

## Bead 2701

Date : Mon Oct 17 13:30:02 PDT 2022

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

Frame size : 10 pixels

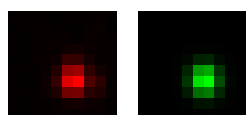
Coordinates : 122  $\mu\text{m}$  (x), -89.1  $\mu\text{m}$  (y), 60.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 447 nm             | 462 nm             | 223 nm      |
| max       | 485 nm             | 501 nm             | 223 nm      |
| z         | 1.52 $\mu\text{m}$ | 1.53 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.922              |                    |             |
| Theta     | -86.1°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1736.881$  (brightness)

$B = 124.275$  (background)

$a = 0.671$  px

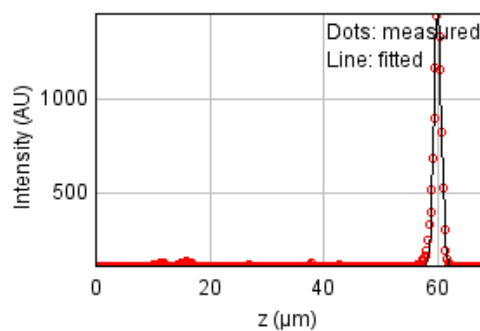
$b = -0.007$  px

$c = 0.571$  px

$x_c = 5.588$  px

$y_c = 5.863$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 98798.0205

Standard deviation: 17.93928

$R^2: 0.98920$

Parameters:

$a = 114.32202$

$b = 1456.70110$

$c = 59.99575$

$d = 0.64531$

## Bead 2702

Date : Mon Oct 17 13:30:02 PDT 2022

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

Frame size : 10 pixels

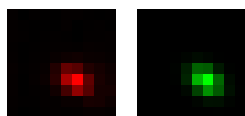
Coordinates : 163  $\mu\text{m}$  (x), -91.1  $\mu\text{m}$  (y), 60.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

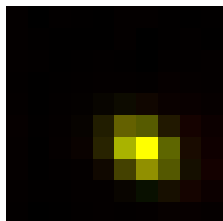
| FWHM      | Non corrected      | Corrected         | Theoretical |
|-----------|--------------------|-------------------|-------------|
| min       | 375 nm             | 388 nm            | 223 nm      |
| max       | 521 nm             | 539 nm            | 223 nm      |
| z         | 2.99 $\mu\text{m}$ | 3.0 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.72               |                   |             |
| Theta     | -34.4°             |                   |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1147.430 (brightness)

B = 120.468 (background)

a = 0.640 px

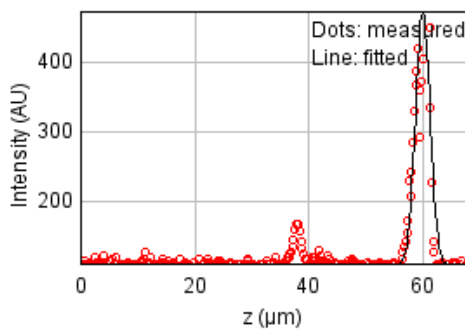
b = -0.214 px

c = 0.807 px

$x_c = 5.812$  px

$y_c = 6.093$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 166674.045

Standard deviation: 23.30048

$R^2$ : 0.88241

Parameters:

a = 111.38973

b = 473.25159

c = 60.01711

d = 1.26995

## Bead 2703

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

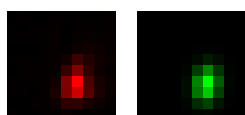
Coordinates : -29.9  $\mu\text{m}$  (x), 95.6  $\mu\text{m}$  (y), 60.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

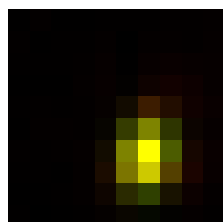
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 396 nm             | 409 nm             | 223 nm      |
| max       | 551 nm             | 570 nm             | 223 nm      |
| z         | 1.08 $\mu\text{m}$ | 1.09 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.718              |                    |             |
| Theta     | 81.3°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1659.346 (brightness)

B = 132.933 (background)

a = 0.848 px

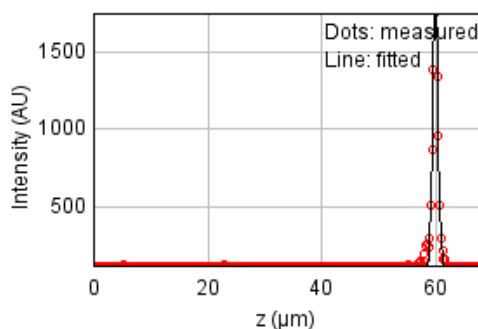
b = 0.062 px

c = 0.451 px

$x_c = 5.876$  px

$y_c = 6.252$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 88312.4971

Standard deviation: 16.96063

$R^2$ : 0.99135

Parameters:

a = 116.13225

b = 1789.18399

c = 59.95264

d = 0.45977

## Bead 2704

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

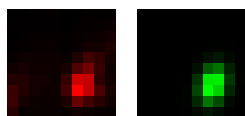
Coordinates : 83.0 um (x), 94.1 um (y), 60.3 um (z)

Corresponding bead : Not found

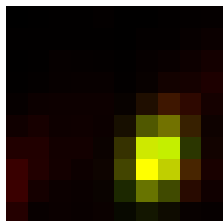
| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 410 nm        | 424 nm    | 223 nm      |
| max       | 577 nm        | 596 nm    | 223 nm      |
| z         | 1.61 um       | 1.61 um   | 885 nm      |
| Asymmetry | 0.712         |           |             |
| Theta     | 71.7°         |           |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1374.667$  (brightness)

$B = 167.011$  (background)

$a = 0.758$  px

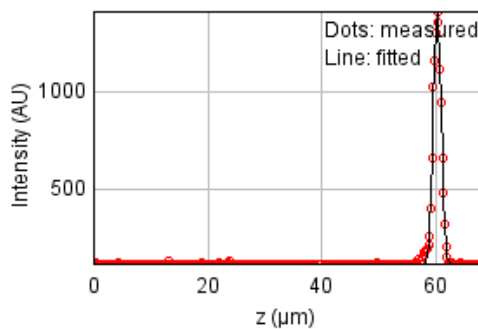
$b = 0.117$  px

$c = 0.442$  px

$x_c = 6.440$  px

$y_c = 6.488$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 45265.3608

Standard deviation: 12.14266

$R^2: 0.99490$

Parameters:

$a = 114.18502$

$b = 1405.34193$

$c = 60.27788$

$d = 0.68187$

## Bead 2705

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

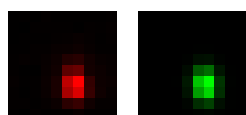
Coordinates : -159  $\mu\text{m}$  (x), 72.5  $\mu\text{m}$  (y), 60.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

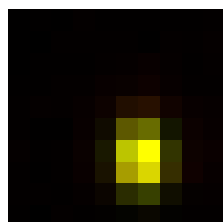
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 379 nm             | 392 nm             | 223 nm      |
| max       | 510 nm             | 528 nm             | 223 nm      |
| z         | 1.18 $\mu\text{m}$ | 1.19 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.743              |                    |             |
| Theta     | -86.5°             |                    |             |

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.989$



Parameters:

A = 1016.589 (brightness)

B = 119.241 (background)

a = 0.930 px

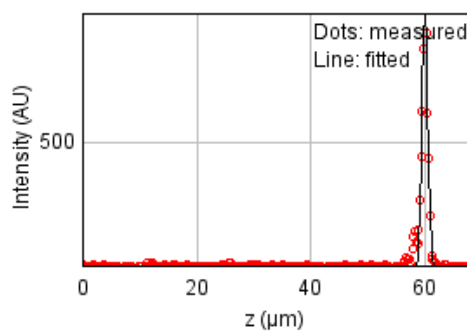
b = -0.026 px

c = 0.517 px

xc = 5.650 px

yc = 6.312 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 61553.6252

Standard deviation: 14.15982

$R^2$ : 0.97597

Parameters:

a = 112.65440

b = 908.58069

c = 60.04968

d = 0.50299

## Bead 2706

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

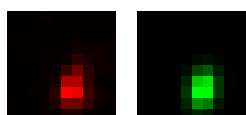
Coordinates : -21.2  $\mu\text{m}$  (x), 37.0  $\mu\text{m}$  (y), 60.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

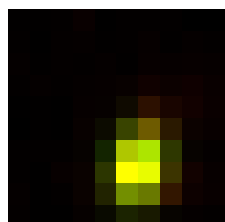
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 409 nm             | 423 nm             | 223 nm      |
| max       | 580 nm             | 599 nm             | 223 nm      |
| z         | 1.42 $\mu\text{m}$ | 1.42 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.706              |                    |             |
| Theta     | 78.6°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1205.296 (brightness)

B = 134.433 (background)

a = 0.785 px

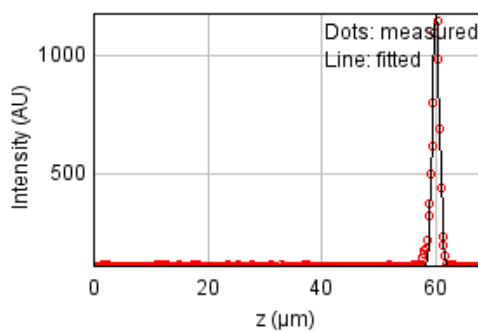
b = 0.077 px

c = 0.415 px

xc = 5.521 px

yc = 6.703 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 79909.1045

Standard deviation: 16.13351

$R^2$ : 0.98512

Parameters:

a = 115.01315

b = 1177.14042

c = 60.07257

d = 0.60091

## Bead 2707

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

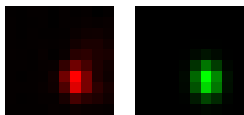
Coordinates : 119  $\mu\text{m}$  (x), 34.9  $\mu\text{m}$  (y), 60.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

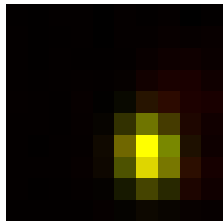
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 416 nm             | 430 nm             | 223 nm      |
| max       | 530 nm             | 547 nm             | 223 nm      |
| z         | 1.32 $\mu\text{m}$ | 1.32 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.786              |                    |             |
| Theta     | -85.2°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1335.287$  (brightness)

$B = 130.411$  (background)

$a = 0.772$  px

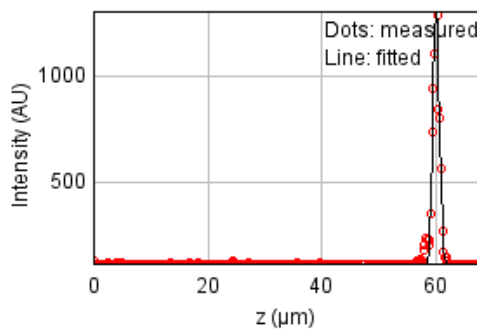
$b = -0.024$  px

$c = 0.481$  px

$x_c = 6.100$  px

$y_c = 6.319$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 128619.528

Standard deviation: 20.46842

$R^2: 0.97975$

Parameters:

$a = 113.54072$

$b = 1305.55552$

$c = 60.08995$

$d = 0.55991$

## Bead 2708

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

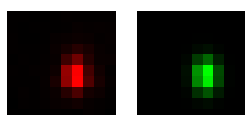
Coordinates : -112  $\mu\text{m}$  (x), 4.97  $\mu\text{m}$  (y), 59.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

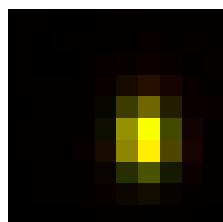
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 384 nm             | 397 nm             | 223 nm      |
| max       | 521 nm             | 538 nm             | 223 nm      |
| z         | 1.16 $\mu\text{m}$ | 1.16 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.738              |                    |             |
| Theta     | -88.8°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1675.292 (brightness)

B = 123.474 (background)

a = 0.909 px

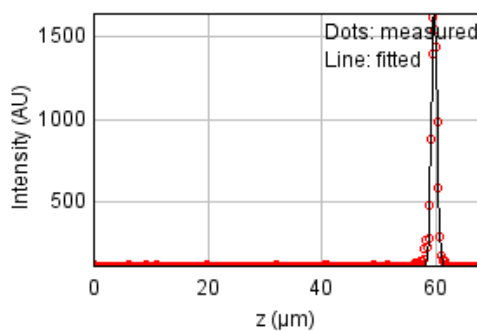
b = -0.009 px

c = 0.495 px

$x_c = 5.813$  px

$y_c = 5.425$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 80354.0703

Standard deviation: 16.17837

$R^2$ : 0.99147

Parameters:

a = 114.55769

b = 1668.99587

c = 59.74795

d = 0.49237



## Bead 2709

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

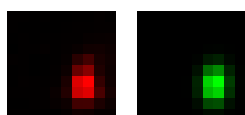
Coordinates : -28.0  $\mu\text{m}$  (x), 2.8  $\mu\text{m}$  (y), 60.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

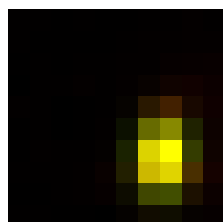
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 404 nm             | 417 nm             | 223 nm      |
| max       | 576 nm             | 595 nm             | 223 nm      |
| z         | 1.04 $\mu\text{m}$ | 1.04 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.701              |                    |             |
| Theta     | 86.4°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1676.080 (brightness)

B = 126.552 (background)

a = 0.821 px

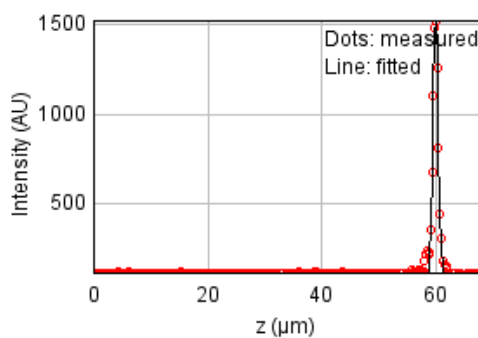
b = 0.026 px

c = 0.406 px

xc = 6.607 px

yc = 6.293 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 72890.8286

Standard deviation: 15.40874

$R^2$ : 0.98979

Parameters:

a = 115.75442

b = 1542.46576

c = 59.98788

d = 0.44099

## Bead 2710

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

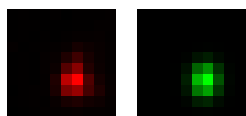
Coordinates : 5.0  $\mu\text{m}$  (x), -23.3  $\mu\text{m}$  (y), 60.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

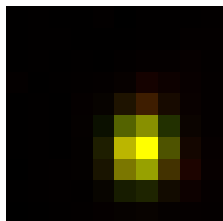
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 427 nm             | 441 nm             | 223 nm      |
| max       | 509 nm             | 527 nm             | 223 nm      |
| z         | 1.04 $\mu\text{m}$ | 1.05 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.838              |                    |             |
| Theta     | 84.8°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1784.266 (brightness)

B = 128.040 (background)

a = 0.735 px

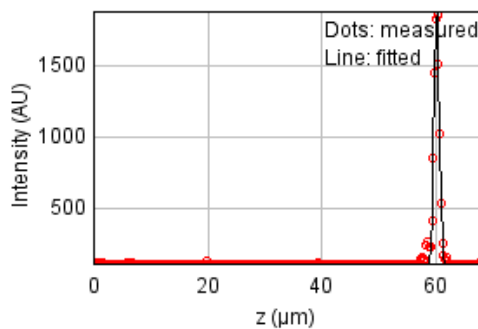
b = 0.020 px

c = 0.519 px

$x_c = 5.729$  px

$y_c = 6.064$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 99835.3129

Standard deviation: 18.03320

$R^2$ : 0.99109

Parameters:

a = 116.82136

b = 1903.08749

c = 60.19514

d = 0.44202

## Bead 2711

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

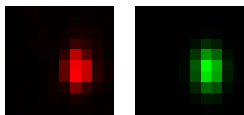
Coordinates : -78.9  $\mu\text{m}$  (x), -42.1  $\mu\text{m}$  (y), 60.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

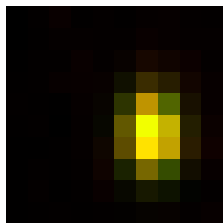
| FWHM      | Non corrected     | Corrected          | Theoretical |
|-----------|-------------------|--------------------|-------------|
| min       | 434 nm            | 448 nm             | 223 nm      |
| max       | 635 nm            | 657 nm             | 223 nm      |
| z         | 1.5 $\mu\text{m}$ | 1.51 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.682             |                    |             |
| Theta     | -88.0°            |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1142.659 (brightness)

B = 118.693 (background)

a = 0.713 px

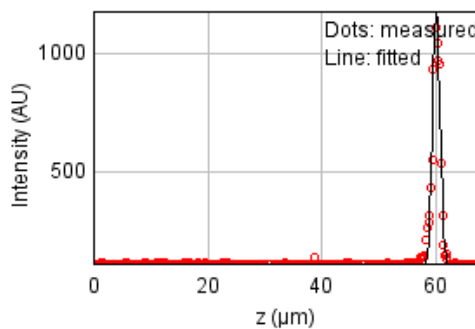
b = -0.013 px

c = 0.333 px

xc = 6.254 px

yc = 5.328 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 165528.344

Standard deviation: 23.22026

$R^2$ : 0.97131

Parameters:

a = 114.49822

b = 1176.52571

c = 60.11147

d = 0.63804

## Bead 2712

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

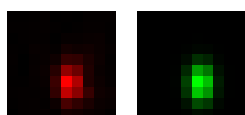
Coordinates : 44.7  $\mu\text{m}$  (x), -45.1  $\mu\text{m}$  (y), 59.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

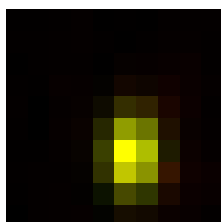
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 401 nm             | 414 nm             | 223 nm      |
| max       | 599 nm             | 620 nm             | 223 nm      |
| z         | 1.31 $\mu\text{m}$ | 1.31 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.668              |                    |             |
| Theta     | 90.0°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1036.513 (brightness)

B = 127.039 (background)

a = 0.837 px

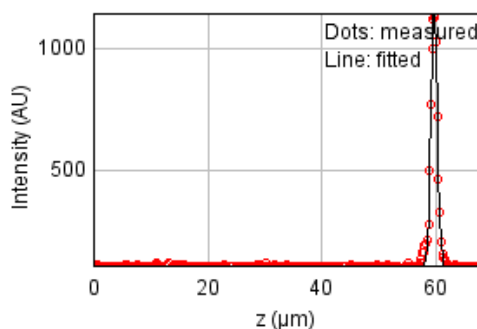
b = 0.000 px

c = 0.373 px

xc = 5.323 px

yc = 6.155 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 38681.4324

Standard deviation: 11.22489

$R^2$ : 0.99186

Parameters:

a = 114.60542

b = 1156.76634

c = 59.72464

d = 0.55478

## Bead 2713

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

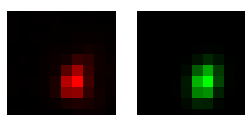
Coordinates : 80.5  $\mu\text{m}$  (x), -54.3  $\mu\text{m}$  (y), 60.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

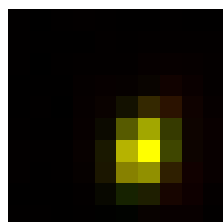
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 393 nm             | 406 nm             | 223 nm      |
| max       | 541 nm             | 559 nm             | 223 nm      |
| z         | 1.31 $\mu\text{m}$ | 1.32 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.727              |                    |             |
| Theta     | 71.5°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1992.856 (brightness)

