# Bead 301 (Rejected)

Date: Mon Oct 17 13:50:41 PDT 2022

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

Frame size: 12 pixels

Coordinates: -162 um (x), -7.58 um (y), 6.04 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	438 nm	456 nm	270 nm
max	662 nm	689 nm	270 nm
Z	2.7 um	2.71 um	1.3 um
Asymmetry	0.662		
Theta	28.2°		

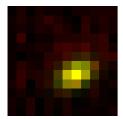
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.838$$



Parameters:

A = 126.384 (brightness)

B = 115.493 (background)

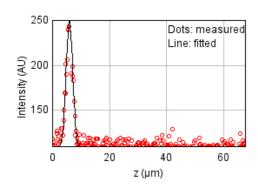
a = 0.394 px

b = 0.164 px

c = 0.612 px

xc = 6.942 pxyc = 6.933 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13406.8552

Standard deviation: 6.60837

R^2: 0.92818 Parameters:

a = 109.71446

b = 251.00859

c = 6.04393

# Bead 302 (Rejected)

Date: Mon Oct 17 13:50:42 PDT 2022

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

Frame size: 12 pixels

Coordinates: 162 um (x), -27.0 um (y), 6.41 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	399 nm	416 nm	270 nm
max	708 nm	737 nm	270 nm
Z	5.14 um	5.16 um	1.3 um
Asymmetry	0.564		
Theta	-42.5°		

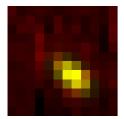
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.825$$



Parameters:

A = 145.601 (brightness)

B = 121.629 (background)

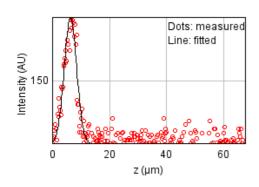
a = 0.530 px

b = -0.286 px

c = 0.581 px

xc = 6.600 pxyc = 7.084 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 14237.9367

Standard deviation: 6.81011

R^2: 0.88061 Parameters:

a = 109.19987

b = 191.27218

c = 6.40534

d = 2.18406

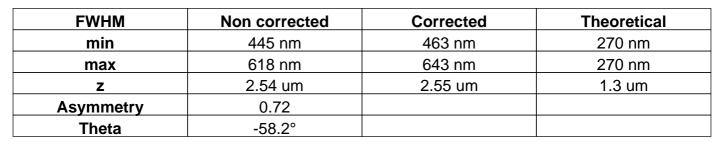
Date: Mon Oct 17 13:50:42 PDT 2022

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

Frame size: 12 pixels

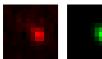
Coordinates: 124 um (x), -28.9 um (y), 6.86 um (z)

Corresponding bead: Not found



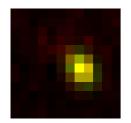
## XY profile & fitting parameters :

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





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



Parameters:

A = 249.397 (brightness)

B = 119.599 (background)

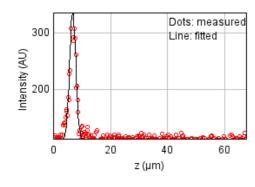
a = 0.588 px

b = -0.147 px

c = 0.443 px

xc = 7.249 pxyc = 6.061 px

# **Z** profile & fitting parameters:



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

Sum of residuals squared: 22838.4478

Standard deviation: 8.62510

R^2: 0.94754 Parameters: a = 112.11557b = 336.27393

c = 6.85664

Date: Mon Oct 17 13:50:42 PDT 2022

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

Frame size: 12 pixels

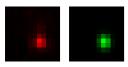
Coordinates: -30.1 um (x), -29.9 um (y), 7.21 um (z)

Corresponding bead: Not found

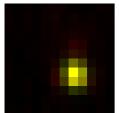
FWHM	Non corrected	Corrected	Theoretical
min	399 nm	416 nm	270 nm
max	495 nm	516 nm	270 nm
Z	1.84 um	1.85 um	1.3 um
Asymmetry	0.806		
Theta	-83.1°		

### XY profile & fitting parameters :

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



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



A = 698.762 (brightness)

B = 127.002 (background)

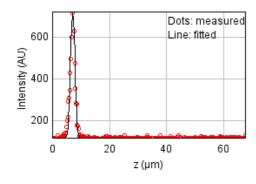
a = 0.838 px

b = -0.035 px

c = 0.551 px

xc = 7.216 pxyc = 7.265 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 51581.0929

Standard deviation: 12.96212

R^2: 0.97739 Parameters: a = 115.05947 b = 722.81037 c = 7.20698

# Bead 305 (Rejected)

Date: Mon Oct 17 13:50:42 PDT 2022

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

Frame size: 12 pixels

Coordinates: 108 um (x), -41.0 um (y), 7.71 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	410 nm	427 nm	270 nm
max	617 nm	643 nm	270 nm
Z	2.76 um	2.77 um	1.3 um
Asymmetry	0.664		
Theta	42.6°		

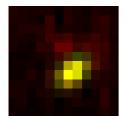
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.808$$



Parameters:

A = 200.013 (brightness)

B = 120.558 (background)

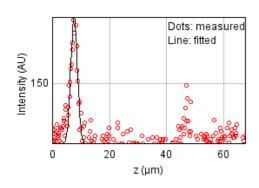
a = 0.557 px

b = 0.222 px

c = 0.593 px

xc = 6.507 pxyc = 6.676 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 18453.3387

Standard deviation: 7.75297

R^2: 0.74126 Parameters: a = 113.13830

b = 190.36368

c = 7.70981

# Bead 306 (Rejected)

Date: Mon Oct 17 13:50:43 PDT 2022

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

Frame size: 12 pixels

Coordinates: -89.1 um (x), -46.0 um (y), 7.23 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	450 nm	469 nm	270 nm
max	668 nm	695 nm	270 nm
Z	3.55 um	3.56 um	1.3 um
Asymmetry	0.674		
Theta	-20.9°		

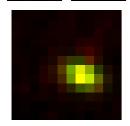
## XY profile & fitting parameters :

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





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



Parameters:

A = 296.211 (brightness)

B = 122.350 (background)

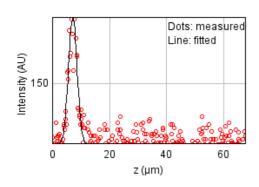
a = 0.347 px

b = -0.120 px

c = 0.617 px

xc = 7.216 pxyc = 6.610 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15000.4545

