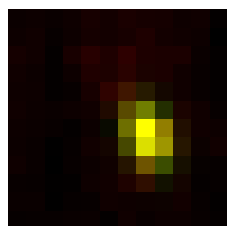
FWHM	Non corrected	Corrected	Theoretical
min	404 nm	421 nm	270 nm
max	608 nm	634 nm	270 nm
z	2.02 $\mu\text{m}$	2.03 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.664		
Theta	-69.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.924$



Parameters:

A = 338.404 (brightness)

B = 121.758 (background)

a = 0.765 px

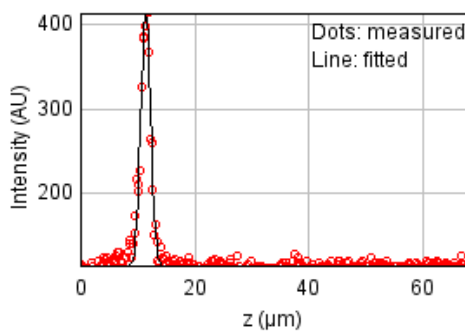
b = -0.152 px

c = 0.420 px

xc = 7.118 px

yc = 6.385 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24582.3089

Standard deviation: 8.94833

$R^2$ : 0.96026

Parameters:

a = 113.65263

b = 413.61490

c = 11.49575

d = 0.85788



## Bead 589

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

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

Frame size : 12 pixels

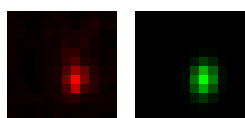
Coordinates : 19.4  $\mu\text{m}$  (x), -1.64  $\mu\text{m}$  (y), 11.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

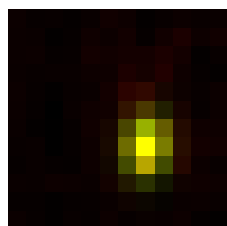
FWHM	Non corrected	Corrected	Theoretical
min	410 nm	427 nm	270 nm
max	584 nm	608 nm	270 nm
z	2.15 $\mu\text{m}$	2.16 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.703		
Theta	85.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 367.529$  (brightness)

$B = 121.973$  (background)

$a = 0.794$  px

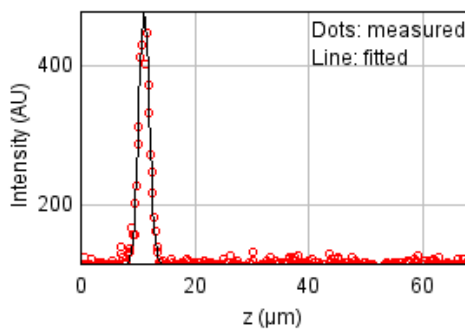
$b = 0.034$  px

$c = 0.397$  px

$x_c = 7.046$  px

$y_c = 6.954$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 24671.9829

Standard deviation: 8.96464

$R^2: 0.97397$

Parameters:

$a = 114.17478$

$b = 476.92799$

$c = 11.20624$

$d = 0.91436$

## Bead 590 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -21.9  $\mu\text{m}$  (x), -15.4  $\mu\text{m}$  (y), 13.9  $\mu\text{m}$  (z)

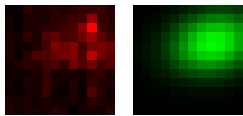
Corresponding bead : Not found

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

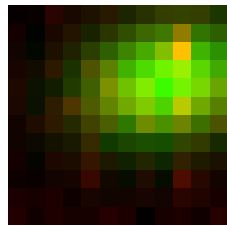
FWHM	Non corrected	Corrected	Theoretical
min	1.11 $\mu\text{m}$	1.16 $\mu\text{m}$	270 nm
max	1.61 $\mu\text{m}$	1.67 $\mu\text{m}$	270 nm
z	932 nm	936 nm	1.3 $\mu\text{m}$
Asymmetry	0.693		
Theta	12.3°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.655$



Parameters:

A = 62.216 (brightness)