B = 131.463 (background)

a = 0.827 px

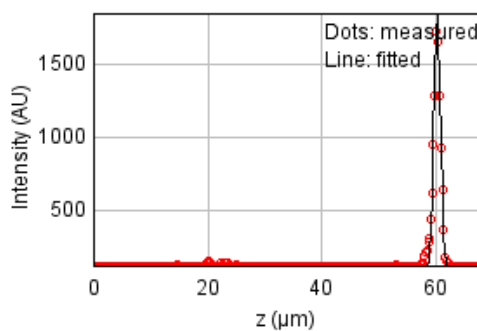
b = 0.123 px

c = 0.500 px

xc = 5.716 px

yc = 5.998 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 133568.721

Standard deviation: 20.85851

$R^2$ : 0.98986

Parameters:

a = 116.55467

b = 1846.94377

c = 60.26914

d = 0.55698

## Bead 2714

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

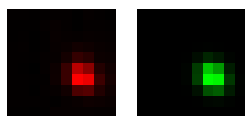
Coordinates : 136  $\mu\text{m}$  (x), -81.8  $\mu\text{m}$  (y), 60.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

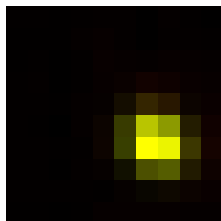
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 405 nm             | 419 nm             | 223 nm      |
| max       | 466 nm             | 482 nm             | 223 nm      |
| z         | 1.41 $\mu\text{m}$ | 1.41 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.869              |                    |             |
| Theta     | -46.8°             |                    |             |

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.990$



Parameters:

$A = 2039.225$  (brightness)

$B = 127.657$  (background)

$a = 0.724$  px

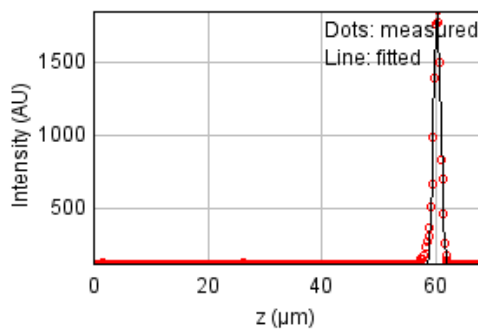
$b = -0.100$  px

$c = 0.712$  px

$x_c = 6.433$  px

$y_c = 5.743$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 154518.517

Standard deviation: 22.43474

$R^2: 0.98912$

Parameters:

$a = 112.48354$

$b = 1847.89966$

$c = 60.27049$

$d = 0.59769$

## Bead 2715

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

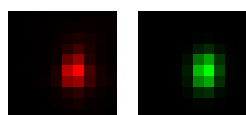
Coordinates : -22.5  $\mu\text{m}$  (x), -88.4  $\mu\text{m}$  (y), 60.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

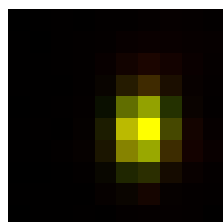
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 412 nm             | 425 nm             | 223 nm      |
| max       | 554 nm             | 573 nm             | 223 nm      |
| z         | 1.16 $\mu\text{m}$ | 1.16 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.743              |                    |             |
| Theta     | 84.6°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1939.841 (brightness)

B = 136.682 (background)

a = 0.789 px

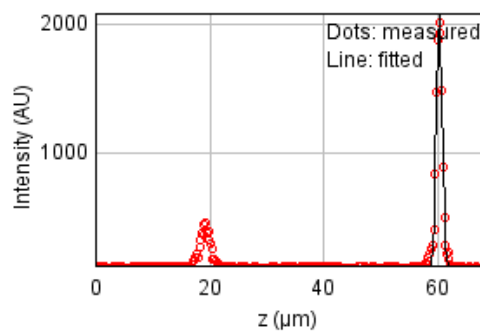
b = 0.033 px

c = 0.440 px

$x_c = 5.699$  px

$y_c = 5.045$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 854200.945

Standard deviation: 52.74859

$R^2$ : 0.94488

Parameters:

a = 127.90669

b = 2077.39189

c = 60.29098

d = 0.49085

## Bead 2716

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

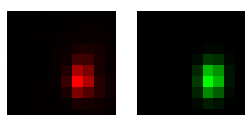
Coordinates : 57.9  $\mu\text{m}$  (x), -89.5  $\mu\text{m}$  (y), 60.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

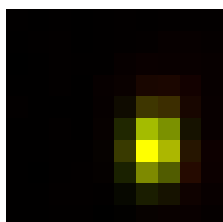
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 383 nm             | 396 nm             | 223 nm      |
| max       | 540 nm             | 558 nm             | 223 nm      |
| z         | 1.39 $\mu\text{m}$ | 1.39 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.709              |                    |             |
| Theta     | 85.2°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 2032.364$  (brightness)

$B = 134.631$  (background)

$a = 0.913$  px

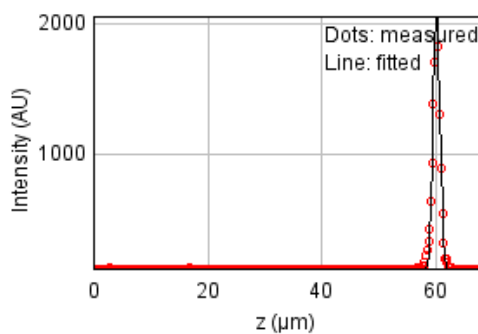
$b = 0.038$  px

$c = 0.464$  px

$x_c = 6.325$  px

$y_c = 5.808$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 91666.6793

Standard deviation: 17.27971

$R^2: 0.99488$

Parameters:

$a = 114.43667$

$b = 2081.13685$

$c = 60.15813$

$d = 0.58950$



## Bead 2717

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

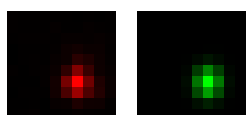
Coordinates : -67.1  $\mu\text{m}$  (x), -93.5  $\mu\text{m}$  (y), 60.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

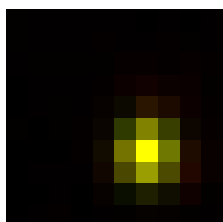
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 415 nm             | 429 nm             | 223 nm      |
| max       | 482 nm             | 498 nm             | 223 nm      |
| z         | 1.28 $\mu\text{m}$ | 1.29 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.862              |                    |             |
| Theta     | 87.4°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1578.204 (brightness)

B = 128.439 (background)

a = 0.778 px

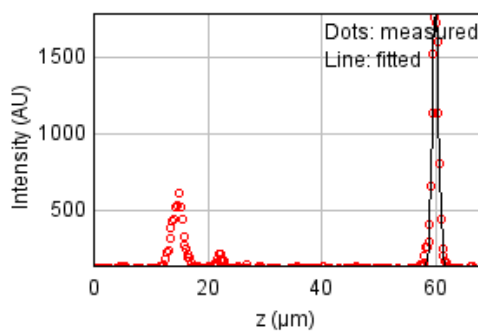
b = 0.009 px

c = 0.579 px

xc = 6.011 px

yc = 6.083 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 1805398.11

Standard deviation: 76.68622

$R^2$ : 0.86845

Parameters:

a = 137.04132

b = 1808.05475

c = 59.96667

d = 0.54536

## Bead 2718

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

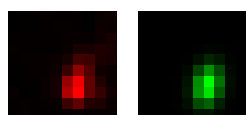
Coordinates : 134  $\mu\text{m}$  (x), 95.0  $\mu\text{m}$  (y), 60.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

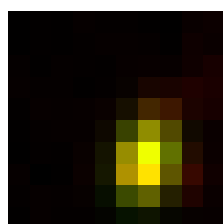
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 431 nm             | 445 nm             | 223 nm      |
| max       | 625 nm             | 646 nm             | 223 nm      |
| z         | 1.65 $\mu\text{m}$ | 1.66 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.689              |                    |             |
| Theta     | 77.6°              |                    |             |

### 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 = 958.661 (brightness)

B = 125.195 (background)

a = 0.706 px

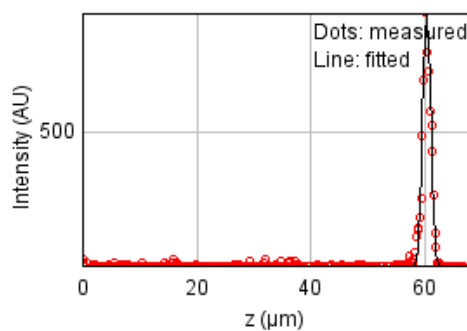
b = 0.080 px

c = 0.362 px

xc = 5.880 px

yc = 6.355 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 101639.599

Standard deviation: 18.19543

$R^2$ : 0.96698

Parameters:

a = 112.45375

b = 851.24263

c = 60.36397

d = 0.70272

## Bead 2719

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

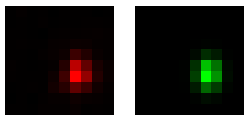
Coordinates : -126  $\mu\text{m}$  (x), 19.9  $\mu\text{m}$  (y), 60.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

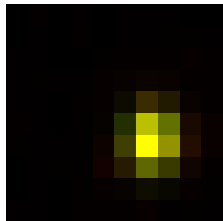
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 371 nm             | 383 nm             | 223 nm      |
| max       | 474 nm             | 490 nm             | 223 nm      |
| z         | 1.21 $\mu\text{m}$ | 1.21 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.781              |                    |             |
| Theta     | 88.4°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1964.051 (brightness)

B = 130.671 (background)

a = 0.976 px

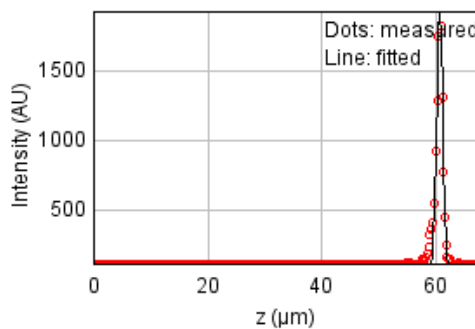
b = 0.011 px

c = 0.596 px

$x_c = 6.217$  px

$y_c = 5.735$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 251317.968

Standard deviation: 28.61163

$R^2$ : 0.98128

Parameters:

a = 116.66032

b = 1927.03665

c = 60.70001

d = 0.51261

## Bead 2720

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

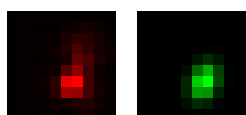
Coordinates : -2.72  $\mu\text{m}$  (x), 19.6  $\mu\text{m}$  (y), 60.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

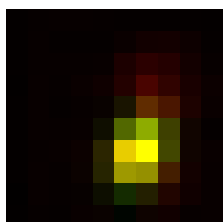
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 407 nm             | 420 nm             | 223 nm      |
| max       | 563 nm             | 582 nm             | 223 nm      |
| z         | 1.28 $\mu\text{m}$ | 1.29 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.722              |                    |             |
| Theta     | 66.4°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1008.292 (brightness)

B = 133.903 (background)

a = 0.749 px

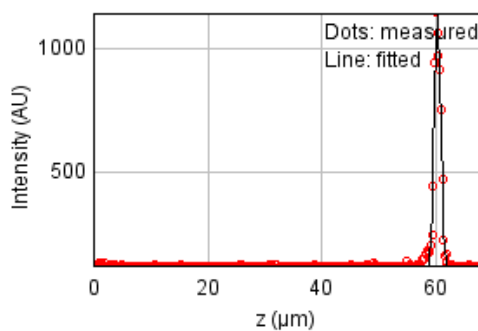
b = 0.143 px

c = 0.485 px

xc = 5.645 px

yc = 6.012 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 119814.629

Standard deviation: 19.75540

$R^2$ : 0.97440

Parameters:

a = 114.05084

b = 1148.68151

c = 60.32602

d = 0.54430

## Bead 2721

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

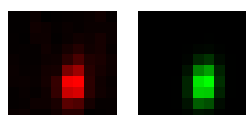
Coordinates : -161  $\mu\text{m}$  (x), -12.6  $\mu\text{m}$  (y), 59.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

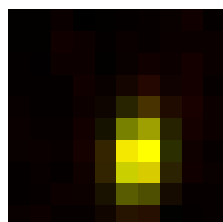
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 387 nm             | 400 nm             | 223 nm      |
| max       | 626 nm             | 647 nm             | 223 nm      |
| z         | 1.17 $\mu\text{m}$ | 1.17 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.619              |                    |             |
| Theta     | 83.7°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 462.564 (brightness)

B = 115.834 (background)

a = 0.888 px

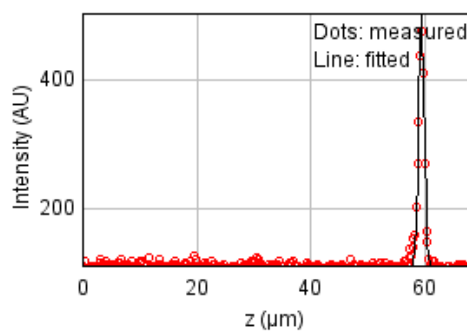
b = 0.060 px

c = 0.349 px

xc = 5.537 px

yc = 6.247 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 19961.2603

Standard deviation: 8.06352

$R^2$ : 0.96813

Parameters:

a = 110.71895

b = 505.13530

c = 59.43857

d = 0.49680

## Bead 2722

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

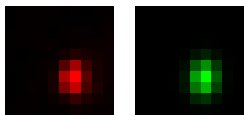
Coordinates : 136  $\mu\text{m}$  (x), -18.5  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

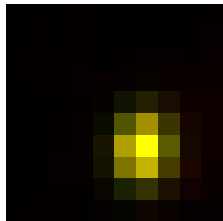
| FWHM      | Non corrected     | Corrected         | Theoretical |
|-----------|-------------------|-------------------|-------------|
| min       | 420 nm            | 434 nm            | 223 nm      |
| max       | 539 nm            | 557 nm            | 223 nm      |
| z         | 1.4 $\mu\text{m}$ | 1.4 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.779             |                   |             |
| Theta     | 85.8°             |                   |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1340.785 (brightness)

B = 121.265 (background)

a = 0.759 px

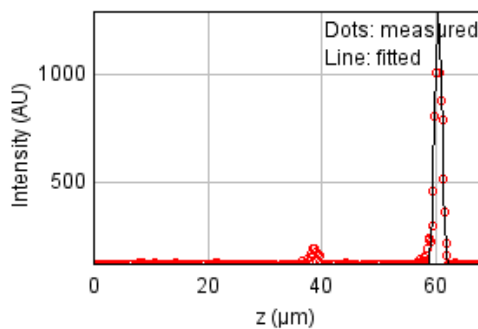
b = 0.022 px

c = 0.463 px

$x_c = 5.814$  px

$y_c = 6.131$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 166623.498

Standard deviation: 23.29694

$R^2$ : 0.97483

Parameters:

a = 115.84316

b = 1295.51973

c = 60.46027

d = 0.59410

## Bead 2723

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

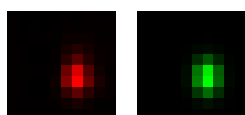
Coordinates : -87.8  $\mu\text{m}$  (x), -29.6  $\mu\text{m}$  (y), 60.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

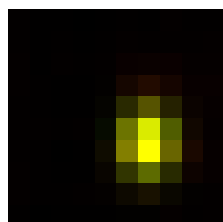
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 405 nm             | 419 nm             | 223 nm      |
| max       | 530 nm             | 548 nm             | 223 nm      |
| z         | 1.19 $\mu\text{m}$ | 1.19 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.764              |                    |             |
| Theta     | 89.7°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1768.571 (brightness)

B = 125.364 (background)

a = 0.818 px

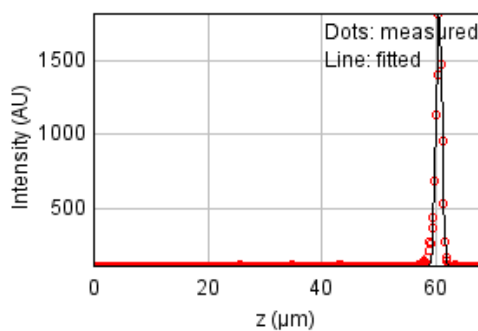
b = 0.002 px

c = 0.477 px

$x_c = 5.931$  px

$y_c = 5.590$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 139716.216

Standard deviation: 21.33311

$R^2$ : 0.98818

Parameters:

a = 115.10143

b = 1833.42748

c = 60.57892

d = 0.50412

## Bead 2724

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

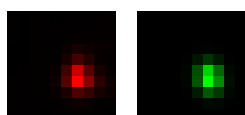
Coordinates : -64.4  $\mu\text{m}$  (x), -34.7  $\mu\text{m}$  (y), 60.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

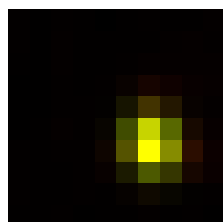
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 391 nm             | 404 nm             | 223 nm      |
| max       | 469 nm             | 485 nm             | 223 nm      |
| z         | 1.27 $\mu\text{m}$ | 1.28 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.833              |                    |             |
| Theta     | -78.6°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 2050.925 (brightness)

B = 130.704 (background)

a = 0.868 px

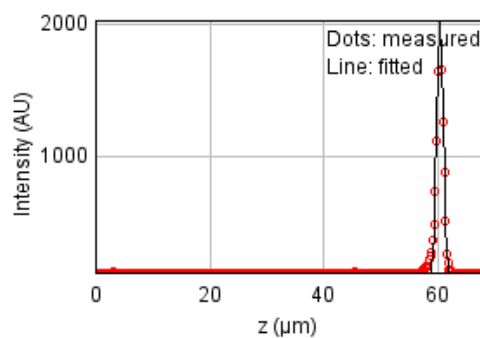
b = -0.052 px

c = 0.620 px

xc = 6.131 px

yc = 5.662 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 120475.041

Standard deviation: 19.80977

$R^2$ : 0.99250

Parameters:

a = 114.72523

b = 2056.17483

c = 60.40820

d = 0.53994



## Bead 2725

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

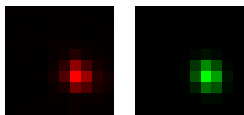
Coordinates : 139  $\mu\text{m}$  (x), -91.3  $\mu\text{m}$  (y), 60.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

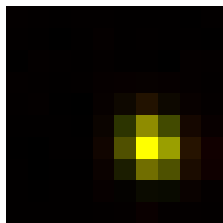
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 393 nm             | 406 nm             | 223 nm      |
| max       | 446 nm             | 461 nm             | 223 nm      |
| z         | 1.31 $\mu\text{m}$ | 1.31 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.88               |                    |             |
| Theta     | -59.6°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1176.253 (brightness)

B = 119.100 (background)

a = 0.819 px

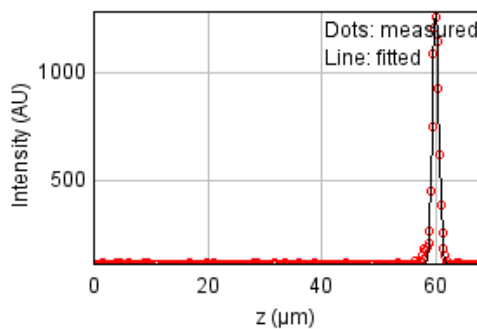
b = -0.085 px

c = 0.723 px

$x_c = 6.205$  px

$y_c = 5.939$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36467.2999

Standard deviation: 10.89890

$R^2$ : 0.99401

Parameters:

a = 110.36708

b = 1289.84656

c = 60.01003

d = 0.55593

## Bead 2726 (Rejected)

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

Coordinates : 121 um (x), 95.7 um (y), 48.9 um (z)

Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 0             | 0         | 223 nm      |
| max       | 0             | 0         | 223 nm      |
| z         | 1.52 um       | 1.52 um   | 885 nm      |
| Asymmetry | 0.0           |           |             |
| Theta     | 0.0°          |           |             |

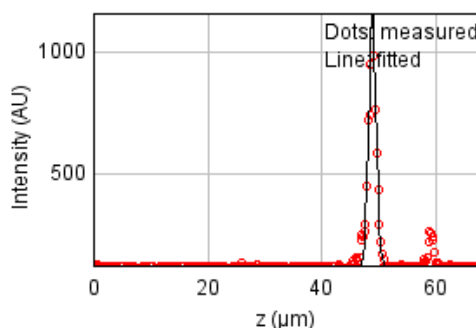
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 208031.999

Standard deviation: 26.03130

R<sup>2</sup>: 0.96376

Parameters:

a = 116.35964

b = 1166.77801

c = 48.92622

d = 0.64414

## Bead 2727

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

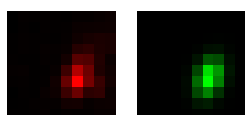
Coordinates : 125 µm (x), 93.1 µm (y), 60.4 µm (z)

Corresponding bead : Not found

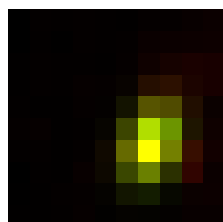
| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 401 nm        | 415 nm    | 223 nm      |
| max       | 605 nm        | 625 nm    | 223 nm      |
| z         | 1.53 µm       | 1.54 µm   | 885 nm      |
| Asymmetry | 0.664         |           |             |
| Theta     | 70.8°         |           |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 962.578 (brightness)

B = 129.106 (background)

a = 0.783 px

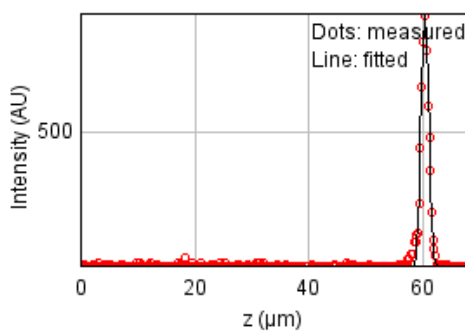
b = 0.145 px

c = 0.418 px

xc = 6.129 px

yc = 5.625 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37999.6830

Standard deviation: 11.12553

$R^2$ : 0.98647

Parameters:

a = 111.81377

b = 850.88237

c = 60.39814

d = 0.65176

## Bead 2728

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

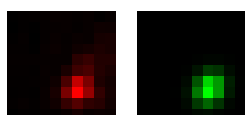
Coordinates : 132  $\mu\text{m}$  (x), 89.2  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

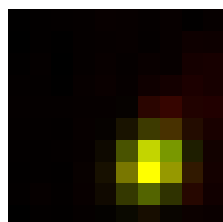
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 438 nm             | 453 nm             | 223 nm      |
| max       | 517 nm             | 534 nm             | 223 nm      |
| z         | 1.46 $\mu\text{m}$ | 1.47 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.848              |                    |             |
| Theta     | 56.6°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 674.591 (brightness)

B = 122.196 (background)

a = 0.639 px

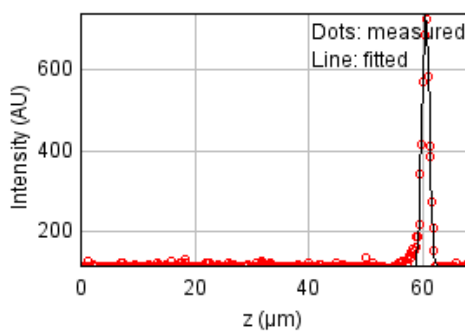
b = 0.090 px

c = 0.562 px

xc = 6.148 px

yc = 6.640 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 36395.5383

Standard deviation: 10.88817

$R^2$ : 0.98135

Parameters:

a = 111.88171

b = 741.42229

c = 60.52360

d = 0.61976

## Bead 2729

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

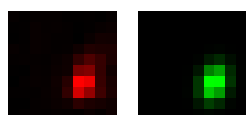
Coordinates : 136  $\mu\text{m}$  (x), 87.8  $\mu\text{m}$  (y), 60.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

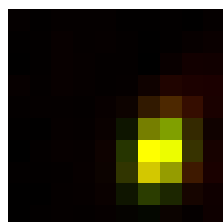
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 402 nm             | 416 nm             | 223 nm      |
| max       | 558 nm             | 577 nm             | 223 nm      |
| z         | 1.55 $\mu\text{m}$ | 1.56 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.72               |                    |             |
| Theta     | 71.8°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 912.845 (brightness)

B = 120.679 (background)

a = 0.791 px

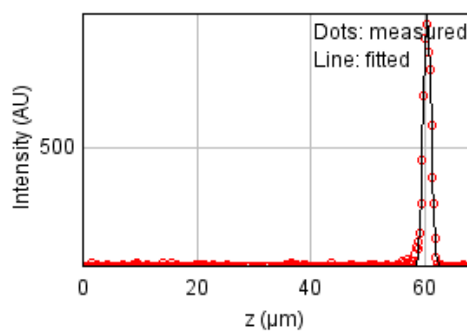
b = 0.119 px

c = 0.469 px

$x_c = 6.475$  px

$y_c = 6.120$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 31848.1537

Standard deviation: 10.18528

$R^2$ : 0.99114

Parameters:

a = 111.03820

b = 944.95377

c = 60.43807

d = 0.65856

## Bead 2730

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

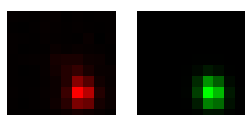
Coordinates : -131  $\mu\text{m}$  (x), 86.9  $\mu\text{m}$  (y), 60.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

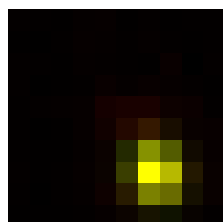
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 389 nm             | 402 nm             | 223 nm      |
| max       | 471 nm             | 487 nm             | 223 nm      |
| z         | 1.24 $\mu\text{m}$ | 1.25 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.826              |                    |             |
| Theta     | -75.7°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1003.508$  (brightness)

$B = 122.276$  (background)

$a = 0.870$  px

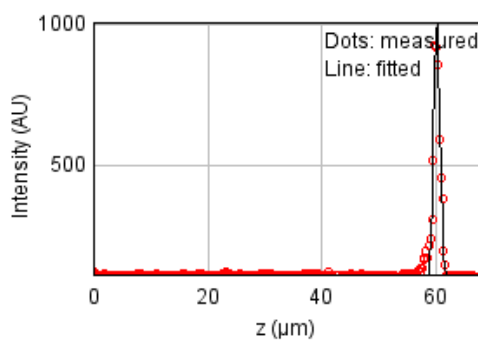
$b = -0.068$  px

$c = 0.622$  px

$x_c = 6.313$  px

$y_c = 6.986$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 91024.7549

Standard deviation: 17.21910

$R^2: 0.97369$

Parameters:

$a = 112.25782$

$b = 1015.37409$

$c = 60.21161$

$d = 0.52718$

## Bead 2731

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

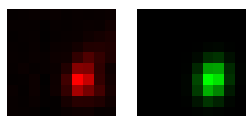
Coordinates : 135  $\mu\text{m}$  (x), 85.4  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

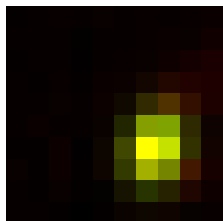
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 431 nm             | 445 nm             | 223 nm      |
| max       | 575 nm             | 595 nm             | 223 nm      |
| z         | 1.61 $\mu\text{m}$ | 1.62 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.749              |                    |             |
| Theta     | 75.3°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 769.326$  (brightness)

$B = 121.411$  (background)

$a = 0.703$  px

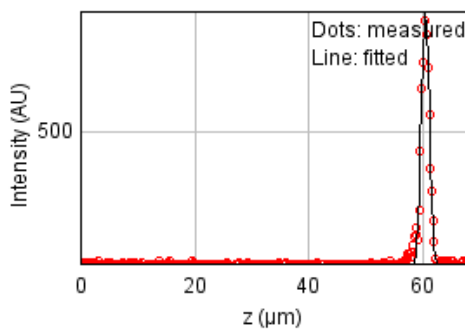
$b = 0.078$  px

$c = 0.426$  px

$x_c = 6.410$  px

$y_c = 5.988$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 41787.5326

Standard deviation: 11.66687

$R^2: 0.98593$

Parameters:

$a = 111.25425$

$b = 854.03436$

$c = 60.47491$

$d = 0.68317$

## Bead 2732 (Rejected)

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

Coordinates : 136  $\mu\text{m}$  (x), 83.4  $\mu\text{m}$  (y), 50.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

| FWHM      | Non corrected      | Corrected         | Theoretical |
|-----------|--------------------|-------------------|-------------|
| min       | 0                  | 0                 | 223 nm      |
| max       | 0                  | 0                 | 223 nm      |
| z         | 1.49 $\mu\text{m}$ | 1.5 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.0                |                   |             |
| Theta     | 0.0°               |                   |             |

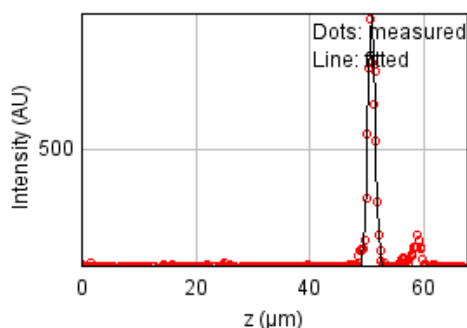
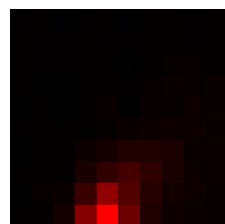
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 153636.175

Standard deviation: 22.37060

R<sup>2</sup>: 0.95739

Parameters:

a = 115.48877

b = 951.80383

c = 50.87132

d = 0.63360



## Bead 2733

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

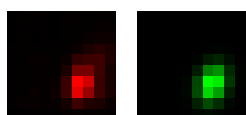
Coordinates : 127 µm (x), 75.4 µm (y), 60.7 µm (z)

Corresponding bead : Not found

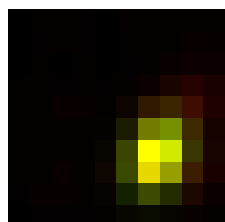
| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 426 nm        | 440 nm    | 223 nm      |
| max       | 578 nm        | 598 nm    | 223 nm      |
| z         | 1.52 µm       | 1.53 µm   | 885 nm      |
| Asymmetry | 0.736         |           |             |
| Theta     | 69.3°         |           |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1228.664 (brightness)

B = 126.354 (background)

a = 0.698 px

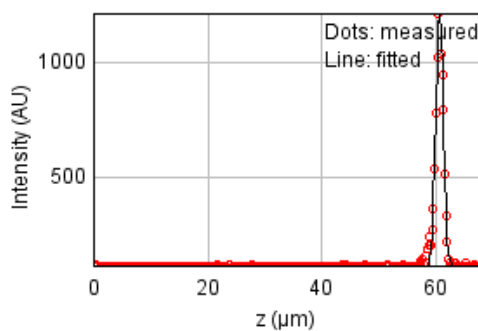
b = 0.112 px

c = 0.444 px

xc = 6.408 px

yc = 6.206 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57600.4122

Standard deviation: 13.69757

$R^2$ : 0.99061

Parameters:

a = 110.89119

b = 1210.16742

c = 60.68761

d = 0.64603

## Bead 2734 (Rejected)

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

Coordinates : 115 um (x), 68.1 um (y), 61.1 um (z)

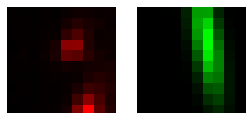
Corresponding bead : Not found

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

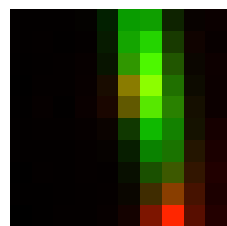
| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 412 nm        | 426 nm    | 223 nm      |
| max       | 1.73 um       | 1.79 um   | 223 nm      |
| z         | 1.22 um       | 1.22 um   | 885 nm      |
| Asymmetry | 0.238         |           |             |
| Theta     | -80.9°        |           |             |

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.678$



Parameters:

A = 170.654 (brightness)

B = 146.600 (background)

a = 0.769 px

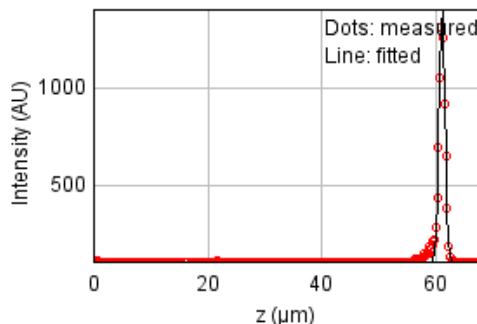
b = -0.131 px

c = -0.024 px

xc = 5.897 px

yc = 2.540 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 60374.5370

Standard deviation: 14.02354

$R^2$ : 0.99106

Parameters:

a = 114.38018

b = 1399.06899

c = 61.12409

d = 0.51716

## Bead 2735

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

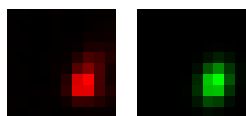
Coordinates : 106 um (x), 62.0 um (y), 61.3 um (z)

Corresponding bead : Not found

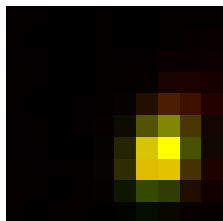
| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 426 nm        | 441 nm    | 223 nm      |
| max       | 575 nm        | 595 nm    | 223 nm      |
| z         | 1.26 um       | 1.27 um   | 885 nm      |
| Asymmetry | 0.741         |           |             |
| Theta     | 68.9°         |           |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 2043.990 (brightness)

B = 140.525 (background)

a = 0.695 px

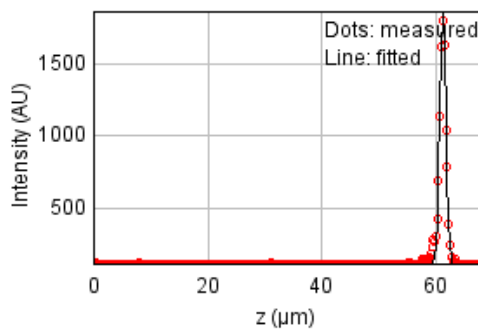
b = 0.112 px

c = 0.448 px

xc = 6.641 px

yc = 6.289 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 116008.727

Standard deviation: 19.43910

$R^2$ : 0.99128

Parameters:

a = 115.73861

b = 1889.37970

c = 61.26317

d = 0.53525

## Bead 2736 (Rejected)

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

Coordinates : 103  $\mu\text{m}$  (x), 60.2  $\mu\text{m}$  (y), 61.3  $\mu\text{m}$  (z)

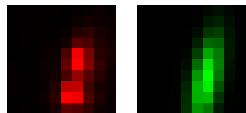
Corresponding bead : Not found

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

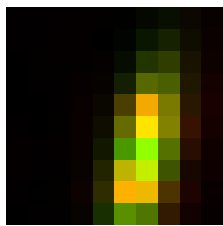
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 442 nm             | 457 nm             | 223 nm      |
| max       | 1.4 $\mu\text{m}$  | 1.44 $\mu\text{m}$ | 223 nm      |
| z         | 1.59 $\mu\text{m}$ | 1.59 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.316              |                    |             |
| Theta     | 78.6°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 974.404 (brightness)

B = 123.952 (background)

a = 0.663 px

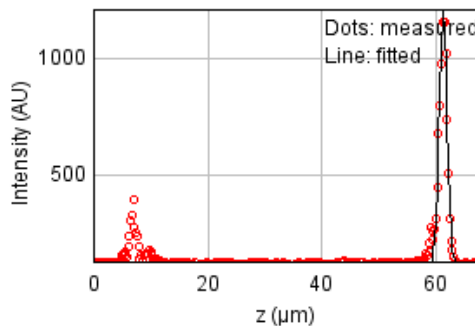
b = 0.120 px

c = 0.093 px

xc = 5.832 px

yc = 6.330 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 362987.907

Standard deviation: 34.38562

$R^2$ : 0.94497

Parameters:

a = 123.44483

b = 1213.94084

c = 61.32284

d = 0.67445

## Bead 2737

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

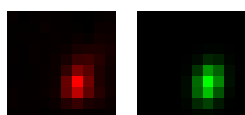
Coordinates : 146  $\mu\text{m}$  (x), 59.6  $\mu\text{m}$  (y), 60.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

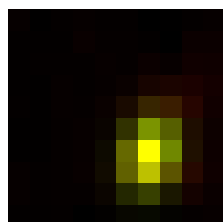
| FWHM      | Non corrected     | Corrected          | Theoretical |
|-----------|-------------------|--------------------|-------------|
| min       | 413 nm            | 427 nm             | 223 nm      |
| max       | 588 nm            | 608 nm             | 223 nm      |
| z         | 1.3 $\mu\text{m}$ | 1.31 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.703             |                    |             |
| Theta     | 75.3°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 969.619$  (brightness)

$B = 122.973$  (background)

$a = 0.760$  px

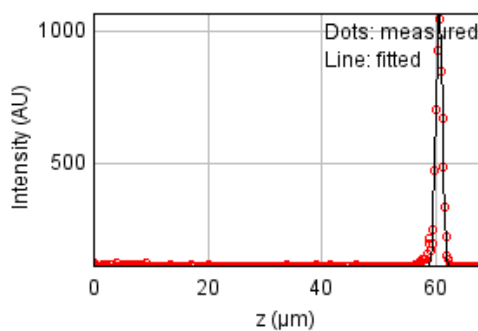
$b = 0.098$  px

$c = 0.414$  px

$x_c = 6.064$  px

$y_c = 6.145$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 52583.9494

Standard deviation: 13.08752

$R^2: 0.98726$

Parameters:

$a = 112.31162$

$b = 1083.19008$

$c = 60.60135$

$d = 0.55235$

## Bead 2738

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

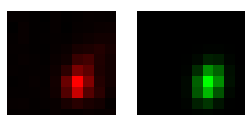
Coordinates : 118 um (x), 57.2 um (y), 60.3 um (z)

Corresponding bead : Not found

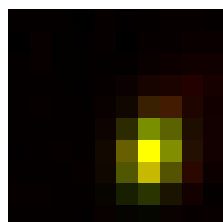
| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 406 nm        | 419 nm    | 223 nm      |
| max       | 562 nm        | 581 nm    | 223 nm      |
| z         | 1.36 um       | 1.37 um   | 885 nm      |
| Asymmetry | 0.722         |           |             |
| Theta     | 73.5°         |           |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 888.831 (brightness)