Standard deviation: 6.99009

R^2: 0.81818 Parameters:

a = 112.99277

b = 190.66454

c = 7.23468

# Bead 307 (Rejected)

Date: Mon Oct 17 13:50:43 PDT 2022

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

Frame size: 12 pixels

Coordinates: 20.6 um (x), -52.5 um (y), 3.77 um (z)

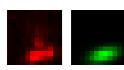
Corresponding bead: Not found

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

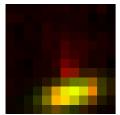
FWHM	Non corrected	Corrected	Theoretical
min	486 nm	506 nm	270 nm
max	1.07 um	1.12 um	270 nm
Z	3.46 um	3.48 um	1.3 um
Asymmetry	0.452		
Theta	14.6°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.838$$



Parameters:

A = 304.368 (brightness) B = 124.484 (background)

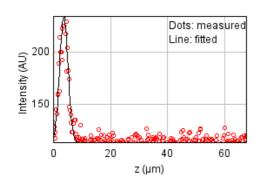
a = 0.145 px

b = 0.110 px

c = 0.540 px

xc = 6.623 pxyc = 9.307 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14606.3040

Standard deviation: 6.89765

R^2: 0.91621 Parameters:

a = 113.17563

b = 233.98441

c = 3.76945

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

Frame size: 12 pixels

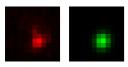
Coordinates: 70.6 um (x), -59.5 um (y), 7.44 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	511 nm	532 nm	270 nm
max	579 nm	603 nm	270 nm
Z	2.08 um	2.08 um	1.3 um
Asymmetry	0.883		
Theta	75.4°		

### XY profile & fitting parameters :

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



Fitted 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 = 414.880 (brightness)

B = 123.990 (background)

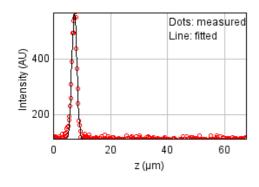
a = 0.507 px

b = 0.028 px

c = 0.408 px

xc = 6.754 pxyc = 7.086 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24737.8605

Standard deviation: 8.97660

R^2: 0.98228 Parameters:

a = 113.44296

b = 563.44409

c = 7.43617

# Bead 309 (Rejected)

Date: Mon Oct 17 13:50:43 PDT 2022

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

Frame size: 12 pixels

Coordinates: 119 um (x), -61.2 um (y), 6.57 um (z)

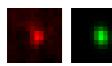
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

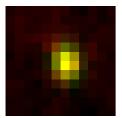
FWHM	Non corrected	Corrected	Theoretical
min	482 nm	502 nm	270 nm
max	640 nm	666 nm	270 nm
Z	3.1 um	3.11 um	1.3 um
Asymmetry	0.754		
Theta	-80.9°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.874$$



Parameters:

A = 205.098 (brightness)

B = 120.444 (background)

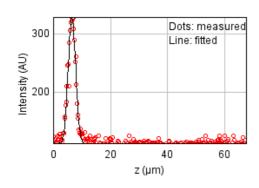
a = 0.571 px

b = -0.039 px

c = 0.334 px

xc = 6.125 pxyc = 5.675 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17256.3166

Standard deviation: 7.49730

R^2: 0.96414 Parameters:

a = 111.17538

b = 328.02679

c = 6.56618

# Bead 310 (Rejected)

Date: Mon Oct 17 13:50:44 PDT 2022

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

Frame size: 12 pixels

Coordinates: -152 um (x), 68.8 um (y), 7.24 um (z)

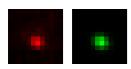
Corresponding bead: Not found

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

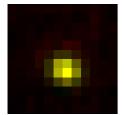
FWHM	Non corrected	Corrected	Theoretical
min	451 nm	470 nm	270 nm
max	526 nm	548 nm	270 nm
Z	3.89 um	3.9 um	1.3 um
Asymmetry	0.857		
Theta	-27.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 346.064 (brightness) B = 119.025 (background)

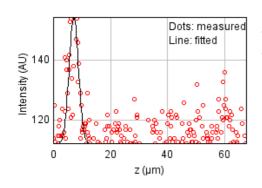
a = 0.521 px

b = -0.071 px

c = 0.624 px

xc = 5.808 pxyc = 6.690 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 19967.0151

Standard deviation: 8.06468

R^2: 0.51853 Parameters:

a = 112.14197

b = 154.20885

c = 7.24477

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

Frame size: 12 pixels

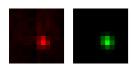
Coordinates: -127 um (x), 63.3 um (y), 6.45 um (z)

Corresponding bead: Not found

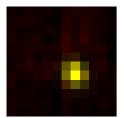
FWHM	Non corrected	Corrected	Theoretical
min	380 nm	396 nm	270 nm
max	441 nm	460 nm	270 nm
Z	2.43 um	2.44 um	1.3 um
Asymmetry	0.86		
Theta	-64.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 241.326 (brightness)

B = 117.715 (background)

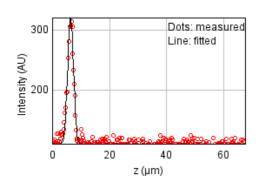
a = 0.887 px

b = -0.093 px

c = 0.732 px

xc = 6.948 pxyc = 6.791 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 18227.5474

Standard deviation: 7.70540

R^2: 0.94938 Parameters:

a = 111.58967

b = 320.20815

c = 6.45153

Date: Mon Oct 17 13:50:44 PDT 2022

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

Frame size: 12 pixels

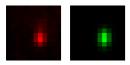
Coordinates: 28.6 um (x), 48.2 um (y), 7.11 um (z)

Corresponding bead: Not found

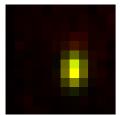
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	591 nm	616 nm	270 nm
Z	2.11 um	2.12 um	1.3 um
Asymmetry	0.651		
Theta	87.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 392.463 (brightness)

B = 123.914 (background)

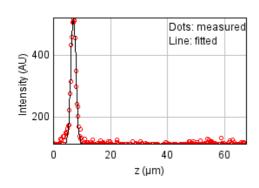
a = 0.905 px

b = 0.019 px

c = 0.384 px

xc = 6.976 pxyc = 6.600 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 23710.2239