B = 112.956 (background)

a = 0.055 px

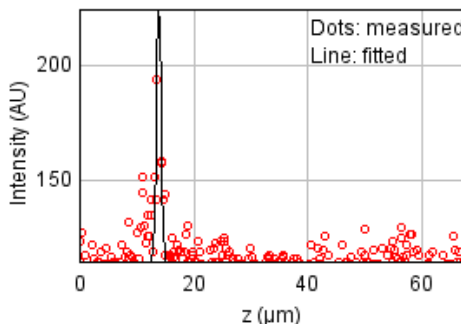
b = 0.012 px

c = 0.106 px

xc = 8.286 px

yc = 3.644 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17803.5794

Standard deviation: 7.61526

$R^2$ : 0.68547

Parameters:

a = 114.40041

b = 225.86769

c = 13.93243

d = 0.39580

## Bead 591 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 117 um (x), -49.8 um (y), 8.58 um (z)

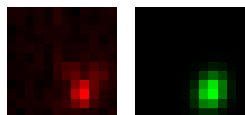
Corresponding bead : Not found

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

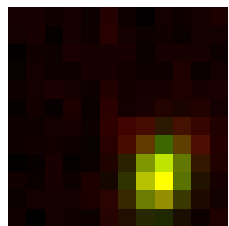
FWHM	Non corrected	Corrected	Theoretical
min	489 nm	510 nm	270 nm
max	646 nm	673 nm	270 nm
z	3.23 um	3.24 um	1.3 um
Asymmetry	0.758		
Theta	70.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.865$



Parameters:

A = 193.933 (brightness)

B = 118.382 (background)

a = 0.535 px

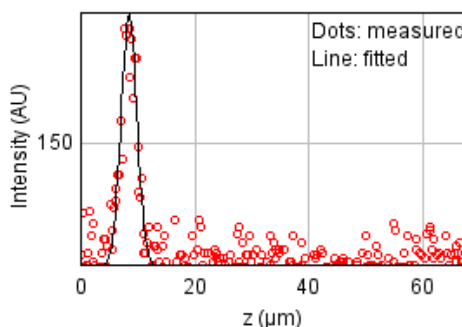
b = 0.074 px

c = 0.347 px

xc = 7.798 px

yc = 8.700 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 12750.9470

Standard deviation: 6.44469

$R^2$ : 0.83396

Parameters:

a = 111.64441

b = 190.67976

c = 8.57529

d = 1.37092

## Bead 592 (Rejected)

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

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

Frame size : 12 pixels

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

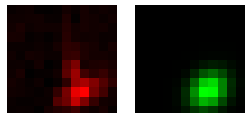
Corresponding bead : Not found

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

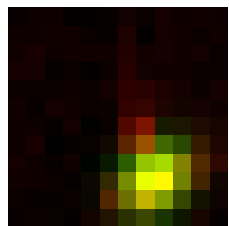
FWHM	Non corrected	Corrected	Theoretical
min	599 nm	624 nm	270 nm
max	743 nm	774 nm	270 nm
z	2.67 $\mu\text{m}$	2.69 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.807		
Theta	46.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.832$



Parameters:

A = 200.083 (brightness)

B = 116.411 (background)

a = 0.313 px

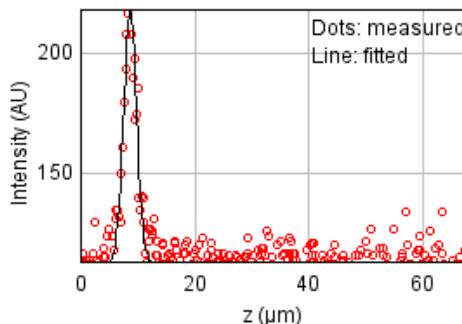
b = 0.065 px

c = 0.304 px

xc = 7.497 px

yc = 8.822 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15564.2867

Standard deviation: 7.12025

$R^2$ : 0.86008

Parameters:

a = 112.72899

b = 218.15475

c = 8.75863

d = 1.13593

## Bead 593 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 107  $\mu\text{m}$  (x), -74.0  $\mu\text{m}$  (y), 12.2  $\mu\text{m}$  (z)

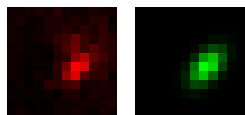
Corresponding bead : Not found

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

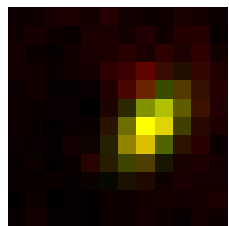
FWHM	Non corrected	Corrected	Theoretical
min	439 nm	457 nm	270 nm
max	762 nm	793 nm	270 nm
z	3.37 $\mu\text{m}$	3.38 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.576		
Theta	50.5°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.863$