B = 125.228 (background)

a = 0.784 px

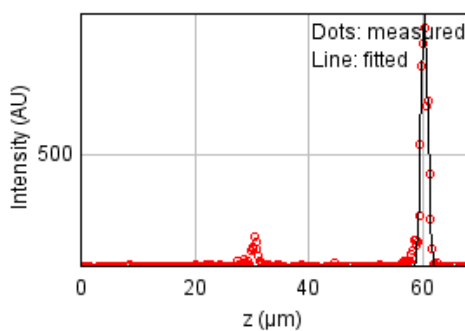
b = 0.106 px

c = 0.456 px

xc = 6.108 px

yc = 6.115 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 110251.961

Standard deviation: 18.95064

$R^2$ : 0.96912

Parameters:

a = 115.00034

b = 989.79144

c = 60.31231

d = 0.57879

## Bead 2739 (Rejected)

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

Coordinates : 88.7  $\mu\text{m}$  (x), 52.1  $\mu\text{m}$  (y), 61.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 0                  | 0                  | 223 nm      |
| max       | 0                  | 0                  | 223 nm      |
| z         | 1.22 $\mu\text{m}$ | 1.23 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.0                |                    |             |
| Theta     | 0.0°               |                    |             |

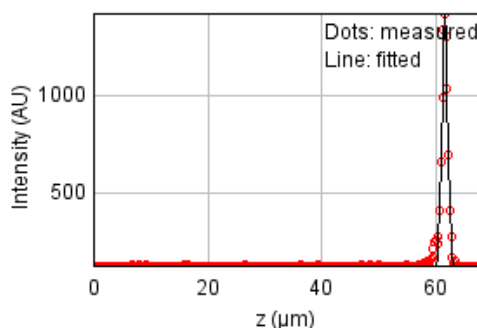
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 72138.1791

Standard deviation: 15.32899

R<sup>2</sup>: 0.98986

Parameters:

a = 114.75737

b = 1429.93066

c = 61.60276

d = 0.51958

## Bead 2740

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

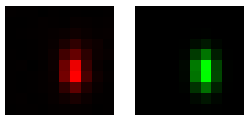
Coordinates : -65.4  $\mu\text{m}$  (x), 47.9  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

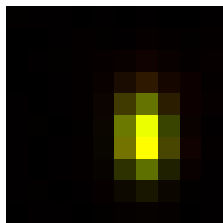
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 359 nm             | 371 nm             | 223 nm      |
| max       | 579 nm             | 598 nm             | 223 nm      |
| z         | 1.07 $\mu\text{m}$ | 1.08 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.621              |                    |             |
| Theta     | -87.9°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1896.321 (brightness)

B = 131.159 (background)

a = 1.039 px

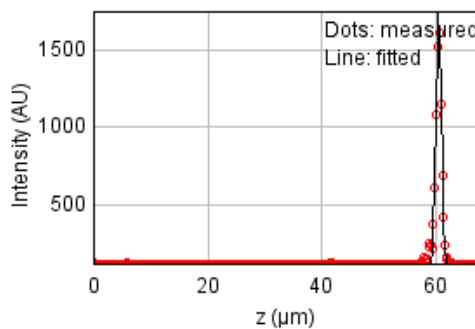
b = -0.023 px

c = 0.401 px

$x_c = 5.869$  px

$y_c = 5.480$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 77030.6267

Standard deviation: 15.84027

$R^2$ : 0.99202

Parameters:

a = 114.97090

b = 1748.54942

c = 60.52029

d = 0.45646



## Bead 2741

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

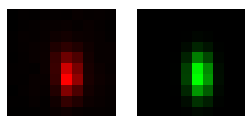
Coordinates : -135  $\mu\text{m}$  (x), 45.0  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

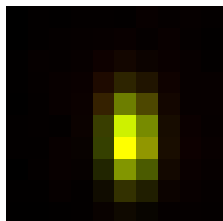
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 375 nm             | 387 nm             | 223 nm      |
| max       | 674 nm             | 697 nm             | 223 nm      |
| z         | 1.24 $\mu\text{m}$ | 1.25 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.556              |                    |             |
| Theta     | -89.0°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1201.388 (brightness)

B = 127.524 (background)

a = 0.955 px

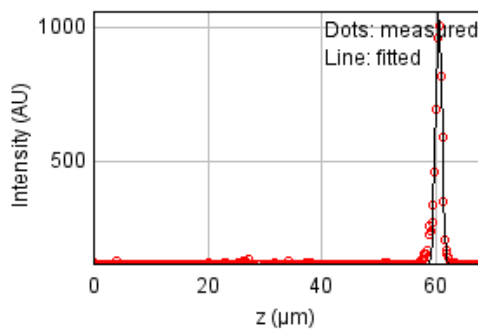
b = -0.011 px

c = 0.295 px

$x_c = 5.220$  px

$y_c = 5.609$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 74114.1804

Standard deviation: 15.53751

$R^2$ : 0.98044

Parameters:

a = 114.54177

b = 1061.95424

c = 60.53772

d = 0.52824

## Bead 2742

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

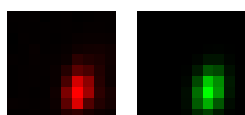
Coordinates : 68.9  $\mu\text{m}$  (x), 13.0  $\mu\text{m}$  (y), 60.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 434 nm             | 449 nm             | 223 nm      |
| max       | 677 nm             | 700 nm             | 223 nm      |
| z         | 1.37 $\mu\text{m}$ | 1.38 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.641              |                    |             |
| Theta     | 77.3°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1261.294 (brightness)

B = 124.728 (background)

a = 0.692 px

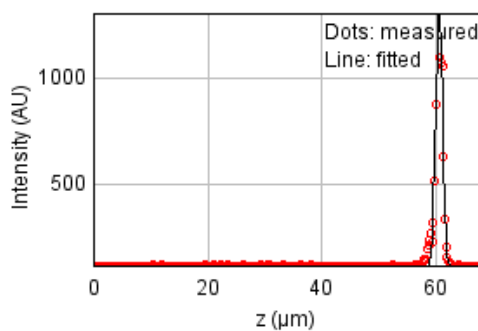
b = 0.090 px

c = 0.313 px

$x_c = 6.134$  px

$y_c = 6.859$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 199858.662

Standard deviation: 25.51481

$R^2$ : 0.97064

Parameters:

a = 115.27504

b = 1319.37430

c = 60.60408

d = 0.58336

## Bead 2743

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

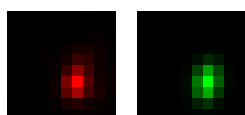
Coordinates : 95.0  $\mu\text{m}$  (x), 11.0  $\mu\text{m}$  (y), 61.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

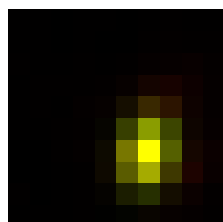
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 390 nm             | 403 nm             | 223 nm      |
| max       | 557 nm             | 576 nm             | 223 nm      |
| z         | 1.13 $\mu\text{m}$ | 1.14 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.7                |                    |             |
| Theta     | 80.7°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 2048.455 (brightness)

B = 138.268 (background)

a = 0.871 px

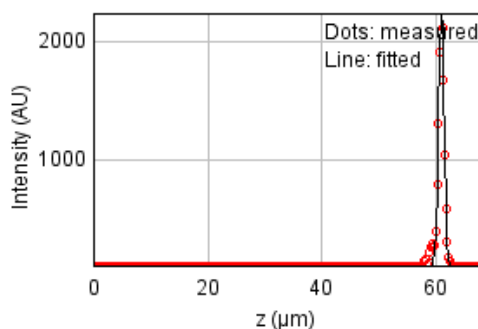
b = 0.072 px

c = 0.444 px

xc = 5.934 px

yc = 6.058 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 127371.558

Standard deviation: 20.36887

$R^2$ : 0.99266

Parameters:

a = 116.01284

b = 2250.11811

c = 60.99975

d = 0.48146

## Bead 2744

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

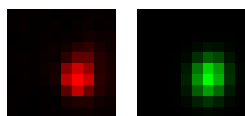
Coordinates : 119  $\mu\text{m}$  (x), -4.35  $\mu\text{m}$  (y), 60.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

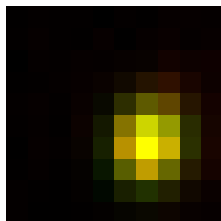
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 532 nm             | 550 nm             | 223 nm      |
| max       | 636 nm             | 657 nm             | 223 nm      |
| z         | 1.28 $\mu\text{m}$ | 1.28 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.837              |                    |             |
| Theta     | 79.5°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 969.692$  (brightness)

$B = 120.177$  (background)

$a = 0.469$  px

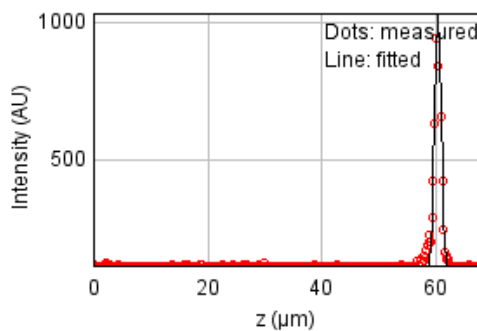
$b = 0.025$  px

$c = 0.337$  px

$x_c = 6.116$  px

$y_c = 5.765$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 118916.510

Standard deviation: 19.68121

$R^2: 0.96895$

Parameters:

$a = 113.22947$

$b = 1047.70281$

$c = 60.39314$

$d = 0.54290$

## Bead 2745

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

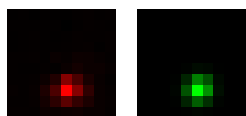
Coordinates : -148  $\mu\text{m}$  (x), -27.3  $\mu\text{m}$  (y), 60.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

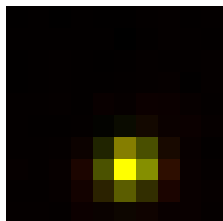
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 383 nm             | 396 nm             | 223 nm      |
| max       | 410 nm             | 423 nm             | 223 nm      |
| z         | 1.26 $\mu\text{m}$ | 1.26 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.936              |                    |             |
| Theta     | 44.7°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1305.945 (brightness)

B = 124.749 (background)

a = 0.856 px

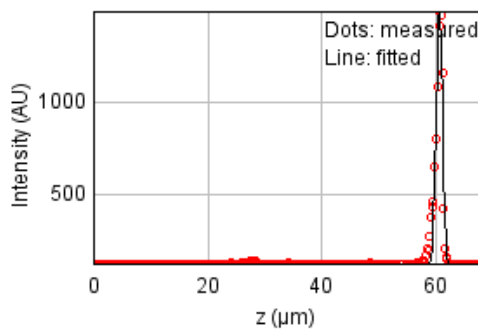
b = 0.057 px

c = 0.857 px

$x_c = 5.167$  px

$y_c = 6.900$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 375129.109

Standard deviation: 34.95596

$R^2$ : 0.95632

Parameters:

a = 115.56054

b = 1516.78864

c = 60.63394

d = 0.53418

## Bead 2746

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

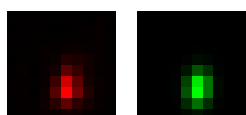
Coordinates : -117  $\mu\text{m}$  (x), -30.7  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

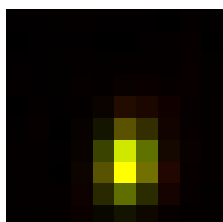
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 370 nm             | 383 nm             | 223 nm      |
| max       | 540 nm             | 558 nm             | 223 nm      |
| z         | 1.22 $\mu\text{m}$ | 1.22 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.686              |                    |             |
| Theta     | 83.6°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1221.340 (brightness)

B = 122.857 (background)

a = 0.972 px

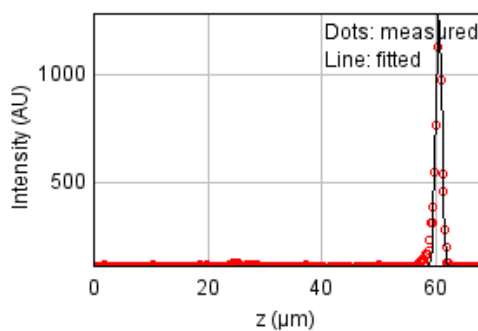
b = 0.058 px

c = 0.467 px

xc = 5.101 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: 124996.117

Standard deviation: 20.17804

$R^2$ : 0.97806

Parameters:

a = 115.66434

b = 1288.60922

c = 60.54152

d = 0.51671

## Bead 2747

Date : Mon Oct 17 13:30:03 PDT 2022

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

Frame size : 10 pixels

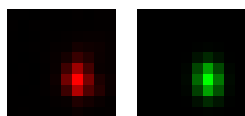
Coordinates : 24.0  $\mu\text{m}$  (x), -55.9  $\mu\text{m}$  (y), 60.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

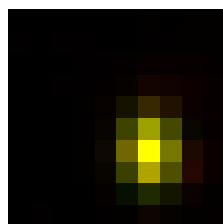
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 401 nm             | 414 nm             | 223 nm      |
| max       | 542 nm             | 560 nm             | 223 nm      |
| z         | 1.28 $\mu\text{m}$ | 1.28 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.739              |                    |             |
| Theta     | -86.6°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 2082.062 (brightness)

B = 127.161 (background)

a = 0.834 px

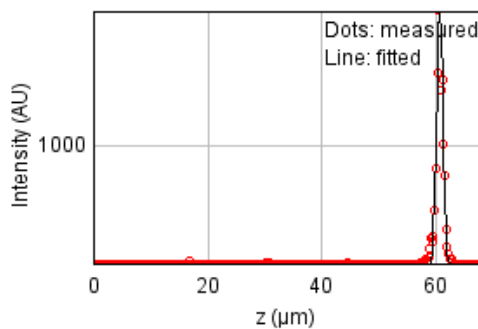
b = -0.023 px

c = 0.458 px

xc = 6.043 px

yc = 6.008 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 405429.642

Standard deviation: 36.34030

$R^2$ : 0.97362

Parameters:

a = 116.76333

b = 1992.64514

c = 60.71573

d = 0.54315

## Bead 2748

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

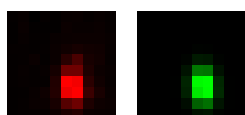
Coordinates : -127  $\mu\text{m}$  (x), -71.6  $\mu\text{m}$  (y), 60.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

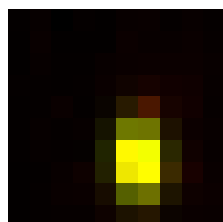
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 376 nm             | 388 nm             | 223 nm      |
| max       | 579 nm             | 599 nm             | 223 nm      |
| z         | 1.24 $\mu\text{m}$ | 1.25 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.648              |                    |             |
| Theta     | -86.7°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1218.467$  (brightness)

$B = 123.860$  (background)

$a = 0.949$  px

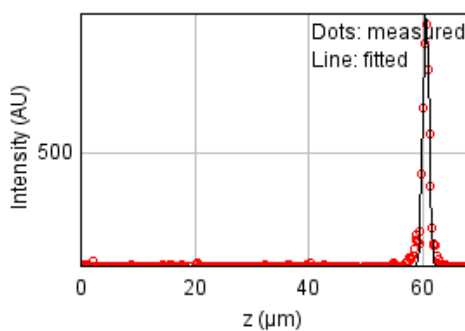
$b = -0.032$  px

$c = 0.401$  px

$x_c = 5.529$  px

$y_c = 6.449$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57483.0724

Standard deviation: 13.68361

$R^2: 0.98188$

Parameters:

$a = 113.64603$

$b = 981.23406$

$c = 60.57369$

$d = 0.52837$



## Bead 2749

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

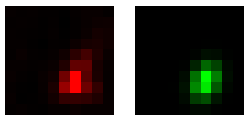
Coordinates : 101 um (x), 95.6 um (y), 61.0 um (z)

Corresponding bead : Not found

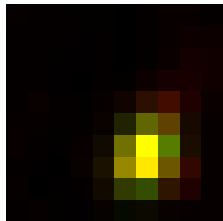
| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 403 nm        | 416 nm    | 223 nm      |
| max       | 548 nm        | 566 nm    | 223 nm      |
| z         | 1.37 um       | 1.38 um   | 885 nm      |
| Asymmetry | 0.736         |           |             |
| Theta     | 66.2°         |           |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1009.360 (brightness)

B = 126.083 (background)

a = 0.766 px

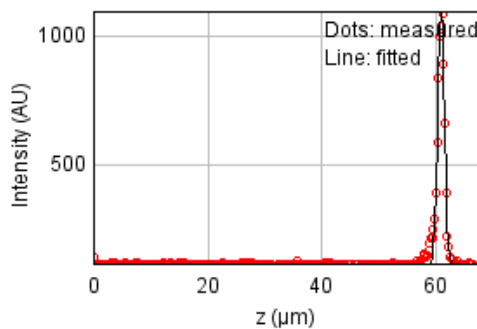
b = 0.140 px

c = 0.509 px

xc = 5.956 px

yc = 6.416 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 63279.7750

Standard deviation: 14.35699

$R^2$ : 0.98579

Parameters:

a = 113.90982

b = 1096.15562

c = 60.95560

d = 0.58230

## Bead 2750

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

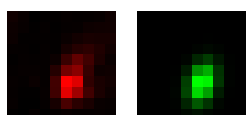
Coordinates : 103  $\mu\text{m}$  (x), 94.4  $\mu\text{m}$  (y), 60.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

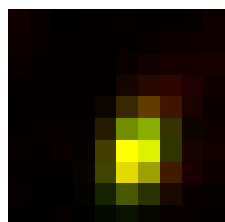
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 416 nm             | 431 nm             | 223 nm      |
| max       | 633 nm             | 655 nm             | 223 nm      |
| z         | 1.59 $\mu\text{m}$ | 1.59 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.658              |                    |             |
| Theta     | 72.5°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 948.293 (brightness)

B = 132.817 (background)

a = 0.734 px

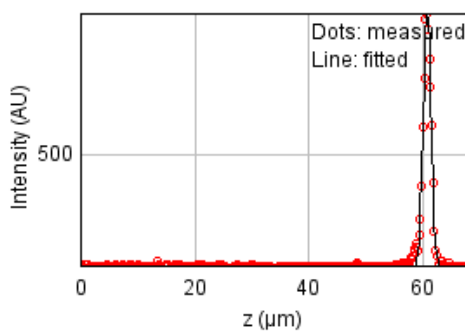
b = 0.126 px

c = 0.374 px

$x_c = 5.440$  px

$y_c = 6.135$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 40755.1996

Standard deviation: 11.52185

$R^2$ : 0.99008

Parameters:

a = 112.96194

b = 994.14818

c = 60.79788

d = 0.67368

## Bead 2751

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

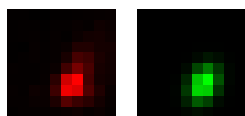
Coordinates : 108  $\mu\text{m}$  (x), 84.6  $\mu\text{m}$  (y), 60.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

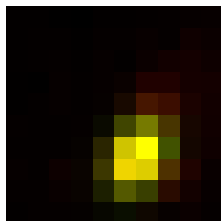
| FWHM      | Non corrected      | Corrected         | Theoretical |
|-----------|--------------------|-------------------|-------------|
| min       | 415 nm             | 429 nm            | 223 nm      |
| max       | 577 nm             | 597 nm            | 223 nm      |
| z         | 1.19 $\mu\text{m}$ | 1.2 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.719              |                   |             |
| Theta     | 62.8°              |                   |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1000.315 (brightness)

B = 127.088 (background)

a = 0.701 px

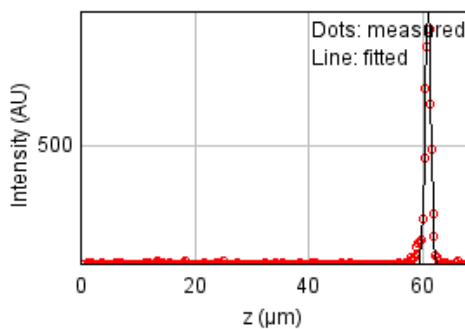
b = 0.153 px

c = 0.481 px

$x_c = 5.604$  px

$y_c = 6.397$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 34973.0804

Standard deviation: 10.67328

$R^2$ : 0.98735

Parameters:

a = 112.03873

b = 940.96737

c = 60.94146

d = 0.50654

## Bead 2752 (Rejected)

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

Coordinates : 93.1  $\mu\text{m}$  (x), 83.6  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