Standard deviation: 8.78817

R^2: 0.97979 Parameters: a = 113.90872

b = 522.87545

c = 7.10602

Date: Mon Oct 17 13:50:44 PDT 2022

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

Frame size: 12 pixels

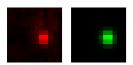
Coordinates: 74.5 um (x), 43.6 um (y), 6.62 um (z)

Corresponding bead: Not found

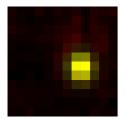
FWHM	Non corrected	Corrected	Theoretical
min	432 nm	450 nm	270 nm
max	506 nm	527 nm	270 nm
Z	2.52 um	2.53 um	1.3 um
Asymmetry	0.855		
Theta	-84.1°		

### XY profile & fitting parameters :

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



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



A = 258.340 (brightness)

B = 119.067 (background)

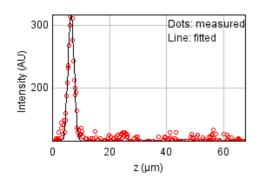
a = 0.716 px

b = -0.020 px

c = 0.527 px

xc = 7.525 pxyc = 6.148 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 17904.0902

Standard deviation: 7.63672

R^2: 0.94965 Parameters: a = 113.71398 b = 317.44872

c = 6.61804

# **Bead 314 (Rejected)**

Date: Mon Oct 17 13:50:45 PDT 2022

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

Frame size: 12 pixels

Coordinates: -32.3 um (x), 39.3 um (y), 7.77 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	473 nm	493 nm	270 nm
max	845 nm	880 nm	270 nm
Z	2.37 um	2.38 um	1.3 um
Asymmetry	0.56		
Theta	-79.5°		

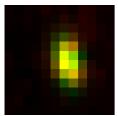
## XY profile & fitting parameters :

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





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



Parameters:

A = 424.121 (brightness) (background)

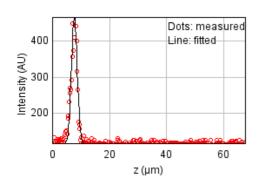
B = 122.041

a = 0.585 pxb = -0.074 px

c = 0.202 px

xc = 6.402 pxyc = 5.674 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 52988.5586

Standard deviation: 13.13778

R^2: 0.94765 Parameters:

a = 114.15913

b = 467.48539

c = 7.77017

# Bead 315 (Rejected)

Date: Mon Oct 17 13:50:45 PDT 2022

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

Frame size: 12 pixels

Coordinates: 155 um (x), 32.4 um (y), 5.7 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	469 nm	488 nm	270 nm
max	525 nm	547 nm	270 nm
Z	3.1 um	3.11 um	1.3 um
Asymmetry	0.893		
Theta	-5.6°		

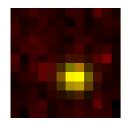
# XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.759$$



Parameters:

A = 86.335 (brightness)

B = 114.926 (background)

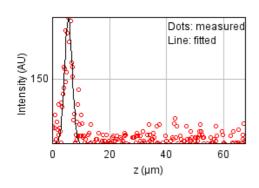
a = 0.488 px

b = -0.012 px

c = 0.609 px

xc = 6.549 pxyc = 7.090 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 15247.8414

Standard deviation: 7.04750

R^2: 0.80030 Parameters:

a = 110.04688

b = 188.72387

c = 5.69614

# Bead 316 (Rejected)

Date: Mon Oct 17 13:50:45 PDT 2022

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

Frame size: 12 pixels

Coordinates: 65.4 um (x), -30.5 um (y), 7.67 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	516 nm	538 nm	270 nm
max	709 nm	739 nm	270 nm
Z	3.29 um	3.3 um	1.3 um
Asymmetry	0.728		
Theta	31.5°		

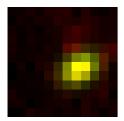
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.881$$



Parameters:

A = 190.903 (brightness)

B = 119.563 (background)

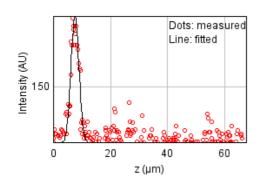
a = 0.331 px

b = 0.105 px

c = 0.439 px

xc = 7.382 pxyc = 6.193 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15192.9731

Standard deviation: 7.03481

R^2: 0.81825 Parameters: a = 114.14269

b = 195.10385

c = 7.66560

Date: Mon Oct 17 13:50:45 PDT 2022

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

Frame size: 12 pixels

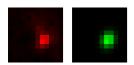
Coordinates: 89.8 um (x), -36.1 um (y), 7.18 um (z)

Corresponding bead: Not found

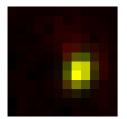
FWHM	Non corrected	Corrected	Theoretical
min	447 nm	466 nm	270 nm
max	568 nm	592 nm	270 nm
Z	2.91 um	2.92 um	1.3 um
Asymmetry	0.787		
Theta	74.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 359.495 (brightness)

B = 122.019 (background)

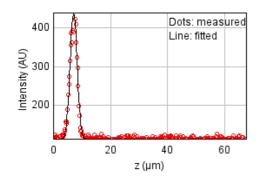
a = 0.651 px

b = 0.067 px

c = 0.434 px

xc = 7.362 pxyc = 6.592 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 22652.3785

Standard deviation: 8.58989

R^2: 0.97783 Parameters:

a = 112.50062

b = 439.92038

c = 7.18380

# Bead 318 (Rejected)

Date: Mon Oct 17 13:50:46 PDT 2022

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

Frame size: 12 pixels

Coordinates: 42.1 um (x), -45.0 um (y), 4.41 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	500 nm	520 nm	270 nm
max	1.12 um	1.16 um	270 nm
Z	3.88 um	3.9 um	1.3 um
Asymmetry	0.447		
Theta	26.6°		

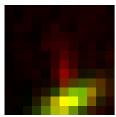
## XY profile & fitting parameters :

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





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



Parameters:

A = 171.969 (brightness)

B = 124.480(background)

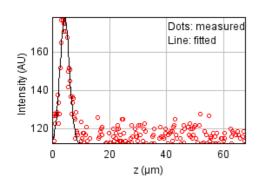
a = 0.194 px

b = 0.172 px

c = 0.451 px

xc = 6.543 pxyc = 10.032 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13953.3258