Parameters:

A = 256.968 (brightness)

B = 120.919 (background)

a = 0.508 px

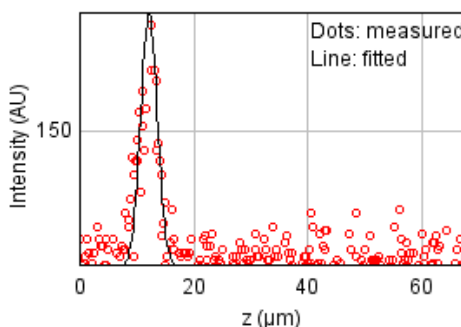
b = 0.228 px

c = 0.419 px

xc = 7.324 px

yc = 5.990 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14462.9751

Standard deviation: 6.86372

$R^2$ : 0.79680

Parameters:

a = 111.46165

b = 184.38756

c = 12.24265

d = 1.43075

## Bead 594 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : -51.9  $\mu\text{m}$  (x), 91.9  $\mu\text{m}$  (y), 11.6  $\mu\text{m}$  (z)

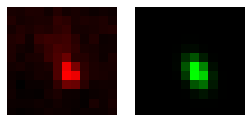
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

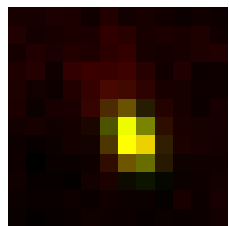
FWHM	Non corrected	Corrected	Theoretical
min	369 nm	384 nm	270 nm
max	554 nm	577 nm	270 nm
z	2.23 $\mu\text{m}$	2.24 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.667		
Theta	-62.9°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.877$



Parameters:

A = 317.746 (brightness)

B = 125.187 (background)

a = 0.871 px

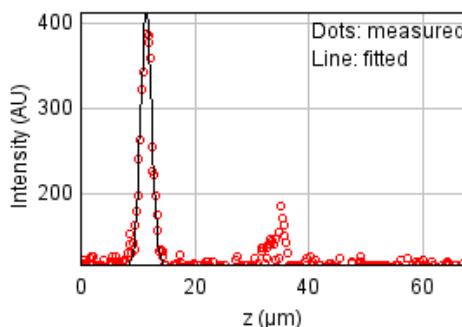
b = -0.222 px

c = 0.551 px

xc = 6.291 px

yc = 6.626 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 43111.7745

Standard deviation: 11.85028

$R^2$ : 0.93720

Parameters:

a = 116.25115

b = 413.89969

c = 11.57573

d = 0.94849

## Bead 595 (Rejected)

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

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

Frame size : 12 pixels

Coordinates : 1.69  $\mu\text{m}$  (x), 89.3  $\mu\text{m}$  (y), 9.85  $\mu\text{m}$  (z)

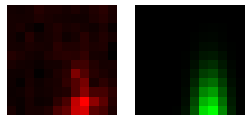
Corresponding bead : Not found

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

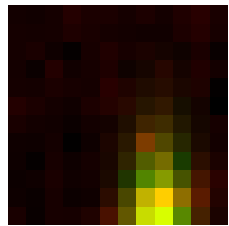
FWHM	Non corrected	Corrected	Theoretical
min	591 nm	615 nm	270 nm
max	1.95 $\mu\text{m}$	2.03 $\mu\text{m}$	270 nm
z	3.26 $\mu\text{m}$	3.28 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.303		
Theta	89.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 219.697 (brightness)