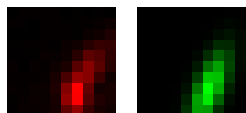
Corresponding bead : Not found

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

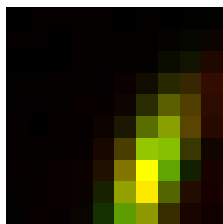
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 443 nm             | 457 nm             | 223 nm      |
| max       | 1.22 $\mu\text{m}$ | 1.26 $\mu\text{m}$ | 223 nm      |
| z         | 1.59 $\mu\text{m}$ | 1.6 $\mu\text{m}$  | 885 nm      |
| Asymmetry | 0.363              |                    |             |
| Theta     | 68.7°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 653.832 (brightness)

B = 127.032 (background)

a = 0.607 px

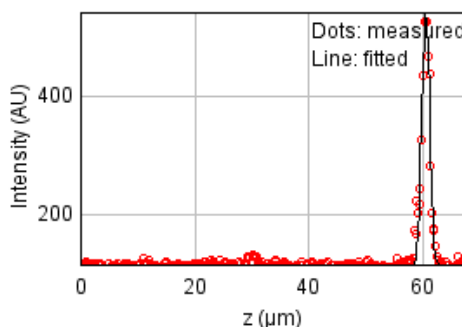
b = 0.201 px

c = 0.169 px

xc = 6.102 px

yc = 7.109 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33237.1656

Standard deviation: 10.40502

$R^2$ : 0.96674

Parameters:

a = 113.63732

b = 542.67196

c = 60.54689

d = 0.67522

## Bead 2753

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

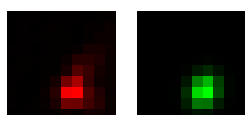
Coordinates : 92.3  $\mu\text{m}$  (x), 77.9  $\mu\text{m}$  (y), 61.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

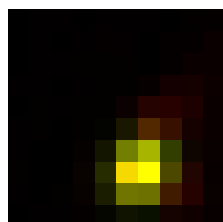
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 420 nm             | 434 nm             | 223 nm      |
| max       | 502 nm             | 519 nm             | 223 nm      |
| z         | 1.25 $\mu\text{m}$ | 1.26 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.836              |                    |             |
| Theta     | 62.6°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1674.381 (brightness)

B = 139.830 (background)

a = 0.713 px

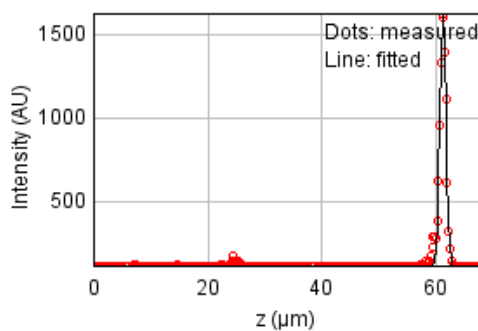
b = 0.094 px

c = 0.580 px

$x_c = 5.634$  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: 120848.624

Standard deviation: 19.84046

$R^2$ : 0.98782

Parameters:

a = 116.35691

b = 1649.19229

c = 61.28177

d = 0.53273

## Bead 2754 (Rejected)

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

Coordinates : 79.0  $\mu\text{m}$  (x), 76.5  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

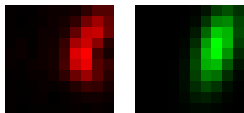
Corresponding bead : Not found

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

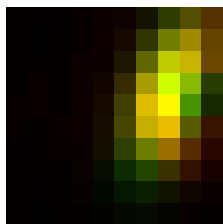
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 554 nm             | 573 nm             | 223 nm      |
| max       | 1.2 $\mu\text{m}$  | 1.24 $\mu\text{m}$ | 223 nm      |
| z         | 3.29 $\mu\text{m}$ | 3.3 $\mu\text{m}$  | 885 nm      |
| Asymmetry | 0.462              |                    |             |
| Theta     | 71.9°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 668.534 (brightness)

B = 117.741 (background)

a = 0.404 px

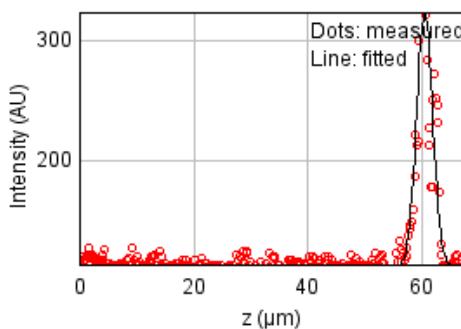
b = 0.102 px

c = 0.127 px

xc = 6.999 px

yc = 3.401 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 78690.4934

Standard deviation: 16.01002

$R^2$ : 0.85598

Parameters:

a = 112.25477

b = 323.96107

c = 60.52700

d = 1.39732

## Bead 2755

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

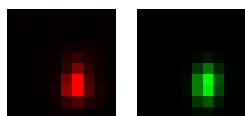
Coordinates : -19.8  $\mu\text{m}$  (x), 72.9  $\mu\text{m}$  (y), 60.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

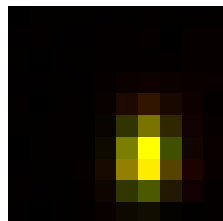
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 378 nm             | 391 nm             | 223 nm      |
| max       | 553 nm             | 572 nm             | 223 nm      |
| z         | 1.13 $\mu\text{m}$ | 1.14 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.684              |                    |             |
| Theta     | 84.5°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1590.986 (brightness)

B = 128.741 (background)

a = 0.933 px

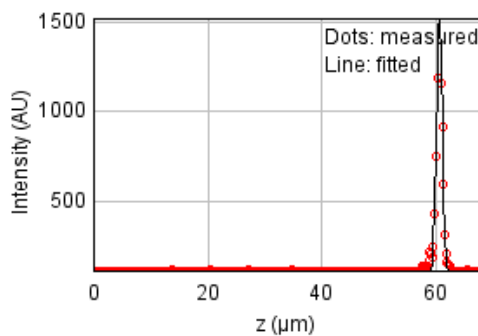
b = 0.047 px

c = 0.443 px

$x_c = 5.855$  px

$y_c = 6.421$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 72418.3739

Standard deviation: 15.35873

$R^2$ : 0.99060

Parameters:

a = 115.51874

b = 1535.48912

c = 60.63959

d = 0.48169

## Bead 2756

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

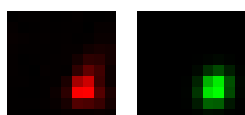
Coordinates : 97.8  $\mu\text{m}$  (x), 68.9  $\mu\text{m}$  (y), 61.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

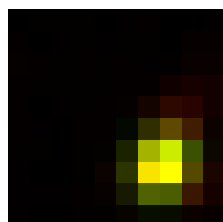
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 431 nm             | 445 nm             | 223 nm      |
| max       | 514 nm             | 531 nm             | 223 nm      |
| z         | 1.23 $\mu\text{m}$ | 1.24 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.838              |                    |             |
| Theta     | 64.4°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1608.439 (brightness)

B = 133.742 (background)

a = 0.684 px

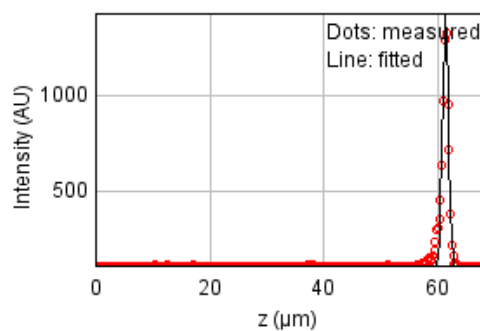
b = 0.084 px

c = 0.548 px

$x_c = 6.630$  px

$y_c = 6.630$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 135734.886

Standard deviation: 21.02696

$R^2$ : 0.98091

Parameters:

a = 115.68457

b = 1420.13982

c = 61.37249

d = 0.52300



## Bead 2757

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

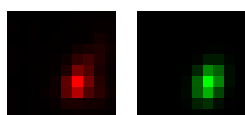
Coordinates : 95.3  $\mu\text{m}$  (x), 69.5  $\mu\text{m}$  (y), 61.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

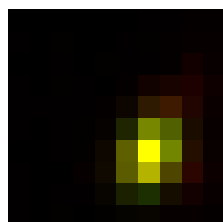
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 391 nm             | 404 nm             | 223 nm      |
| max       | 557 nm             | 576 nm             | 223 nm      |
| z         | 1.23 $\mu\text{m}$ | 1.23 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.702              |                    |             |
| Theta     | 67.9°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1745.088 (brightness)

B = 138.819 (background)

a = 0.816 px

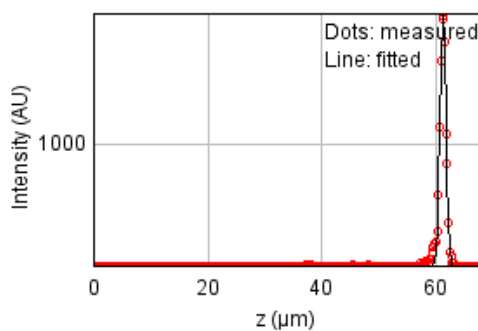
b = 0.156 px

c = 0.496 px

$x_c = 6.079$  px

$y_c = 6.117$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 122812.999

Standard deviation: 20.00106

$R^2$ : 0.99140

Parameters:

a = 115.68636

b = 1977.88216

c = 61.29058

d = 0.52120

## Bead 2758

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

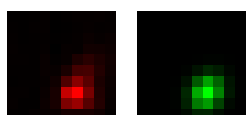
Coordinates : 119  $\mu\text{m}$  (x), 59.6  $\mu\text{m}$  (y), 61.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

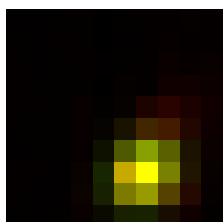
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 470 nm             | 486 nm             | 223 nm      |
| max       | 562 nm             | 581 nm             | 223 nm      |
| z         | 1.36 $\mu\text{m}$ | 1.37 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.836              |                    |             |
| Theta     | 54.3°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1143.096$  (brightness)

$B = 127.573$  (background)

$a = 0.545$  px

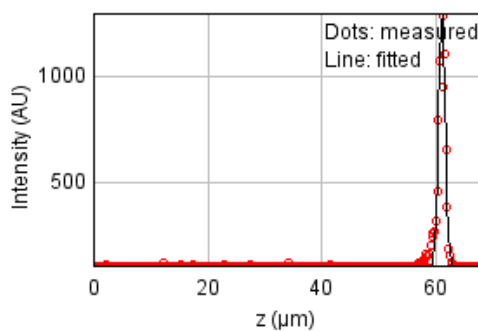
$b = 0.086$  px

$c = 0.487$  px

$x_c = 5.877$  px

$y_c = 7.005$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 172140.410

Standard deviation: 23.67948

$R^2: 0.97352$

Parameters:

$a = 113.20777$

$b = 1297.52608$

$c = 61.09307$

$d = 0.57752$

## Bead 2759

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

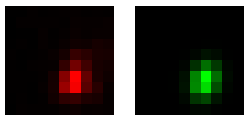
Coordinates : 150  $\mu\text{m}$  (x), 54.0  $\mu\text{m}$  (y), 60.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

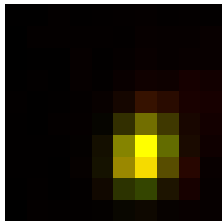
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 412 nm             | 426 nm             | 223 nm      |
| max       | 534 nm             | 552 nm             | 223 nm      |
| z         | 1.33 $\mu\text{m}$ | 1.33 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.772              |                    |             |
| Theta     | 72.4°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 935.421 (brightness)

B = 120.440 (background)

a = 0.761 px

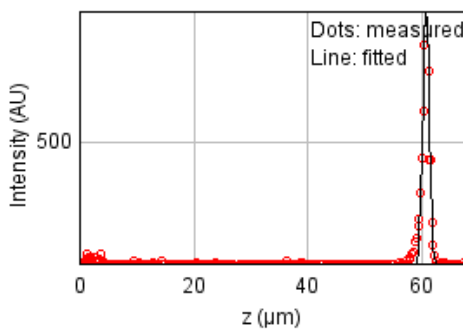
b = 0.092 px

c = 0.500 px

xc = 5.890 px

yc = 6.365 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 77410.3191

Standard deviation: 15.87926

$R^2$ : 0.97357

Parameters:

a = 112.77106

b = 916.92600

c = 60.76898

d = 0.56399

## Bead 2760

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

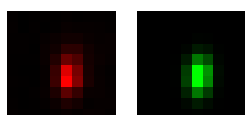
Coordinates : -77.0  $\mu\text{m}$  (x), 49.4  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

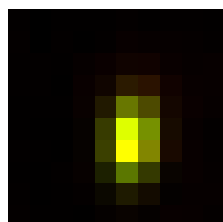
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 362 nm             | 375 nm             | 223 nm      |
| max       | 596 nm             | 616 nm             | 223 nm      |
| z         | 1.12 $\mu\text{m}$ | 1.13 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.609              |                    |             |
| Theta     | 86.3°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1539.567$  (brightness)

$B = 134.839$  (background)

$a = 1.019$  px

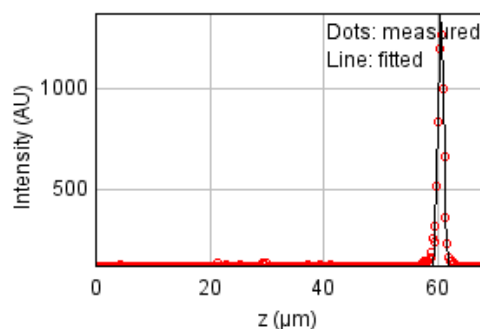
$b = 0.041$  px

$c = 0.381$  px

$x_c = 5.204$  px

$y_c = 5.477$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 50670.6045

Standard deviation: 12.84721

$R^2: 0.99164$

Parameters:

$a = 116.07007$

$b = 1382.65745$

$c = 60.54248$

$d = 0.47664$

## Bead 2761

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

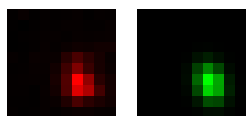
Coordinates : 125 um (x), 18.4 um (y), 61.1 um (z)

Corresponding bead : Not found

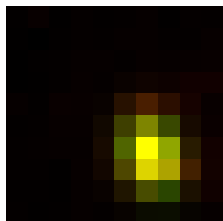
| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 435 nm        | 450 nm    | 223 nm      |
| max       | 583 nm        | 603 nm    | 223 nm      |
| z         | 1.5 um        | 1.51 um   | 885 nm      |
| Asymmetry | 0.747         |           |             |
| Theta     | -73.3°        |           |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 775.533 (brightness)

B = 118.400 (background)

a = 0.682 px

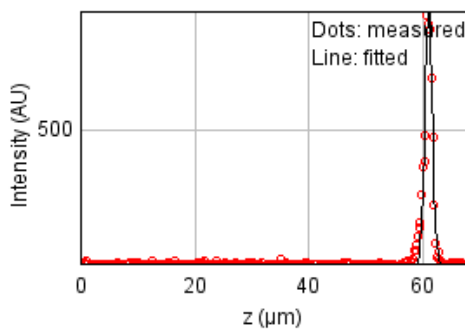
b = -0.086 px

c = 0.421 px

xc = 6.221 px

yc = 6.322 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 83277.6927

Standard deviation: 16.47006

$R^2$ : 0.97077

Parameters:

a = 112.08848

b = 857.85778

c = 61.05163

d = 0.63866

## Bead 2762

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

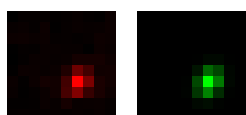
Coordinates : -163  $\mu\text{m}$  (x), -8.59  $\mu\text{m}$  (y), 60.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

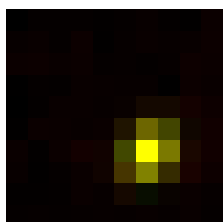
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 348 nm             | 360 nm             | 223 nm      |
| max       | 440 nm             | 455 nm             | 223 nm      |
| z         | 1.28 $\mu\text{m}$ | 1.28 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.79               |                    |             |
| Theta     | 60.0°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 524.601$  (brightness)

$B = 113.800$  (background)

$a = 1.005$  px

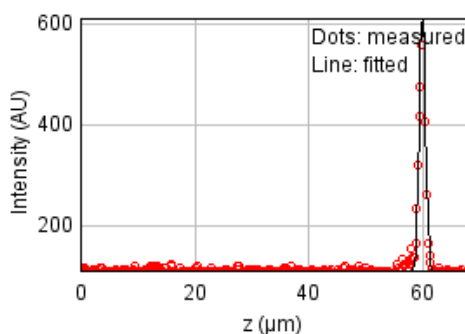
$b = 0.181$  px

$c = 0.797$  px

$x_c = 6.118$  px

$y_c = 6.050$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 34327.1967

Standard deviation: 10.57426

$R^2: 0.96973$

Parameters:

$a = 110.71772$

$b = 619.59824$

$c = 59.96010$

$d = 0.54258$

## Bead 2763

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

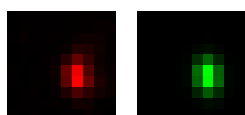
Coordinates : -2.86  $\mu\text{m}$  (x), -28.3  $\mu\text{m}$  (y), 60.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

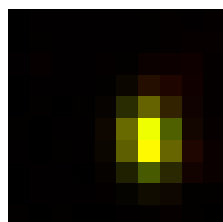
| FWHM      | Non corrected     | Corrected         | Theoretical |
|-----------|-------------------|-------------------|-------------|
| min       | 379 nm            | 392 nm            | 223 nm      |
| max       | 524 nm            | 541 nm            | 223 nm      |
| z         | 1.3 $\mu\text{m}$ | 1.3 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.723             |                   |             |
| Theta     | -84.7°            |                   |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1701.521 (brightness)

B = 130.833 (background)

a = 0.931 px

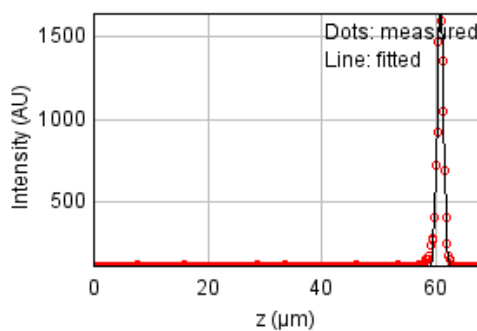
b = -0.041 px

c = 0.493 px

$x_c = 5.995$  px

$y_c = 5.470$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 85056.1806

Standard deviation: 16.64500

$R^2$ : 0.99182

Parameters:

a = 115.04253

b = 1661.44353

c = 60.82316

d = 0.55087

## Bead 2764

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

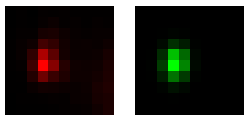
Coordinates : 74.2  $\mu\text{m}$  (x), -29.0  $\mu\text{m}$  (y), 61.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