Standard deviation: 6.74170

R^2: 0.79041 Parameters:

a = 112.27017

b = 178.10103

c = 4.41427

# Bead 319 (Rejected)

Date: Mon Oct 17 13:50:46 PDT 2022

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

Frame size: 12 pixels

Coordinates: 151 um (x), -51.5 um (y), 6.29 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	465 nm	485 nm	270 nm
max	607 nm	632 nm	270 nm
Z	3.71 um	3.72 um	1.3 um
Asymmetry	0.766		
Theta	-32.2°		

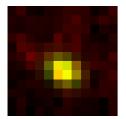
# XY profile & fitting parameters :

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





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



Parameters:

A = 115.109 (brightness)

B = 113.740 (background)

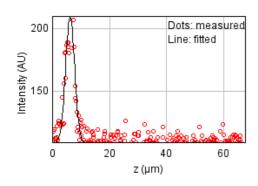
a = 0.437 px

b = -0.115 px

c = 0.547 px

xc = 5.612 pxyc = 6.520 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15150.7662

Standard deviation: 7.02503

R^2: 0.88588 Parameters:

a = 109.39769

b = 209.89756

c = 6.29064

# Bead 320 (Rejected)

Date: Mon Oct 17 13:50:46 PDT 2022

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

Frame size: 12 pixels

Coordinates: 92.1 um (x), -53.9 um (y), 7.42 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	545 nm	568 nm	270 nm
max	689 nm	718 nm	270 nm
Z	3.53 um	3.54 um	1.3 um
Asymmetry	0.791		
Theta	54.5°		

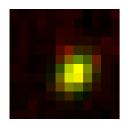
## XY profile & fitting parameters :

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





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



Parameters:

A = 196.664 (brightness)

B = 119.377 (background)

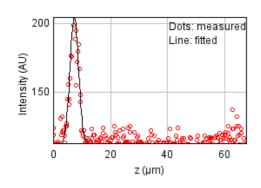
a = 0.395 px

b = 0.080 px

c = 0.340 px

xc = 6.666 pxyc = 6.484 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18591.5716

Standard deviation: 7.78196

R^2: 0.83605 Parameters:

a = 112.16644

b = 204.49198

c = 7.42147

# **Bead 321 (Rejected)**

Date: Mon Oct 17 13:50:46 PDT 2022

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

Frame size: 12 pixels

Coordinates: 133 um (x), -93.8 um (y), 7.22 um (z)

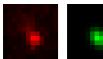
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	476 nm	496 nm	270 nm
max	635 nm	661 nm	270 nm
Z	2.74 um	2.76 um	1.3 um
Asymmetry	0.75		
Theta	-55.0°		

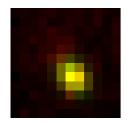
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.896$$



Parameters:

A = 226.244 (brightness)

B = 119.926 (background)

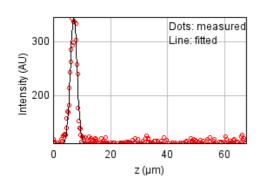
a = 0.507 px

b = -0.122 px

c = 0.419 px

xc = 6.290 pxyc = 6.946 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 21199.4628

Standard deviation: 8.30985

R^2: 0.95786 Parameters:

a = 110.86654

b = 344.65598

c = 7.22059

# Bead 322 (Rejected)

Date: Mon Oct 17 13:50:47 PDT 2022

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

Frame size: 12 pixels

Coordinates: -19.2 um (x), 92.6 um (y), 6.77 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	378 nm	393 nm	270 nm
max	716 nm	746 nm	270 nm
Z	1.88 um	1.89 um	1.3 um
Asymmetry	0.527		
Theta	-80.6°		

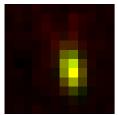
## XY profile & fitting parameters :

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





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



xc = 6.801 px

yc = 6.625 px

#### Parameters:

A = 267.561 (brightness)

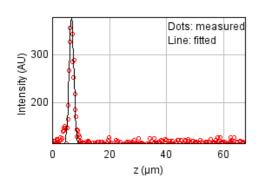
B = 122.798 (background)

a = 0.923 px

b = -0.110 px

c = 0.280 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 28343.3700

Standard deviation: 9.60852

R^2: 0.93870

Parameters:

a = 114.06115

b = 379.37807

c = 6.77393

Date: Mon Oct 17 13:50:47 PDT 2022

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

Frame size: 12 pixels

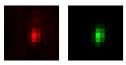
Coordinates: 72.0 um (x), 85.2 um (y), 7.04 um (z)

Corresponding bead: Not found

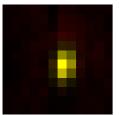
FWHM	Non corrected	Corrected	Theoretical
min	318 nm	332 nm	270 nm
max	536 nm	558 nm	270 nm
Z	2.21 um	2.22 um	1.3 um
Asymmetry	0.594		
Theta	83.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 333.183 (brightness)

B = 117.450 (background)

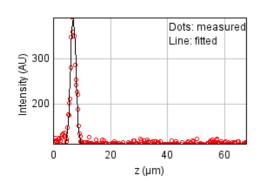
a = 1.312 px

b = 0.102 px

c = 0.480 px

xc = 6.267 pxyc = 6.087 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24547.9508

Standard deviation: 8.94208

R^2: 0.95716 Parameters: a = 112.78922 b = 388.69636 c = 7.04006

# **Bead 324 (Rejected)**

Date: Mon Oct 17 13:50:47 PDT 2022

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

Frame size: 12 pixels

Coordinates: 133 um (x), 76.4 um (y), 6.62 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	436 nm	454 nm	270 nm
max	562 nm	585 nm	270 nm
Z	2.75 um	2.76 um	1.3 um
Asymmetry	0.776		
Theta	32.3°		

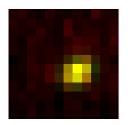
## XY profile & fitting parameters :

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





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



Parameters:

A = 167.442 (brightness)

B = 116.787(background)

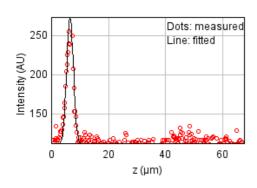
a = 0.505 px

b = 0.127 px

c = 0.626 px

xc = 7.052 pxyc = 6.355 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 21444.3651