B = 117.590 (background)

a = 0.384 px

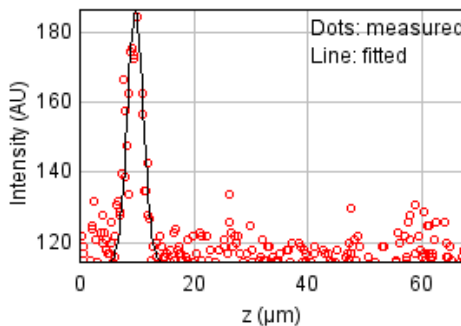
b = 0.002 px

c = 0.035 px

xc = 7.677 px

yc = 13.509 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15353.5600

Standard deviation: 7.07189

$R^2$ : 0.77903

Parameters:

a = 114.32668

b = 186.63656

c = 9.85064

d = 1.38537

## Bead 596

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

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

Frame size : 12 pixels

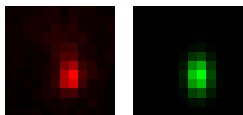
Coordinates : 21.9  $\mu\text{m}$  (x), 89.8  $\mu\text{m}$  (y), 11.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

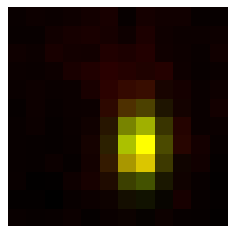
FWHM	Non corrected	Corrected	Theoretical
min	421 nm	438 nm	270 nm
max	656 nm	683 nm	270 nm
z	1.96 $\mu\text{m}$	1.97 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.641		
Theta	89.1°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 364.783$  (brightness)

$B = 122.995$  (background)

$a = 0.759$  px

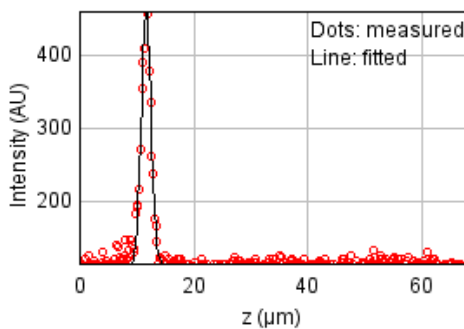
$b = 0.007$  px

$c = 0.312$  px

$x_c = 6.683$  px

$y_c = 7.099$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 23820.9188

Standard deviation: 8.80866

$R^2: 0.96994$

Parameters:

$a = 114.81011$

$b = 460.60824$

$c = 11.75767$

$d = 0.83440$



## Bead 597

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

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

Frame size : 12 pixels

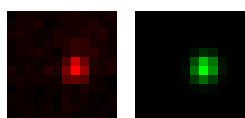
Coordinates : 144 um (x), 79.4 um (y), 11.7 um (z)

Corresponding bead : Not found

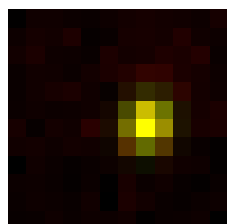
FWHM	Non corrected	Corrected	Theoretical
min	429 nm	447 nm	270 nm
max	484 nm	504 nm	270 nm
z	2.28 um	2.29 um	1.3 um
Asymmetry	0.887		
Theta	73.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 248.060 (brightness)

B = 116.803 (background)

a = 0.714 px

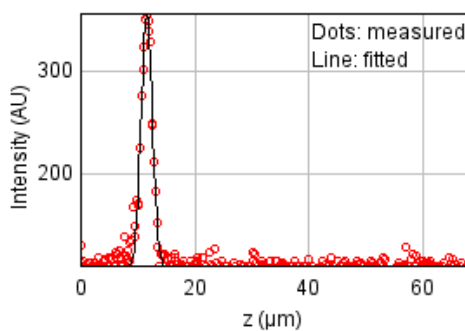
b = 0.043 px

c = 0.586 px

xc = 7.105 px

yc = 5.747 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19553.7990

Standard deviation: 7.98080

$R^2$ : 0.95765

Parameters:

a = 111.39844

b = 355.78653

c = 11.68073

d = 0.96796

## Bead 598

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

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

Frame size : 12 pixels

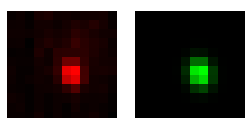
Coordinates : 85.7  $\mu\text{m}$  (x), 61.0  $\mu\text{m}$  (y), 11.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

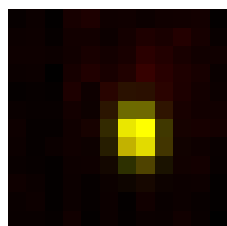
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	422 nm	270 nm
max	513 nm	534 nm	270 nm
z	2.36 $\mu\text{m}$	2.37 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.79		
Theta	-79.8°		