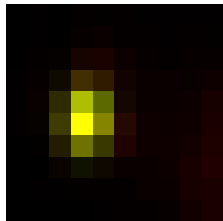
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 358 nm             | 370 nm             | 223 nm      |
| max       | 494 nm             | 511 nm             | 223 nm      |
| z         | 1.29 $\mu\text{m}$ | 1.29 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.723              |                    |             |
| Theta     | 87.1°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 2230.944 (brightness)

B = 184.460 (background)

a = 1.048 px

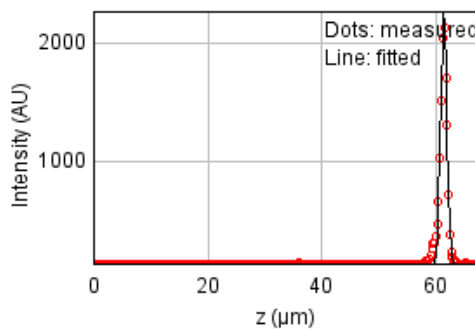
b = 0.025 px

c = 0.550 px

xc = 3.194 px

yc = 4.758 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 164184.688

Standard deviation: 23.12582

$R^2$ : 0.99188

Parameters:

a = 114.82296

b = 2279.07519

c = 61.41336

d = 0.54725



## Bead 2765

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

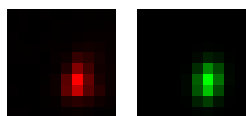
Coordinates : 21.8  $\mu\text{m}$  (x), -29.5  $\mu\text{m}$  (y), 61.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

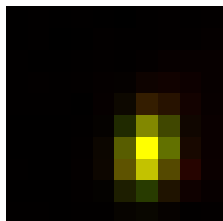
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 380 nm             | 393 nm             | 223 nm      |
| max       | 552 nm             | 570 nm             | 223 nm      |
| z         | 1.11 $\mu\text{m}$ | 1.12 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.689              |                    |             |
| Theta     | 80.2°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1888.822 (brightness)

B = 135.418 (background)

a = 0.916 px

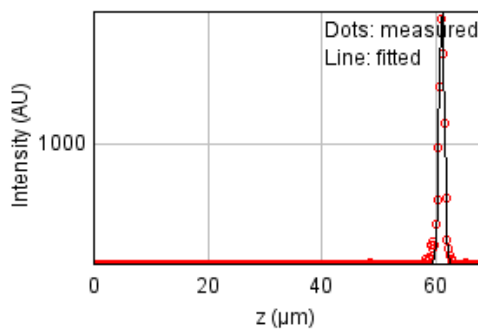
b = 0.082 px

c = 0.455 px

$x_c = 6.036$  px

$y_c = 6.189$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 129762.908

Standard deviation: 20.55919

$R^2$ : 0.99033

Parameters:

a = 115.86281

b = 2007.17456

c = 61.08107

d = 0.47284

## Bead 2766

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

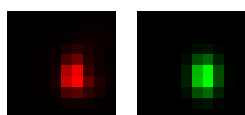
Coordinates : 28.3  $\mu\text{m}$  (x), -31.4  $\mu\text{m}$  (y), 61.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

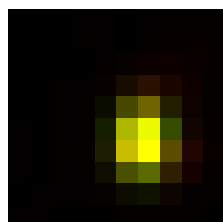
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 419 nm             | 433 nm             | 223 nm      |
| max       | 549 nm             | 567 nm             | 223 nm      |
| z         | 1.17 $\mu\text{m}$ | 1.18 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.764              |                    |             |
| Theta     | 89.6°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 2362.411 (brightness)

B = 133.553 (background)

a = 0.764 px

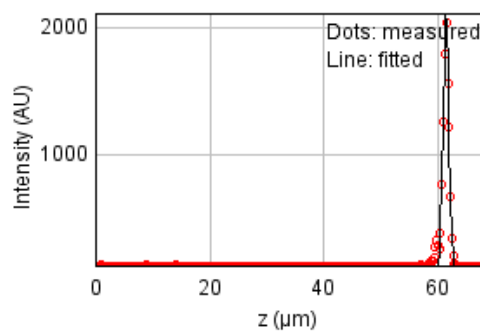
b = 0.002 px

c = 0.446 px

$x_c = 5.704$  px

$y_c = 5.522$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 139883.821

Standard deviation: 21.34590

$R^2$ : 0.99134

Parameters:

a = 116.35425

b = 2140.08999

c = 61.45826

d = 0.49817

## Bead 2767

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

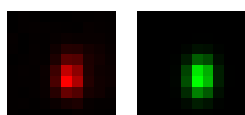
Coordinates : 133  $\mu\text{m}$  (x), -33.6  $\mu\text{m}$  (y), 60.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

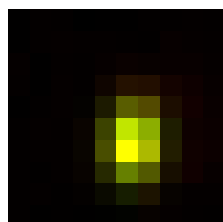
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 420 nm             | 435 nm             | 223 nm      |
| max       | 582 nm             | 601 nm             | 223 nm      |
| z         | 1.21 $\mu\text{m}$ | 1.21 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.722              |                    |             |
| Theta     | 86.4°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1194.861 (brightness)

B = 127.265 (background)

a = 0.758 px

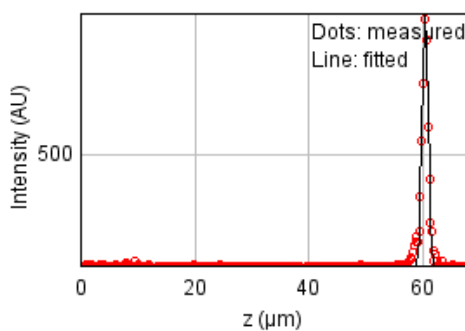
b = 0.023 px

c = 0.398 px

$x_c = 5.297$  px

$y_c = 5.617$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 52927.8787

Standard deviation: 13.13025

$R^2$ : 0.98339

Parameters:

a = 112.02968

b = 994.98780

c = 60.43295

d = 0.51260

## Bead 2768

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

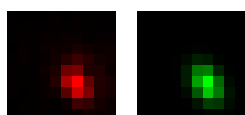
Coordinates : 158  $\mu\text{m}$  (x), -49.8  $\mu\text{m}$  (y), 60.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

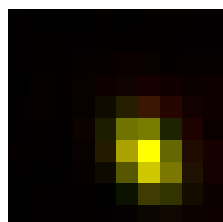
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 411 nm             | 425 nm             | 223 nm      |
| max       | 604 nm             | 625 nm             | 223 nm      |
| z         | 1.25 $\mu\text{m}$ | 1.26 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.68               |                    |             |
| Theta     | -58.5°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1251.274$  (brightness)

$B = 127.703$  (background)

$a = 0.678$  px

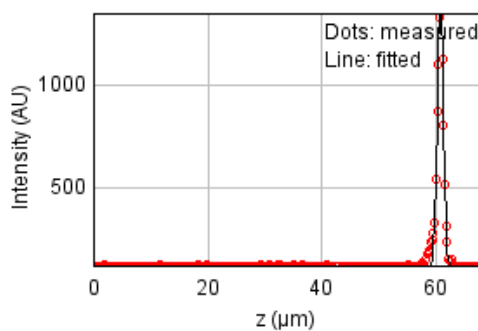
$b = -0.190$  px

$c = 0.484$  px

$x_c = 5.894$  px

$y_c = 6.206$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 69993.9279

Standard deviation: 15.09945

$R^2: 0.98956$

Parameters:

$a = 111.91825$

$b = 1374.67832$

$c = 60.82163$

$d = 0.53110$

## Bead 2769 (Rejected)

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

Coordinates : -74.1  $\mu\text{m}$  (x), -53.9  $\mu\text{m}$  (y), 61.1  $\mu\text{m}$  (z)

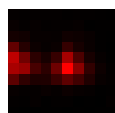
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 0                  | 0                  | 223 nm      |
| max       | 0                  | 0                  | 223 nm      |
| z         | 2.24 $\mu\text{m}$ | 2.25 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.0                |                    |             |
| Theta     | 0.0°               |                    |             |

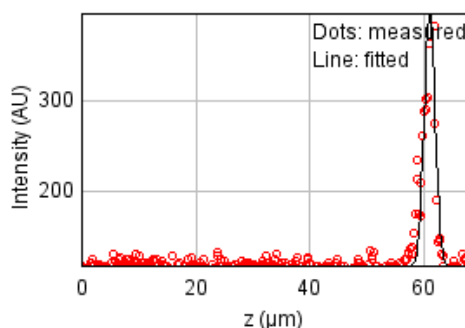
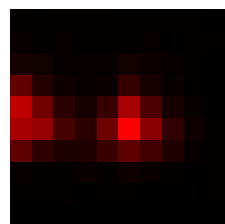
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 67057.8286

Standard deviation: 14.77936

$R^2$ : 0.89835

Parameters:

$a = 114.94199$

$b = 400.30630$

$c = 61.06491$

$d = 0.95063$

## Bead 2770

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

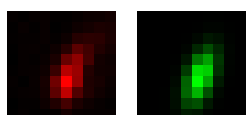
Coordinates : 81.5  $\mu\text{m}$  (x), 93.4  $\mu\text{m}$  (y), 60.8  $\mu\text{m}$  (z)

Corresponding bead : Not found

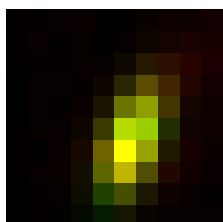
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 415 nm             | 429 nm             | 223 nm      |
| max       | 876 nm             | 905 nm             | 223 nm      |
| z         | 1.69 $\mu\text{m}$ | 1.69 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.474              |                    |             |
| Theta     | 70.2°              |                    |             |

### 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 = 694.597 (brightness)

B = 131.362 (background)

a = 0.709 px

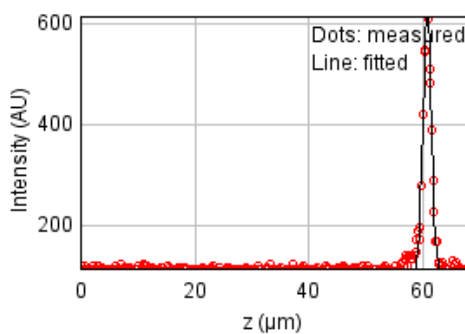
b = 0.193 px

c = 0.244 px

$x_c = 5.295$  px

$y_c = 5.565$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 34471.8879

Standard deviation: 10.59652

$R^2$ : 0.97603

Parameters:

a = 113.99304

b = 616.61373

c = 60.79959

d = 0.71666

## Bead 2771

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

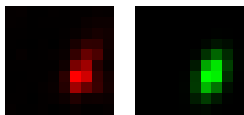
Coordinates : 84.6  $\mu\text{m}$  (x), 91.3  $\mu\text{m}$  (y), 61.1  $\mu\text{m}$  (z)

Corresponding bead : Not found

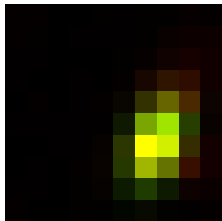
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 389 nm             | 402 nm             | 223 nm      |
| max       | 655 nm             | 677 nm             | 223 nm      |
| z         | 1.54 $\mu\text{m}$ | 1.54 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.594              |                    |             |
| Theta     | 68.7°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1236.203 (brightness)

B = 127.587 (background)

a = 0.811 px

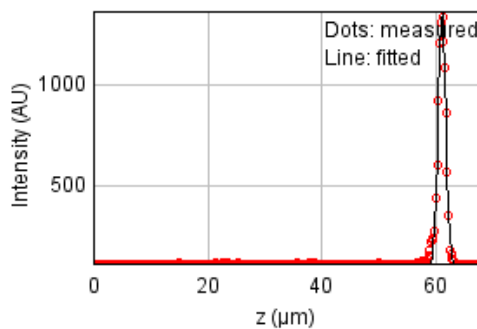
b = 0.194 px

c = 0.388 px

xc = 6.507 px

yc = 5.804 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 58003.9952

Standard deviation: 13.74548

$R^2$ : 0.99275

Parameters:

a = 113.48547

b = 1364.09934

c = 61.11369

d = 0.65284

## Bead 2772

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

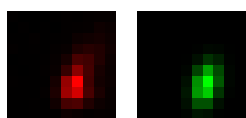
Coordinates : 54.7 um (x), 88.2 um (y), 61.5 um (z)

Corresponding bead : Not found

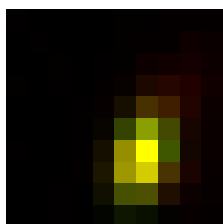
| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 393 nm        | 407 nm    | 223 nm      |
| max       | 657 nm        | 680 nm    | 223 nm      |
| z         | 1.21 um       | 1.21 um   | 885 nm      |
| Asymmetry | 0.598         |           |             |
| Theta     | 74.4°         |           |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1657.841 (brightness)

B = 141.576 (background)

a = 0.827 px

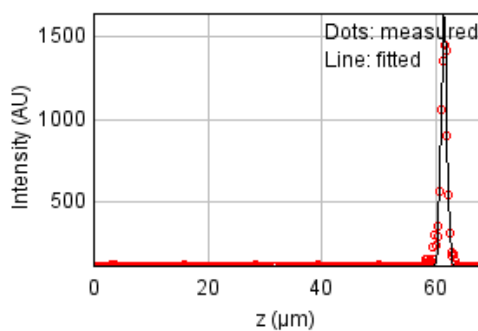
b = 0.144 px

c = 0.351 px

xc = 5.808 px

yc = 6.252 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 154274.980

Standard deviation: 22.41706

$R^2$ : 0.98408

Parameters:

a = 115.35670

b = 1655.67959

c = 61.46244

d = 0.51277



## Bead 2773

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

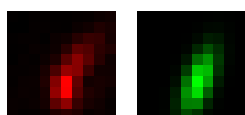
Coordinates : 93.1  $\mu\text{m}$  (x), 83.6  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

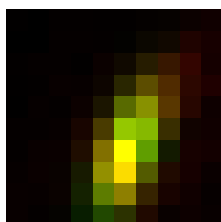
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 429 nm             | 444 nm             | 223 nm      |
| max       | 1.05 $\mu\text{m}$ | 1.08 $\mu\text{m}$ | 223 nm      |
| z         | 1.59 $\mu\text{m}$ | 1.6 $\mu\text{m}$  | 885 nm      |
| Asymmetry | 0.41               |                    |             |
| Theta     | 69.3°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 673.375$  (brightness)

$B = 137.293$  (background)

$a = 0.652$  px

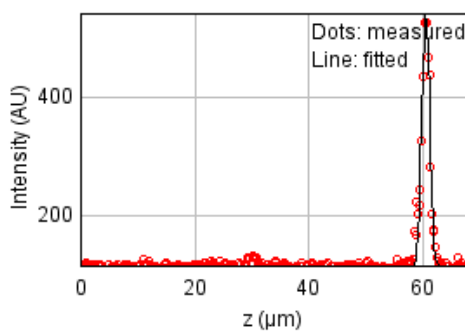
$b = 0.200$  px

$c = 0.198$  px

$x_c = 5.138$  px

$y_c = 5.976$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33237.1656

Standard deviation: 10.40502

$R^2: 0.96674$

Parameters:

$a = 113.63732$

$b = 542.67196$

$c = 60.54689$

$d = 0.67522$

## Bead 2774

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

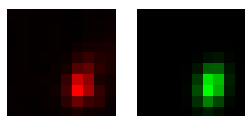
Coordinates : 103  $\mu\text{m}$  (x), 69.8  $\mu\text{m}$  (y), 61.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

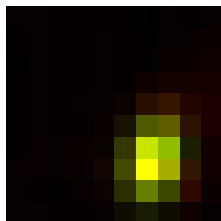
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 402 nm             | 415 nm             | 223 nm      |
| max       | 594 nm             | 614 nm             | 223 nm      |
| z         | 1.46 $\mu\text{m}$ | 1.47 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.677              |                    |             |
| Theta     | 76.7°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 903.677$  (brightness)

$B = 123.069$  (background)

$a = 0.807$  px

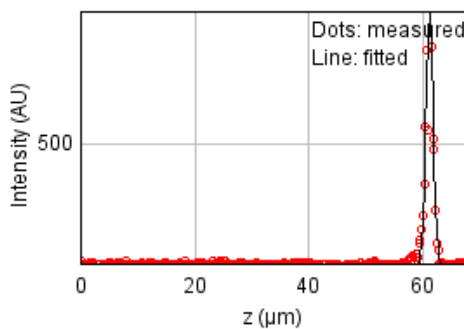
$b = 0.101$  px

$c = 0.405$  px

$x_c = 6.313$  px

$y_c = 6.559$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 184189.131

Standard deviation: 24.49417

$R^2: 0.94638$

Parameters:

$a = 113.00642$

$b = 932.33568$

$c = 61.21942$

$d = 0.62130$

## Bead 2775

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

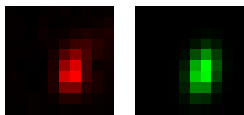
Coordinates : 144  $\mu\text{m}$  (x), 53.3  $\mu\text{m}$  (y), 60.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

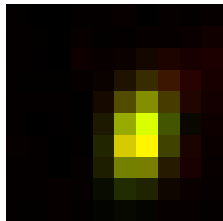
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 415 nm             | 429 nm             | 223 nm      |
| max       | 685 nm             | 708 nm             | 223 nm      |
| z         | 1.31 $\mu\text{m}$ | 1.32 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.607              |                    |             |
| Theta     | 77.1°              |                    |             |

### 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:

$A = 710.882$  (brightness)

$B = 120.713$  (background)

$a = 0.753$  px

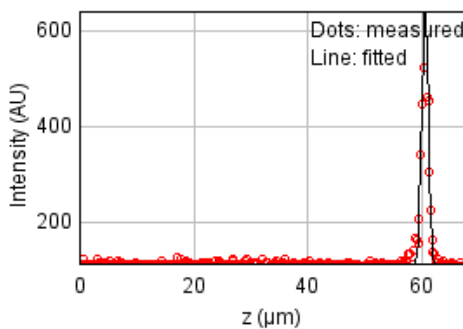
$b = 0.107$  px

$c = 0.311$  px

$x_c = 5.696$  px

$y_c = 5.540$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 35250.2272

Standard deviation: 10.71548

$R^2: 0.97268$

Parameters:

$a = 111.76908$

$b = 648.54211$

$c = 60.59179$

$d = 0.55677$

## Bead 2776 (Rejected)

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

Coordinates : 74.4  $\mu\text{m}$  (x), 44.7  $\mu\text{m}$  (y), 61.8  $\mu\text{m}$  (z)

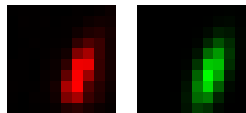
Corresponding bead : Not found

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

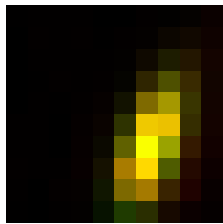
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 415 nm             | 429 nm             | 223 nm      |
| max       | 1.01 $\mu\text{m}$ | 1.05 $\mu\text{m}$ | 223 nm      |
| z         | 1.42 $\mu\text{m}$ | 1.42 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.41               |                    |             |
| Theta     | 70.6°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1665.495 (brightness)