Standard deviation: 8.35771

R^2: 0.91421

Parameters: a = 112.52408

b = 273.32744

c = 6.62010

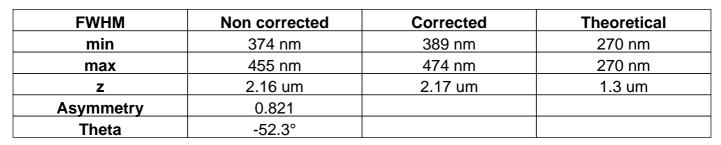
Date: Mon Oct 17 13:50:48 PDT 2022

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

Frame size: 12 pixels

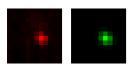
Coordinates: -110 um (x), 65.7 um (y), 6.98 um (z)

Corresponding bead: Not found

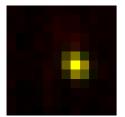


### XY profile & fitting parameters :

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



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



Parameters:

A = 342.737 (brightness)

B = 118.729 (background)

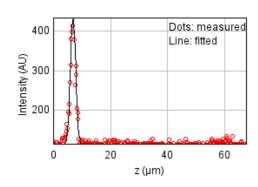
a = 0.844 px

b = -0.152 px

c = 0.765 px

xc = 7.099 pxyc = 6.027 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 31104.7219

Standard deviation: 10.06570

R^2: 0.95883 Parameters: a = 114.07787 b = 434.69349

c = 6.98454

Date: Mon Oct 17 13:50:48 PDT 2022

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

Frame size: 12 pixels

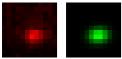
Coordinates: 164 um (x), 38.0 um (y), 6.42 um (z)

Corresponding bead: Not found

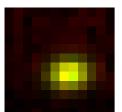
FWHM	Non corrected	Corrected	Theoretical
min	544 nm	567 nm	270 nm
max	726 nm	756 nm	270 nm
Z	3.47 um	3.48 um	1.3 um
Asymmetry	0.749		
Theta	5.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 149.751 (brightness)

B = 118.964 (background)

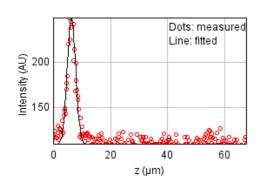
a = 0.257 px

b = 0.020 px

c = 0.451 px

xc = 6.551 pxyc = 6.699 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 18725.9600

Standard deviation: 7.81003

R^2: 0.91819 Parameters: a = 110.10344 b = 248.61361 c = 6.41547

# Bead 327 (Rejected)

Date: Mon Oct 17 13:50:48 PDT 2022

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

Frame size: 12 pixels

Coordinates: 77.0 um (x), 28.2 um (y), 7.15 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	491 nm	511 nm	270 nm
max	619 nm	645 nm	270 nm
Z	2.49 um	2.5 um	1.3 um
Asymmetry	0.793		
Theta	90.0°		

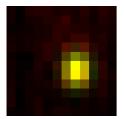
## XY profile & fitting parameters :

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





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



Parameters:

A = 210.437 (brightness)

B = 116.722 (background)

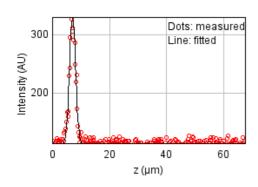
a = 0.556 px

b = 0.000 px

c = 0.350 px

xc = 7.166 pxyc = 6.449 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 17833.9723

Standard deviation: 7.62175

R^2: 0.95573 Parameters:

a = 112.24157

b = 330.87215

c = 7.14620

# Bead 328 (Rejected)

Date: Mon Oct 17 13:50:48 PDT 2022

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

Frame size: 12 pixels

Coordinates: 112 um (x), 16.9 um (y), 57.3 um (z)

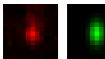
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	509 nm	531 nm	270 nm
max	831 nm	865 nm	270 nm
Z	2.48 um	2.49 um	1.3 um
Asymmetry	0.613		
Theta	89.4°		

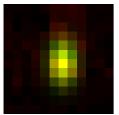
## XY profile & fitting parameters :

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





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



xc = 5.968 pxyc = 5.847 px

### Parameters:

A = 257.791 (brightness)

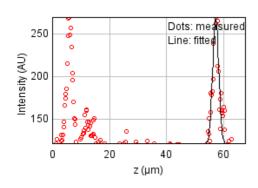
B = 124.847(background)

a = 0.517 px

b = 0.003 px

c = 0.195 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 223280.536

Standard deviation: 26.96847

R^2: 0.44010 Parameters:

a = 121.28514

b = 269.32799

c = 57.27140

# Bead 329 (Rejected)

Date: Mon Oct 17 13:50:48 PDT 2022

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

Frame size: 12 pixels

Coordinates: 62.9 um (x), -19.1 um (y), 4.41 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	455 nm	474 nm	270 nm
max	768 nm	800 nm	270 nm
Z	3.17 um	3.18 um	1.3 um
Asymmetry	0.592		
Theta	39.7°		

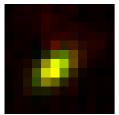
## XY profile & fitting parameters :

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





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



Parameters:

A = 319.384 (brightness) B = 121.349 (background)

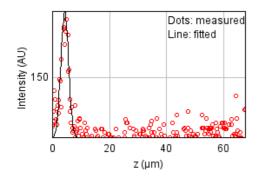
a = 0.399 px

b = 0.207 px

c = 0.477 px

xc = 4.964 pxyc = 6.527 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18486.5692

Standard deviation: 7.75995

R^2: 0.77234 Parameters:

a = 112.51151

b = 191.42394

c = 4.41378

Date: Mon Oct 17 13:50:48 PDT 2022

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

Frame size: 12 pixels

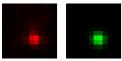
Coordinates: -29.4 um (x), -21.1 um (y), 7.63 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	438 nm	456 nm	270 nm
max	463 nm	482 nm	270 nm
Z	1.86 um	1.87 um	1.3 um
Asymmetry	0.946		
Theta	-56.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 566.211 (brightness)

B = 124.848 (background)