### XY profile & fitting parameters :

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



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



Parameters:

$A = 413.526$  (brightness)

$B = 122.045$  (background)

$a = 0.808$  px

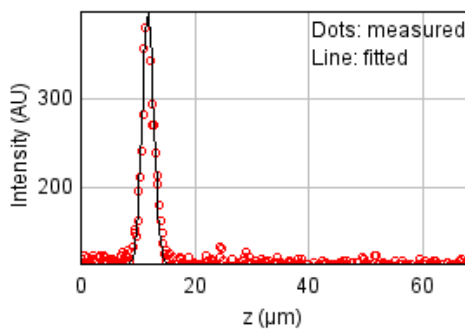
$b = -0.054$  px

$c = 0.520$  px

$x_c = 6.581$  px

$y_c = 6.311$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25815.1886

Standard deviation: 9.16998

$R^2: 0.96041$

Parameters:

$a = 112.77391$

$b = 398.75203$

$c = 11.88789$

$d = 1.00315$

## Bead 599 (Rejected)

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

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

Frame size : 12 pixels

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

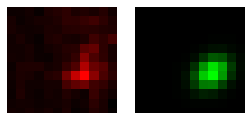
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

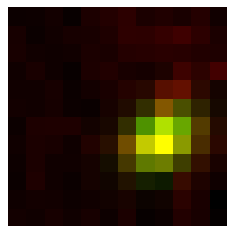
FWHM	Non corrected	Corrected	Theoretical
min	519 nm	541 nm	270 nm
max	683 nm	711 nm	270 nm
z	1.27 $\mu\text{m}$	1.27 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.76		
Theta	38.2°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.799$



Parameters:

A = 163.276 (brightness)

B = 118.269 (background)

a = 0.368 px

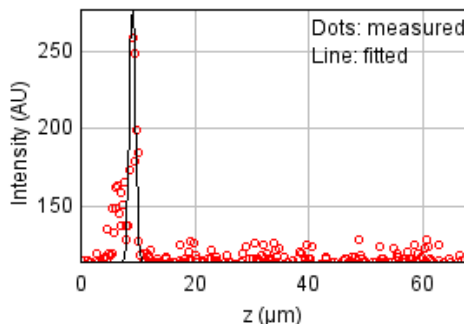
b = 0.102 px

c = 0.418 px

xc = 7.910 px

yc = 6.668 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 34498.4573

Standard deviation: 10.60060

$R^2$ : 0.76470

Parameters:

a = 114.76653

b = 277.92440

c = 9.16277

d = 0.53788

## Bead 600

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

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

Frame size : 12 pixels

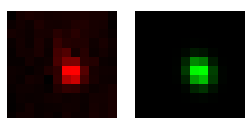
Coordinates : 75.6  $\mu\text{m}$  (x), 47.8  $\mu\text{m}$  (y), 11.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

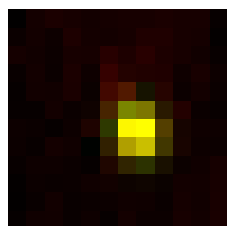
FWHM	Non corrected	Corrected	Theoretical
min	425 nm	442 nm	270 nm
max	517 nm	538 nm	270 nm
z	2.46 $\mu\text{m}$	2.47 $\mu\text{m}$	1.3 $\mu\text{m}$
Asymmetry	0.822		
Theta	-70.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 298.243 (brightness)

B = 120.178 (background)

a = 0.717 px

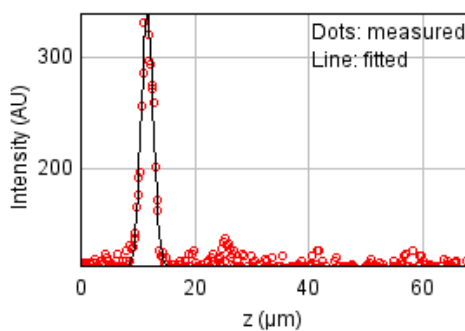
b = -0.076 px

c = 0.529 px

xc = 6.538 px

yc = 6.158 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19684.3054

Standard deviation: 8.00739

$R^2$ : 0.95357

Parameters:

a = 113.99080

b = 339.58520

c = 11.76715

d = 1.04298