B = 131.821 (background)

a = 0.708 px

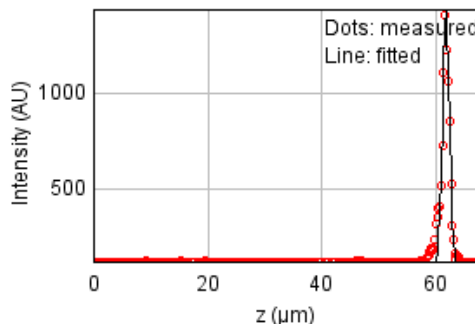
b = 0.204 px

c = 0.203 px

xc = 6.221 px

yc = 5.867 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 221629.165

Standard deviation: 26.86855

$R^2$ : 0.97383

Parameters:

a = 116.17106

b = 1441.34655

c = 61.80047

d = 0.60186

## Bead 2777

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

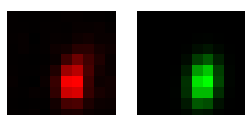
Coordinates : 95.4  $\mu\text{m}$  (x), 7.69  $\mu\text{m}$  (y), 60.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

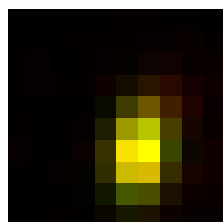
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 432 nm             | 446 nm             | 223 nm      |
| max       | 697 nm             | 721 nm             | 223 nm      |
| z         | 1.45 $\mu\text{m}$ | 1.45 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.62               |                    |             |
| Theta     | 81.7°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1086.232 (brightness)

B = 124.748 (background)

a = 0.710 px

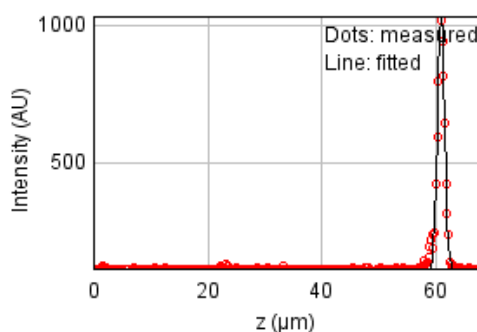
b = 0.063 px

c = 0.285 px

$x_c = 5.587$  px

$y_c = 6.037$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 52921.0574

Standard deviation: 13.12941

$R^2$ : 0.98700

Parameters:

a = 114.74231

b = 1030.77409

c = 60.94628

d = 0.61429

## Bead 2778

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

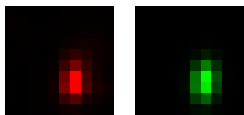
Coordinates : -8.17  $\mu\text{m}$  (x), -4.27  $\mu\text{m}$  (y), 61.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

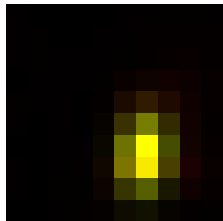
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 365 nm             | 377 nm             | 223 nm      |
| max       | 581 nm             | 600 nm             | 223 nm      |
| z         | 1.06 $\mu\text{m}$ | 1.06 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.628              |                    |             |
| Theta     | 84.4°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 2747.799 (brightness)

B = 144.630 (background)

a = 1.003 px

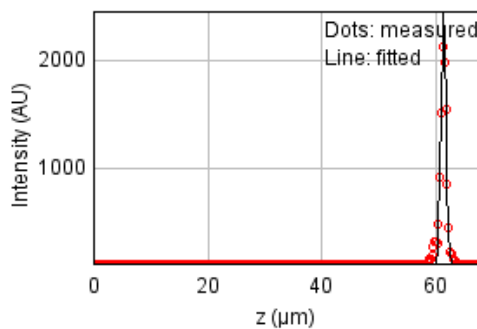
b = 0.059 px

c = 0.404 px

xc = 5.881 px

yc = 6.401 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 257615.949

Standard deviation: 28.96791

$R^2$ : 0.98675

Parameters:

a = 117.34495

b = 2447.30663

c = 61.36994

d = 0.44908

## Bead 2779

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

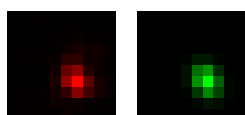
Coordinates : -105  $\mu\text{m}$  (x), -30.6  $\mu\text{m}$  (y), 60.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

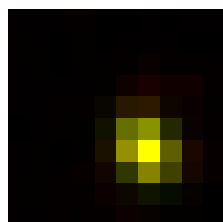
| FWHM      | Non corrected     | Corrected         | Theoretical |
|-----------|-------------------|-------------------|-------------|
| min       | 393 nm            | 406 nm            | 223 nm      |
| max       | 501 nm            | 518 nm            | 223 nm      |
| z         | 1.2 $\mu\text{m}$ | 1.2 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.784             |                   |             |
| Theta     | -60.6°            |                   |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1336.328 (brightness)

B = 124.161 (background)

a = 0.789 px

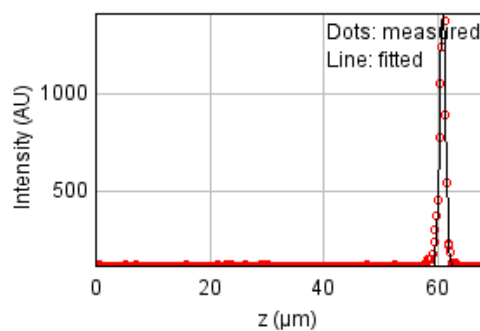
b = -0.143 px

c = 0.615 px

$x_c = 5.850$  px

$y_c = 5.921$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 116539.184

Standard deviation: 19.48349

$R^2$ : 0.98318

Parameters:

a = 114.38646

b = 1420.32258

c = 60.88256

d = 0.50929

## Bead 2780 (Rejected)

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

Coordinates : -75.5  $\mu\text{m}$  (x), -53.5  $\mu\text{m}$  (y), 60.8  $\mu\text{m}$  (z)

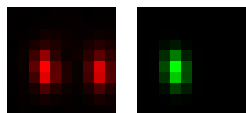
Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

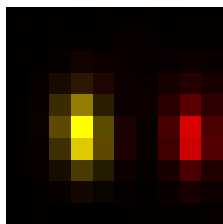
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 328 nm             | 339 nm             | 223 nm      |
| max       | 535 nm             | 553 nm             | 223 nm      |
| z         | 1.23 $\mu\text{m}$ | 1.23 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.614              |                    |             |
| Theta     | -82.7°             |                    |             |

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.539$



Parameters:

A = 1577.421 (brightness)

B = 219.278 (background)

a = 1.234 px

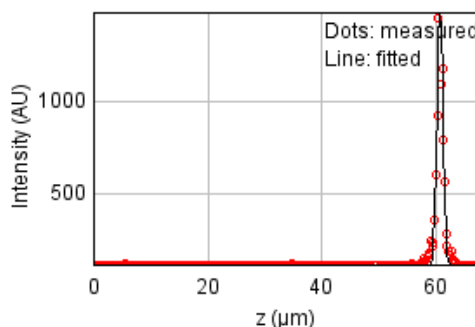
b = -0.098 px

c = 0.482 px

xc = 3.028 px

yc = 5.257 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 233933.806

Standard deviation: 27.60434

$R^2$ : 0.97034

Parameters:

a = 115.58164

b = 1482.99276

c = 60.75903

d = 0.52226



## Bead 2781

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

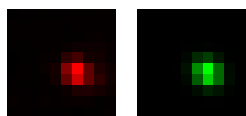
Coordinates : 110  $\mu\text{m}$  (x), -54.9  $\mu\text{m}$  (y), 61.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

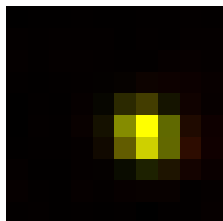
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 388 nm             | 401 nm             | 223 nm      |
| max       | 445 nm             | 460 nm             | 223 nm      |
| z         | 1.28 $\mu\text{m}$ | 1.28 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.87               |                    |             |
| Theta     | -35.4°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1647.042 (brightness)

B = 128.406 (background)

a = 0.749 px

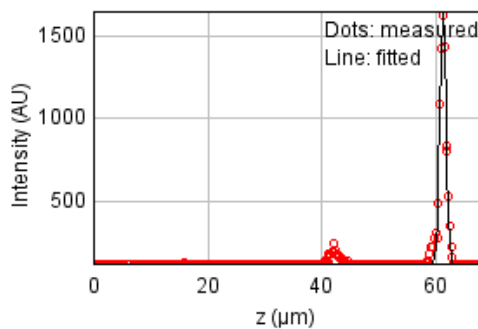
b = -0.102 px

c = 0.821 px

$x_c = 5.953$  px

$y_c = 5.366$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 284383.521

Standard deviation: 30.43568

$R^2$ : 0.97287

Parameters:

a = 118.48191

b = 1669.14117

c = 61.28457

d = 0.54169

## Bead 2782

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

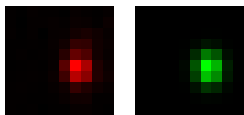
Coordinates : -54.5  $\mu\text{m}$  (x), -55.9  $\mu\text{m}$  (y), 60.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

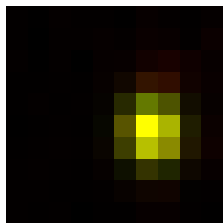
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 428 nm             | 442 nm             | 223 nm      |
| max       | 508 nm             | 525 nm             | 223 nm      |
| z         | 1.44 $\mu\text{m}$ | 1.44 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.842              |                    |             |
| Theta     | -86.9°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1269.065 (brightness)

B = 125.353 (background)

a = 0.733 px

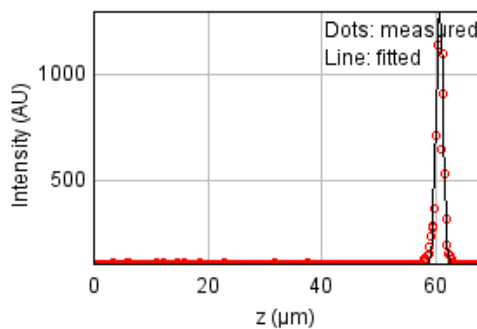
b = -0.012 px

c = 0.520 px

$x_c = 6.262$  px

$y_c = 5.229$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 529138.496

Standard deviation: 41.51600

$R^2$ : 0.92596

Parameters:

a = 114.30691

b = 1292.69894

c = 60.68826

d = 0.61100

## Bead 2783

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

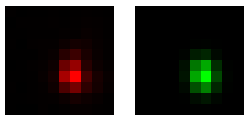
Coordinates : 66.8  $\mu\text{m}$  (x), -68.4  $\mu\text{m}$  (y), 61.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

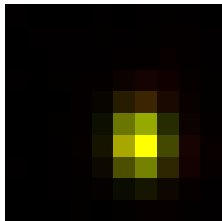
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 397 nm             | 410 nm             | 223 nm      |
| max       | 495 nm             | 511 nm             | 223 nm      |
| z         | 1.14 $\mu\text{m}$ | 1.15 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.802              |                    |             |
| Theta     | -83.8°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 2294.964 (brightness)

B = 135.334 (background)

a = 0.850 px

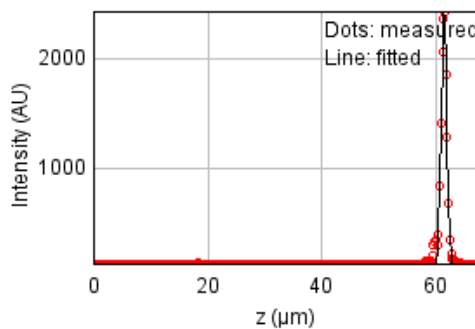
b = -0.033 px

c = 0.552 px

$x_c = 5.745$  px

$y_c = 5.861$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 163982.375

Standard deviation: 23.11157

$R^2$ : 0.99227

Parameters:

a = 116.57529

b = 2467.18273

c = 61.46166

d = 0.48502

## Bead 2784

Date : Mon Oct 17 13:30:04 PDT 2022

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

Frame size : 10 pixels

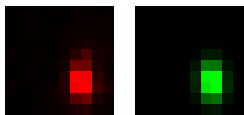
Coordinates : -127  $\mu\text{m}$  (x), -71.6  $\mu\text{m}$  (y), 60.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

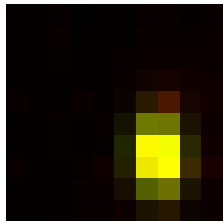
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 377 nm             | 389 nm             | 223 nm      |
| max       | 581 nm             | 601 nm             | 223 nm      |
| z         | 1.24 $\mu\text{m}$ | 1.25 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.649              |                    |             |
| Theta     | -86.7°             |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1217.419 (brightness)

B = 122.603 (background)

a = 0.943 px

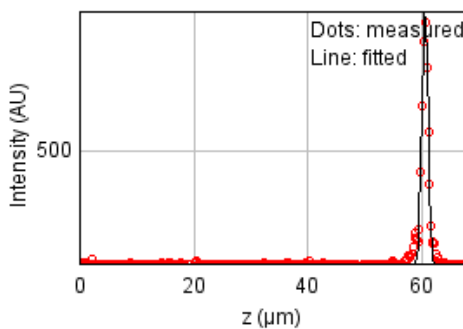
b = -0.032 px

c = 0.399 px

xc = 6.529 px

yc = 6.449 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 57483.0724

Standard deviation: 13.68361

$R^2$ : 0.98188

Parameters:

a = 113.64603

b = 981.23406

c = 60.57369

d = 0.52837

## Bead 2785

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

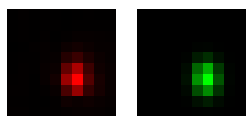
Coordinates : 127  $\mu\text{m}$  (x), -76.3  $\mu\text{m}$  (y), 61.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

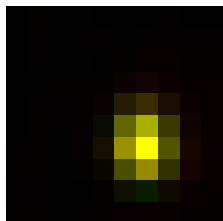
| FWHM      | Non corrected      | Corrected         | Theoretical |
|-----------|--------------------|-------------------|-------------|
| min       | 401 nm             | 415 nm            | 223 nm      |
| max       | 521 nm             | 539 nm            | 223 nm      |
| z         | 1.29 $\mu\text{m}$ | 1.3 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.77               |                   |             |
| Theta     | -88.2°             |                   |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1803.042 (brightness)

B = 127.241 (background)

a = 0.834 px

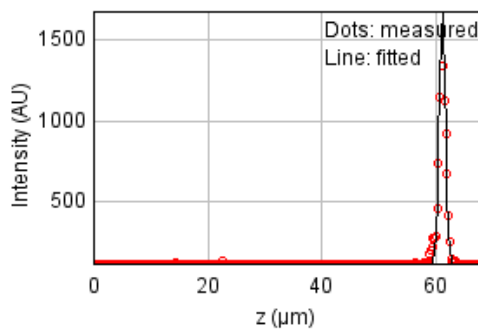
b = -0.011 px

c = 0.495 px

$x_c = 5.838$  px

$y_c = 5.873$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 242154.898

Standard deviation: 28.08519

$R^2$ : 0.97746

Parameters:

a = 112.68613

b = 1676.72466

c = 61.17231

d = 0.54863

## Bead 2786

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

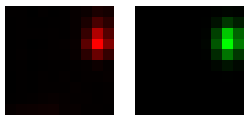
Coordinates : -62.7  $\mu\text{m}$  (x), 84.3  $\mu\text{m}$  (y), 62.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

| FWHM      | Non corrected      | Corrected         | Theoretical |
|-----------|--------------------|-------------------|-------------|
| min       | 384 nm             | 397 nm            | 223 nm      |
| max       | 509 nm             | 526 nm            | 223 nm      |
| z         | 1.29 $\mu\text{m}$ | 1.3 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.754              |                   |             |
| Theta     | 86.9°              |                   |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 2145.055 (brightness)

B = 130.087 (background)

a = 0.910 px

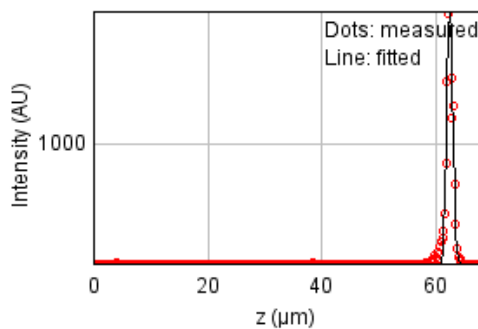
b = 0.021 px

c = 0.520 px

$x_c = 8.106$  px

$y_c = 2.739$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 490479.671

Standard deviation: 39.97066

$R^2$ : 0.96785

Parameters:

a = 116.73127

b = 1971.28098

c = 62.48117

d = 0.54854

## Bead 2787

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

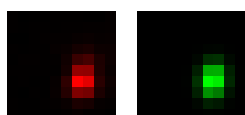
Coordinates : -69.6  $\mu\text{m}$  (x), 79.0  $\mu\text{m}$  (y), 61.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

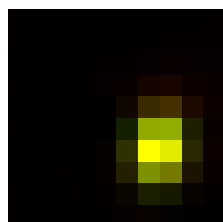
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 393 nm             | 406 nm             | 223 nm      |
| max       | 530 nm             | 548 nm             | 223 nm      |
| z         | 1.28 $\mu\text{m}$ | 1.29 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.742              |                    |             |
| Theta     | 83.2°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1917.759 (brightness)

B = 129.810 (background)

a = 0.863 px

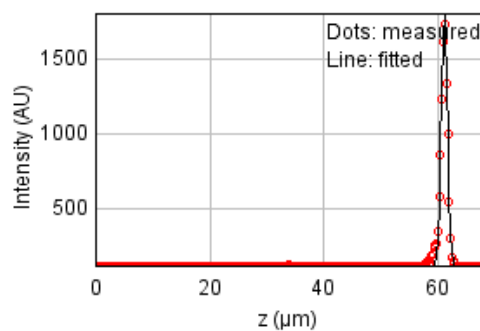
b = 0.046 px

c = 0.484 px

$x_c = 6.460$  px

$y_c = 5.871$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 86162.1547

Standard deviation: 16.75286

$R^2$ : 0.99301

Parameters:

a = 113.69230

b = 1809.51566

c = 61.18122

d = 0.54393

## Bead 2788 (Rejected)

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

Coordinates : 79.0  $\mu\text{m}$  (x), 76.5  $\mu\text{m}$  (y), 60.5  $\mu\text{m}$  (z)

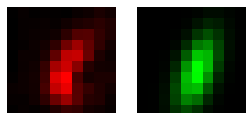
Corresponding bead : Not found

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

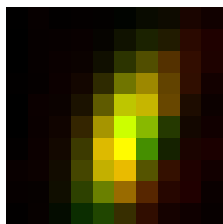
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 532 nm             | 550 nm             | 223 nm      |
| max       | 1.19 $\mu\text{m}$ | 1.23 $\mu\text{m}$ | 223 nm      |
| z         | 3.29 $\mu\text{m}$ | 3.3 $\mu\text{m}$  | 885 nm      |
| Asymmetry | 0.446              |                    |             |
| Theta     | 70.4°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 649.019 (brightness)

B = 137.014 (background)

a = 0.431 px

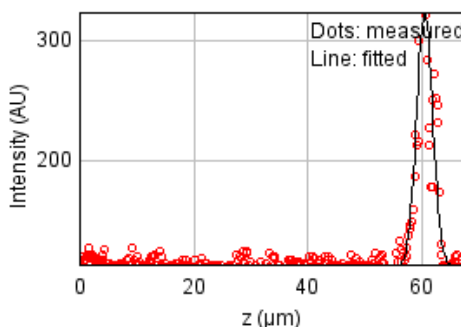
b = 0.120 px

c = 0.137 px

xc = 5.007 px

yc = 5.427 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 78690.4934

Standard deviation: 16.01002

$R^2$ : 0.85598

Parameters:

a = 112.25477

b = 323.96107

c = 60.52700

d = 1.39732



## Bead 2789

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

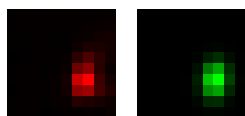
Coordinates : 67.2  $\mu\text{m}$  (x), 73.9  $\mu\text{m}$  (y), 61.7  $\mu\text{m}$  (z)