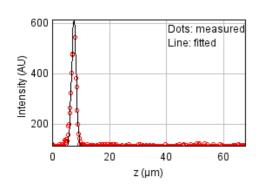
a = 0.677 px

b = -0.034 px

c = 0.648 px

xc = 6.581 pxyc = 7.270 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 38288.8564

Standard deviation: 11.16778

R^2: 0.97578 Parameters:

a = 113.89552

b = 617.01055

c = 7.62524

# Bead 331 (Rejected)

Date: Mon Oct 17 13:50:48 PDT 2022

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

Frame size: 12 pixels

Coordinates: 17.3 um (x), -29.8 um (y), 4.67 um (z)

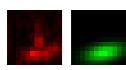
Corresponding bead: Not found

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

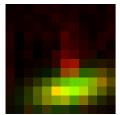
FWHM	Non corrected	Corrected	Theoretical
min	597 nm	622 nm	270 nm
max	1.4 um	1.46 um	270 nm
Z	2.24 um	2.24 um	1.3 um
Asymmetry	0.426		
Theta	12.2°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.699$$



Parameters:

A = 121.884 (brightness)

B = 122.314 (background)

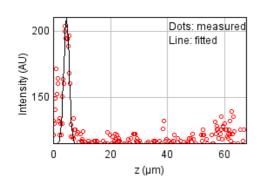
a = 0.082 px

b = 0.064 px

c = 0.363 px

xc = 6.679 pxyc = 8.806 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29262.7429

Standard deviation: 9.76311

R^2: 0.69140 Parameters:

a = 115.44088

b = 210.41840

c = 4.66650

# Bead 332 (Rejected)

Date: Mon Oct 17 13:50:49 PDT 2022

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

Frame size: 12 pixels

Coordinates: -94.3 um (x), -40.2 um (y), 7.9 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	436 nm	454 nm	270 nm
max	713 nm	742 nm	270 nm
Z	3.83 um	3.84 um	1.3 um
Asymmetry	0.612		
Theta	-23.9°		

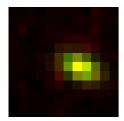
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.889$$



Parameters:

A = 239.125 (brightness)

B = 120.851 (background)

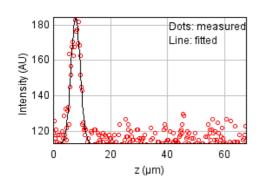
a = 0.337 px

b = -0.164 px

c = 0.633 px

xc = 7.352 pxyc = 6.074 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13526.2498

Standard deviation: 6.63773

R^2: 0.81921

Parameters:

a = 112.88280

b = 184.42340

c = 7.89799

# Bead 333 (Rejected)

Date: Mon Oct 17 13:50:49 PDT 2022

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

Frame size: 12 pixels

Coordinates: 42.1 um (x), -45.0 um (y), 4.03 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	541 nm	563 nm	270 nm
max	704 nm	733 nm	270 nm
Z	4.22 um	4.23 um	1.3 um
Asymmetry	0.768		
Theta	45.8°		

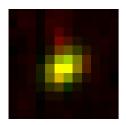
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.881$$



Parameters:

A = 261.700 (brightness)

B = 119.311 (background)

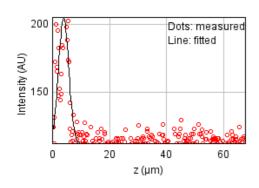
a = 0.367 px

b = 0.094 px

c = 0.362 px

xc = 5.542 pxyc = 5.894 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 32631.5056

Standard deviation: 10.30978

R^2: 0.77398 Parameters:

a = 112.63010

b = 205.01942

c = 4.03310

# Bead 334 (Rejected)

Date: Mon Oct 17 13:50:49 PDT 2022

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

Frame size: 12 pixels

Coordinates: 159 um (x), -47.4 um (y), 5.54 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	434 nm	452 nm	270 nm
max	704 nm	733 nm	270 nm
Z	3.05 um	3.06 um	1.3 um
Asymmetry	0.616		
Theta	-14.8°		

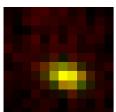
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.796$$



Parameters:

A = 89.185 (brightness)

B = 115.633 (background)

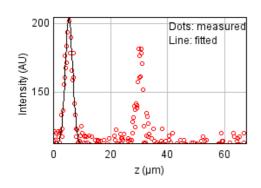
a = 0.300 px

b = -0.110 px

c = 0.684 px

xc = 6.336 pxyc = 7.024 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 50415.0676

Standard deviation: 12.81478

R^2: 0.61676 Parameters:

a = 112.89960

b = 204.27090

c = 5.54413

# Bead 335 (Rejected)

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

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

Frame size: 12 pixels

Coordinates: 85.2 um (x), -65.8 um (y), 5.31 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	485 nm	505 nm	270 nm
max	886 nm	923 nm	270 nm
Z	2.87 um	2.88 um	1.3 um
Asymmetry	0.547		
Theta	39.0°		

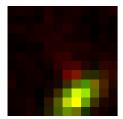
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.796$$



Parameters:

A = 177.705 (brightness)

B = 120.617 (background)

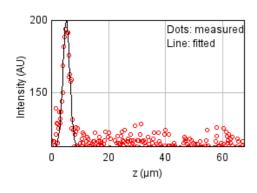
a = 0.330 px

b = 0.196 px

c = 0.412 px

xc = 7.068 pxyc = 9.487 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 11752.2914

Standard deviation: 6.18717

R^2: 0.85783 Parameters:

i arameters.

a = 112.18190

b = 200.04458

c = 5.31471

# Bead 336 (Rejected)

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

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

Frame size: 12 pixels

Coordinates: 38.6 um (x), -73.5 um (y), 48.6 um (z)

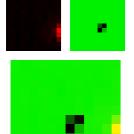
Corresponding bead: Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	128 nm	133 nm	270 nm
max	153 nm	159 nm	270 nm
Z	263 nm	264 nm	1.3 um
Asymmetry	0.839		
Theta	25.1°		

## XY profile & fitting parameters :

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



$$R^2 = 0.001$$



A = -315.608 (brightness)

B = 132.714 (background)

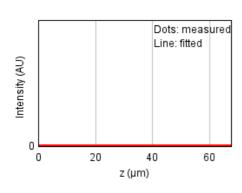
a = 6.190 px

b = 0.929 px

c = 7.738 px

xc = 6.462 pxyc = 6.476 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 0.00000E0

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

Standard deviation: 0.00000E0

R^2: 0.00000 Parameters:

a = 0.00000E0

b = 0.00000E0

c = -0.11115

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

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

Frame size: 12 pixels

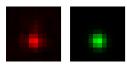
Coordinates: -40.6 um (x), -85.9 um (y), 7.26 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	504 nm	525 nm	270 nm
max	536 nm	559 nm	270 nm
Z	2.12 um	2.13 um	1.3 um
Asymmetry	0.94		
Theta	-59.1°		

#### XY profile & fitting parameters :

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



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



Parameters:

A = 534.148 (brightness)

B = 125.366 (background)

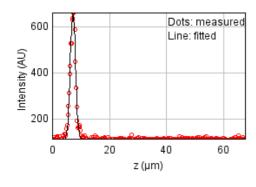
a = 0.512 px

b = -0.027 px

c = 0.483 px

xc = 5.658 pxyc = 7.076 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 37931.5370

Standard deviation: 11.11555

R^2: 0.98197 Parameters: a = 114.11664 b = 660.46647

c = 7.26460

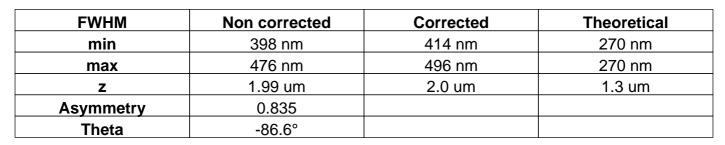
Date: Mon Oct 17 13:50:50 PDT 2022

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

Frame size: 12 pixels

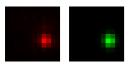
Coordinates: -36.9 um (x), -87.7 um (y), 40.5 um (z)

Corresponding bead: Not found



#### XY profile & fitting parameters :

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



Fitted 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 = 858.427 (brightness)

B = 126.447 (background)

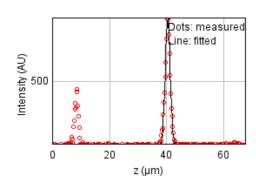
a = 0.847 px

b = -0.015 px

c = 0.592 px

xc = 8.292 pxyc = 6.970 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 544547.113

Standard deviation: 42.11614

R^2: 0.87254 Parameters: a = 122.53132

b = 879.22120

c = 40.48670

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

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

Frame size: 12 pixels

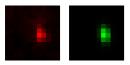
Coordinates: -53.6 um (x), 93.2 um (y), 7.47 um (z)

Corresponding bead: Not found

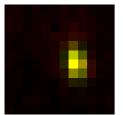
FWHM	Non corrected	Corrected	Theoretical
min	323 nm	336 nm	270 nm
max	556 nm	579 nm	270 nm
Z	2.09 um	2.1 um	1.3 um
Asymmetry	0.581		
Theta	-83.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 378.236 (brightness)

B = 123.476 (background)

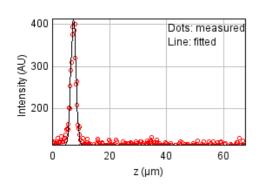
a = 1.277 px

b = -0.103 px

c = 0.447 px

xc = 7.267 pxyc = 5.836 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 25219.7862

Standard deviation: 9.06362

R^2: 0.95994 Parameters:

a = 114.79082

b = 412.38896

c = 7.46607

Date: Mon Oct 17 13:50:51 PDT 2022

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

Frame size: 12 pixels

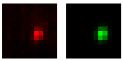
Coordinates: 103 um (x), 80.1 um (y), 7.18 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	354 nm	369 nm	270 nm
max	463 nm	482 nm	270 nm
Z	2.06 um	2.07 um	1.3 um
Asymmetry	0.765		
Theta	78.6°		

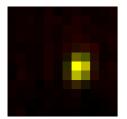
### XY profile & fitting parameters :

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





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



Parameters:

A = 343.204 (brightness)

B = 118.794 (background)

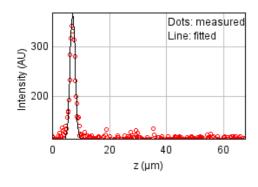
a = 1.052 px

b = 0.086 px

c = 0.644 px

xc = 7.331 pxyc = 6.201 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 20481.2485

Standard deviation: 8.16787

R^2: 0.95531 Parameters: a = 113.44511b = 368.77202

c = 7.17661

Date: Mon Oct 17 13:50:51 PDT 2022

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

Frame size: 12 pixels

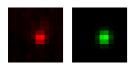
Coordinates: 121 um (x), 73.8 um (y), 7.71 um (z)

Corresponding bead: Not found

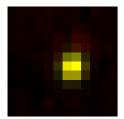
FWHM	Non corrected	Corrected	Theoretical
min	409 nm	426 nm	270 nm
max	476 nm	496 nm	270 nm
Z	2.3 um	2.31 um	1.3 um
Asymmetry	0.858		
Theta	79.8°		

#### XY profile & fitting parameters :

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



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



Parameters:

A = 386.655 (brightness)

B = 121.313 (background)

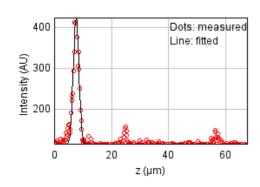
a = 0.797 px

b = 0.037 px

c = 0.599 px

xc = 6.563 pxyc = 6.086 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 36675.9021

Standard deviation: 10.93003

R^2: 0.95093 Parameters: a = 114.62389

b = 422.91899

c = 7.71170

Date: Mon Oct 17 13:50:51 PDT 2022

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

Frame size: 12 pixels

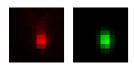
Coordinates: 4.97 um (x), 66.4 um (y), 7.39 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	405 nm	421 nm	270 nm
max	611 nm	636 nm	270 nm
Z	2.57 um	2.58 um	1.3 um
Asymmetry	0.662		
Theta	-84.7°		

#### XY profile & fitting parameters :

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



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



Parameters:

A = 487.057 (brightness)

B = 125.310 (background)

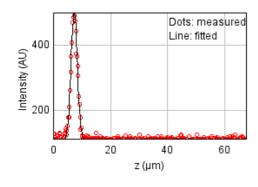
a = 0.816 px

b = -0.043 px

c = 0.364 px

xc = 6.590 pxyc = 6.730 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 17540.2730