Corresponding bead : Not found

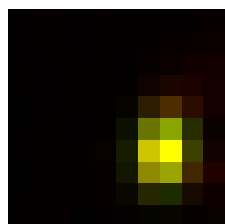
| FWHM      | Non corrected     | Corrected         | Theoretical |
|-----------|-------------------|-------------------|-------------|
| min       | 404 nm            | 418 nm            | 223 nm      |
| max       | 553 nm            | 572 nm            | 223 nm      |
| z         | 1.1 $\mu\text{m}$ | 1.1 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.731             |                   |             |
| Theta     | 83.7°             |                   |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1745.024 (brightness)

B = 129.034 (background)

a = 0.817 px

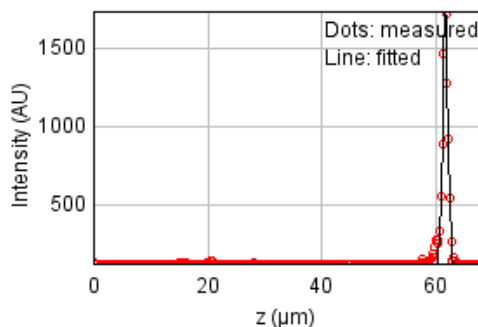
b = 0.041 px

c = 0.443 px

$x_c = 6.659$  px

$y_c = 6.030$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 119486.885

Standard deviation: 19.72836

$R^2$ : 0.98808

Parameters:

a = 117.11693

b = 1762.90460

c = 61.69070

d = 0.46524

## Bead 2790

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

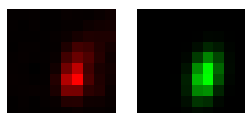
Coordinates : 107  $\mu\text{m}$  (x), 68.3  $\mu\text{m}$  (y), 61.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

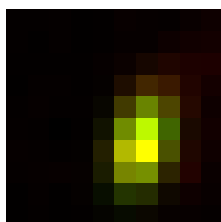
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 418 nm             | 432 nm             | 223 nm      |
| max       | 706 nm             | 730 nm             | 223 nm      |
| z         | 1.34 $\mu\text{m}$ | 1.35 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.592              |                    |             |
| Theta     | 75.1°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 761.077 (brightness)

B = 125.732 (background)

a = 0.737 px

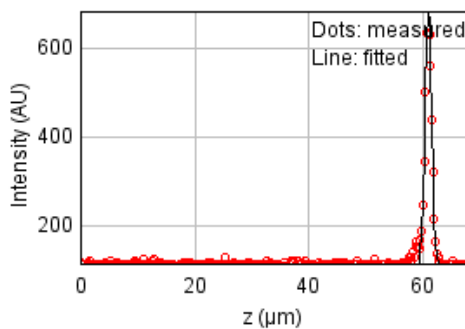
b = 0.124 px

c = 0.302 px

$x_c = 5.782$  px

$y_c = 5.636$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 22219.7875

Standard deviation: 8.50748

$R^2$ : 0.98509

Parameters:

a = 113.24836

b = 687.29555

c = 60.99480

d = 0.56991

## Bead 2791

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

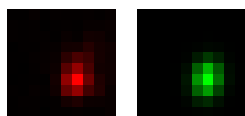
Coordinates : 113  $\mu\text{m}$  (x), 67.3  $\mu\text{m}$  (y), 60.9  $\mu\text{m}$  (z)

Corresponding bead : Not found

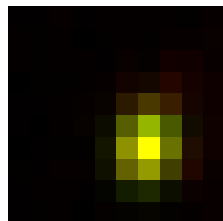
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 438 nm             | 453 nm             | 223 nm      |
| max       | 570 nm             | 589 nm             | 223 nm      |
| z         | 1.34 $\mu\text{m}$ | 1.35 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.77               |                    |             |
| Theta     | 80.2°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 964.618 (brightness)

B = 124.447 (background)

a = 0.690 px

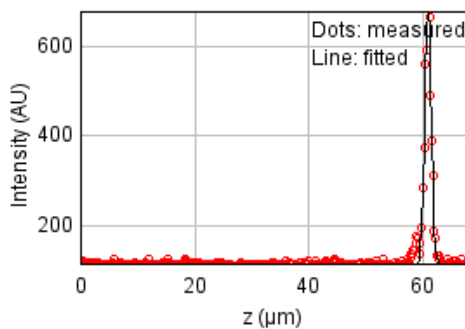
b = 0.048 px

c = 0.422 px

$x_c = 5.913$  px

$y_c = 5.914$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 33585.5115

Standard deviation: 10.45940

$R^2$ : 0.97684

Parameters:

a = 113.58480

b = 677.67643

c = 60.94365

d = 0.56960

## Bead 2792

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

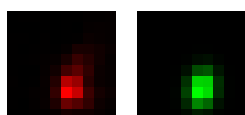
Coordinates : 76.0  $\mu\text{m}$  (x), 62.1  $\mu\text{m}$  (y), 61.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

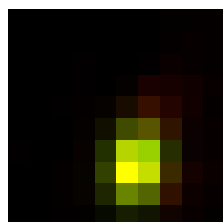
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 418 nm             | 433 nm             | 223 nm      |
| max       | 571 nm             | 590 nm             | 223 nm      |
| z         | 1.52 $\mu\text{m}$ | 1.53 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.733              |                    |             |
| Theta     | 79.6°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1672.590$  (brightness)

$B = 136.033$  (background)

$a = 0.755$  px

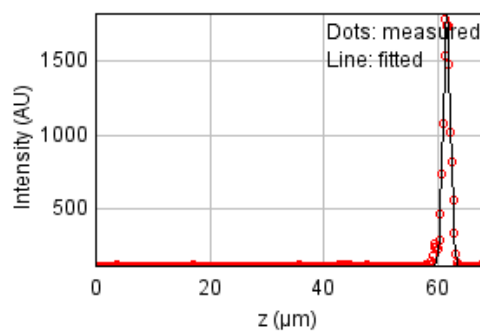
$b = 0.063$  px

$c = 0.423$  px

$x_c = 5.432$  px

$y_c = 6.659$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 107852.397

Standard deviation: 18.74329

$R^2: 0.99268$

Parameters:

$a = 116.12578$

$b = 1822.56787$

$c = 61.59956$

$d = 0.64509$

## Bead 2793

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

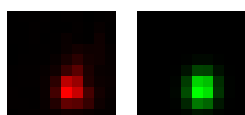
Coordinates : 72.3  $\mu\text{m}$  (x), 59.0  $\mu\text{m}$  (y), 61.5  $\mu\text{m}$  (z)

Corresponding bead : Not found

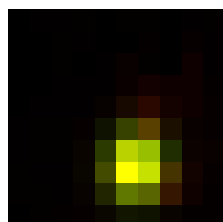
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 444 nm             | 459 nm             | 223 nm      |
| max       | 531 nm             | 549 nm             | 223 nm      |
| z         | 1.51 $\mu\text{m}$ | 1.51 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.836              |                    |             |
| Theta     | 84.3°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1418.821 (brightness)

B = 133.330 (background)

a = 0.679 px

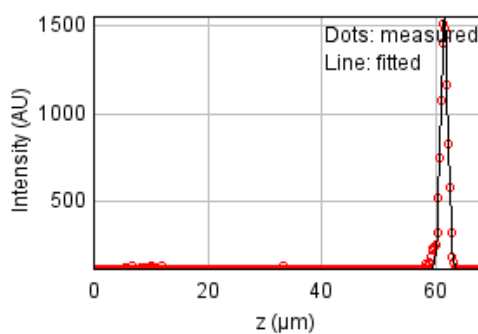
b = 0.020 px

c = 0.478 px

$x_c = 5.415$  px

$y_c = 6.691$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 72538.5607

Standard deviation: 15.37147

$R^2$ : 0.99312

Parameters:

a = 114.81605

b = 1564.85320

c = 61.51164

d = 0.63921

## Bead 2794

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

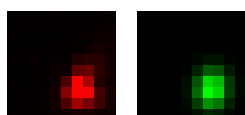
Coordinates : 88.3  $\mu\text{m}$  (x), 55.9  $\mu\text{m}$  (y), 61.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

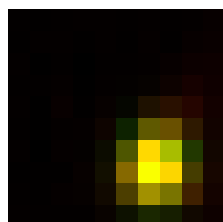
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 499 nm             | 516 nm             | 223 nm      |
| max       | 606 nm             | 627 nm             | 223 nm      |
| z         | 1.51 $\mu\text{m}$ | 1.52 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.823              |                    |             |
| Theta     | 83.5°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1068.168$  (brightness)

$B = 123.188$  (background)

$a = 0.537$  px

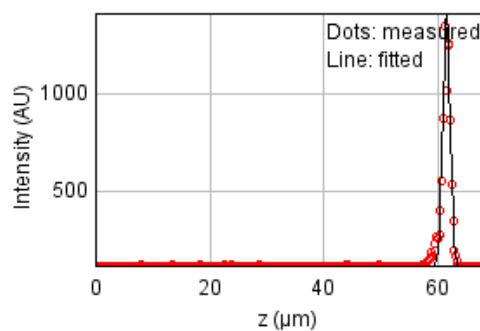
$b = 0.019$  px

$c = 0.367$  px

$x_c = 6.342$  px

$y_c = 6.703$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 371896.010

Standard deviation: 34.80499

$R^2: 0.95798$

Parameters:

$a = 114.12815$

$b = 1415.14760$

$c = 61.55054$

$d = 0.64334$

## Bead 2795

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

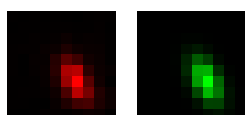
Coordinates : -108  $\mu\text{m}$  (x), 54.1  $\mu\text{m}$  (y), 61.4  $\mu\text{m}$  (z)

Corresponding bead : Not found

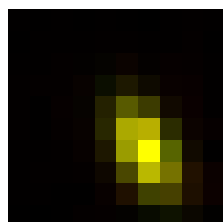
| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 403 nm        | 417 nm    | 223 nm      |
| max       | 742 nm        | 767 nm    | 223 nm      |
| z         | 739 nm        | 742 nm    | 885 nm      |
| Asymmetry | 0.543         |           |             |
| Theta     | -64.1°        |           |             |

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.993$



Parameters:

A = 1467.614 (brightness)

B = 127.397 (background)

a = 0.715 px

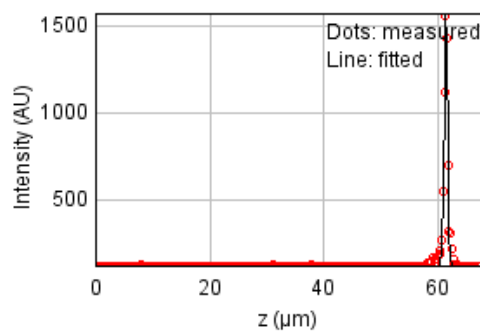
b = -0.229 px

c = 0.355 px

$x_c = 5.820$  px

$y_c = 5.918$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 85551.1362

Standard deviation: 16.69336

$R^2$ : 0.98441

Parameters:

a = 116.09087

b = 1590.27629

c = 61.42573

d = 0.31376

## Bead 2796

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

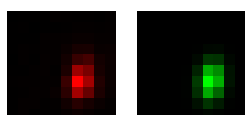
Coordinates : -96.1  $\mu\text{m}$  (x), 51.1  $\mu\text{m}$  (y), 61.2  $\mu\text{m}$  (z)

Corresponding bead : Not found

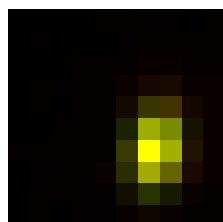
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 378 nm             | 391 nm             | 223 nm      |
| max       | 588 nm             | 608 nm             | 223 nm      |
| z         | 1.25 $\mu\text{m}$ | 1.25 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.643              |                    |             |
| Theta     | 81.8°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1750.444 (brightness)

B = 127.789 (background)

a = 0.927 px

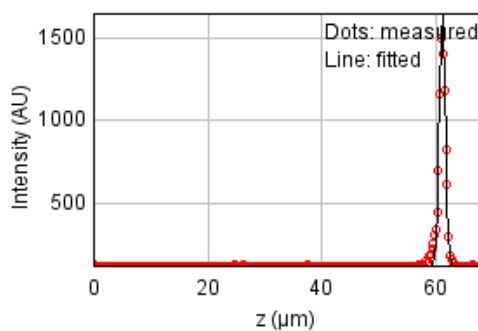
b = 0.078 px

c = 0.400 px

xc = 6.305 px

yc = 5.929 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 145411.621

Standard deviation: 21.76358

$R^2$ : 0.98526

Parameters:

a = 115.48396

b = 1645.74126

c = 61.17522

d = 0.53001



## Bead 2797

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

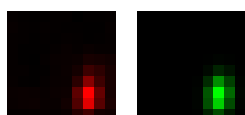
Coordinates : -130  $\mu\text{m}$  (x), 49.7  $\mu\text{m}$  (y), 63.0  $\mu\text{m}$  (z)

Corresponding bead : Not found

| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 365 nm             | 377 nm             | 223 nm      |
| max       | 582 nm             | 601 nm             | 223 nm      |
| z         | 1.08 $\mu\text{m}$ | 1.08 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.627              |                    |             |
| Theta     | 84.4°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

$A = 1398.440$  (brightness)

$B = 133.840$  (background)

$a = 1.002$  px

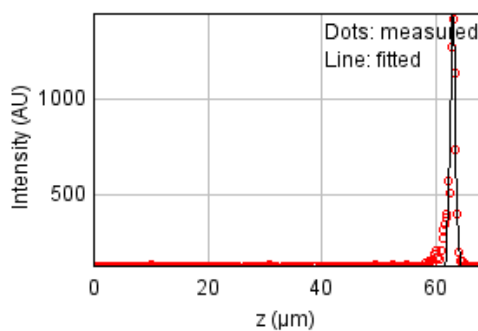
$b = 0.060$  px

$c = 0.402$  px

$x_c = 7.034$  px

$y_c = 7.237$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 334585.011

Standard deviation: 33.01293

$R^2: 0.95258$

Parameters:

$a = 117.62581$

$b = 1485.25174$

$c = 63.01303$

$d = 0.45694$

## Bead 2798

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

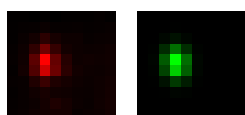
Coordinates : -113  $\mu\text{m}$  (x), 48.8  $\mu\text{m}$  (y), 61.3  $\mu\text{m}$  (z)

Corresponding bead : Not found

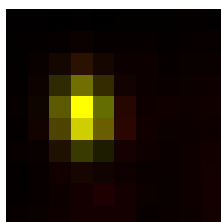
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 376 nm             | 388 nm             | 223 nm      |
| max       | 506 nm             | 523 nm             | 223 nm      |
| z         | 1.21 $\mu\text{m}$ | 1.21 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.743              |                    |             |
| Theta     | -84.9°             |                    |             |

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * \exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$   
 $R^2 = 0.966$



Parameters:

A = 1669.619 (brightness)

B = 192.591 (background)

a = 0.947 px

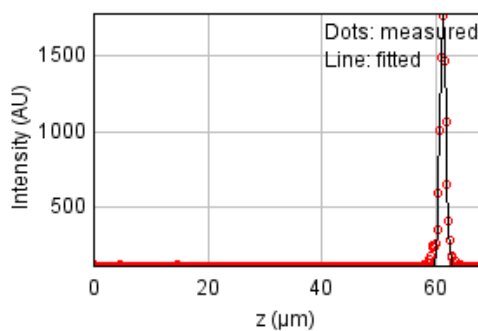
b = -0.037 px

c = 0.528 px

xc = 3.060 px

yc = 4.298 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 87522.6346

Standard deviation: 16.88461

$R^2$ : 0.99245

Parameters:

a = 115.31068

b = 1805.87929

c = 61.28090

d = 0.51341

## Bead 2799 (Rejected)

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

Coordinates : 124 um (x), 44.0 um (y), 38.8 um (z)

Corresponding bead : Not found

Reason of rejection : R or C parameter off limits.

| FWHM      | Non corrected | Corrected | Theoretical |
|-----------|---------------|-----------|-------------|
| min       | 0             | 0         | 223 nm      |
| max       | 0             | 0         | 223 nm      |
| z         | 1.5 um        | 1.51 um   | 885 nm      |
| Asymmetry | 0.0           |           |             |
| Theta     | 0.0°          |           |             |

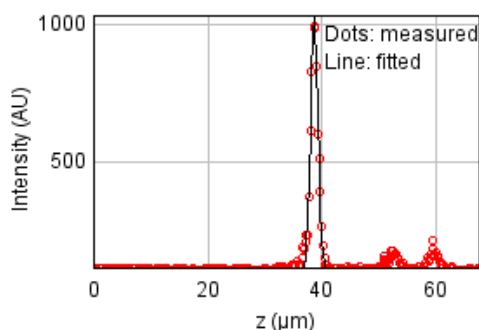
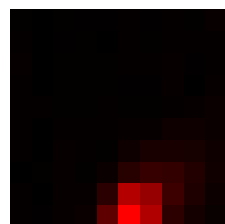
### XY profile & fitting parameters :

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



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

### Z profile & fitting parameters:



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

Sum of residuals squared: 135280.433

Standard deviation: 20.99173

R<sup>2</sup>: 0.96823

Parameters:

a = 119.71575

b = 1031.60442

c = 38.75335

d = 0.63664

## Bead 2800

Date : Mon Oct 17 13:30:05 PDT 2022

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

Frame size : 10 pixels

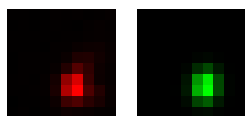
Coordinates : 36.9  $\mu\text{m}$  (x), 43.2  $\mu\text{m}$  (y), 61.6  $\mu\text{m}$  (z)

Corresponding bead : Not found

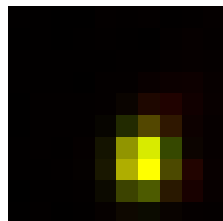
| FWHM      | Non corrected      | Corrected          | Theoretical |
|-----------|--------------------|--------------------|-------------|
| min       | 404 nm             | 418 nm             | 223 nm      |
| max       | 492 nm             | 509 nm             | 223 nm      |
| z         | 1.22 $\mu\text{m}$ | 1.22 $\mu\text{m}$ | 885 nm      |
| Asymmetry | 0.821              |                    |             |
| Theta     | 82.5°              |                    |             |

### XY profile & fitting parameters :

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



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



Parameters:

A = 1802.869 (brightness)

B = 130.115 (background)

a = 0.817 px

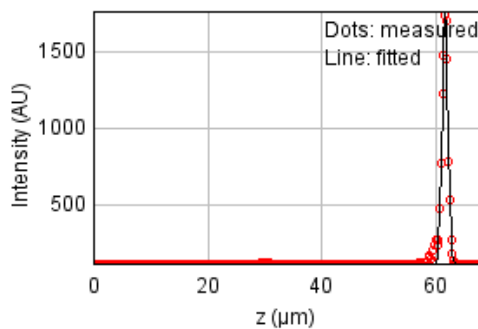
b = 0.035 px

c = 0.558 px

$x_c = 5.752$  px

$y_c = 6.591$  px

### Z profile & fitting parameters:



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

Sum of residuals squared: 122500.695

Standard deviation: 19.97561

$R^2$ : 0.98912

Parameters:

a = 115.25610

b = 1771.97739

c = 61.63716

d = 0.51748