Standard deviation: 7.55873

R^2: 0.98588 Parameters:

a = 113.75869

b = 498.11700

c = 7.38664

## **Bead 343 (Rejected)**

Date: Mon Oct 17 13:50:51 PDT 2022

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

Frame size: 12 pixels

Coordinates: 158 um (x), 54.4 um (y), 47.5 um (z)

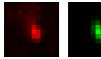
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	367 nm	382 nm	270 nm
max	672 nm	700 nm	270 nm
Z	1.61 um	1.62 um	1.3 um
Asymmetry	0.546		
Theta	-71.4°		

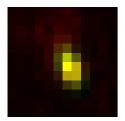
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.906$$



Parameters:

A = 422.556 (brightness)

B = 122.662 (background)

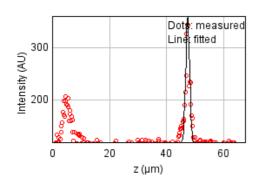
a = 0.927 px

b = -0.212 px

c = 0.369 px

xc = 6.307 pxyc = 6.044 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 113086.635

Standard deviation: 19.19272

R^2: 0.73919 Parameters:

a = 116.70044

b = 362.28198

c = 47.45270

## Bead 344 (Rejected)

Date: Mon Oct 17 13:50:51 PDT 2022

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

Frame size: 12 pixels

Coordinates: 21.6 um (x), 50.5 um (y), 4.25 um (z)

Corresponding bead: Not found

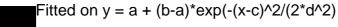
Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
Z	2.98 um	2.99 um	1.3 um
Asymmetry	0.0		
Theta	0.0°		

#### XY profile & fitting parameters :

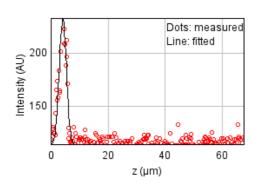
(red: the original data, green: the fit, yellow: the two merged)





## Z profile & fitting parameters:





Fitted on  $y = a + (b-a)^* \exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 17511.6225

Standard deviation: 7.55256

R^2: 0.88551 Parameters: a = 113.94810 b = 233.29641 c = 4.25269

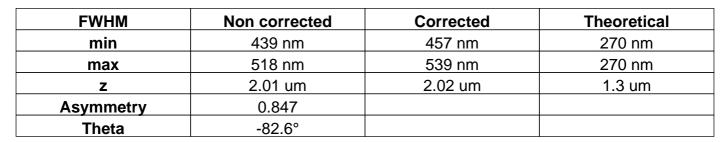
Date: Mon Oct 17 13:50:51 PDT 2022

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

Frame size: 12 pixels

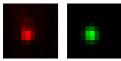
Coordinates: 99.6 um (x), 13.9 um (y), 16.4 um (z)

Corresponding bead: Not found



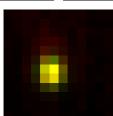
### XY profile & fitting parameters :

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





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



Parameters:

A = 433.427 (brightness)

B = 119.146 (background)

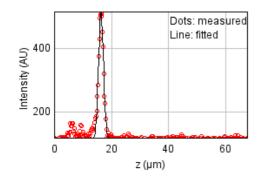
a = 0.694 px

b = -0.025 px

c = 0.504 px

xc = 4.707 pxyc = 6.305 px

### **Z** profile & fitting parameters:



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

Sum of residuals squared: 45127.8055

Standard deviation: 12.12420

R^2: 0.95902 Parameters: a = 117.02325b = 517.71068

c = 16.41617

## Bead 346 (Rejected)

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

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

Frame size: 12 pixels

Coordinates: 17.2 um (x), -29.7 um (y), 4.67 um (z)

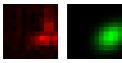
Corresponding bead: Not found

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

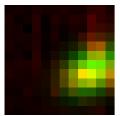
FWHM	Non corrected	Corrected	Theoretical
min	789 nm	822 nm	270 nm
max	1.11 um	1.16 um	270 nm
Z	2.24 um	2.24 um	1.3 um
Asymmetry	0.71		
Theta	33.7°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.704$$



A = 118.070 (brightness)

B = 117.943 (background)

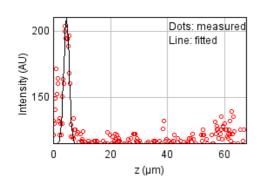
a = 0.141 px

b = 0.049 px

c = 0.183 px

xc = 9.133 pxyc = 6.559 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29262.7429

Standard deviation: 9.76311

R^2: 0.69140 Parameters:

a = 115.44088

b = 210.41840

c = 4.66650

## Bead 347 (Rejected)

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

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

Frame size: 12 pixels

Coordinates: 37.5 um (x), -42.0 um (y), 8.22 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	418 nm	436 nm	270 nm
max	651 nm	678 nm	270 nm
Z	2.23 um	2.24 um	1.3 um
Asymmetry	0.642		
Theta	22.0°		

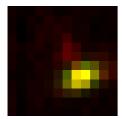
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.861$$



Parameters:

A = 301.494 (brightness)

B = 125.094 (background)

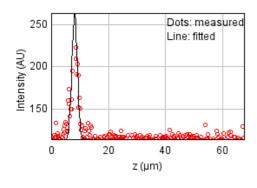
a = 0.380 px

b = 0.157 px

c = 0.704 px

xc = 7.578 pxyc = 7.222 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 28587.4067

Standard deviation: 9.64980

R^2: 0.85075 Parameters:

a = 113.91007

b = 263.70677

c = 8.22432

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

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

Frame size: 12 pixels

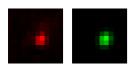
Coordinates: -103 um (x), -44.6 um (y), 7.67 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	397 nm	414 nm	270 nm
max	494 nm	514 nm	270 nm
Z	2.27 um	2.28 um	1.3 um
Asymmetry	0.804		
Theta	68.5°		

### XY profile & fitting parameters :

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



Fitted 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 = 531.124 (brightness)

B = 123.714 (background)

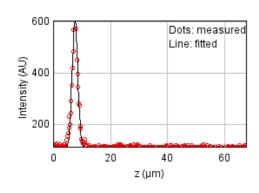
a = 0.810 px

b = 0.102 px

c = 0.591 px

xc = 6.729 pxyc = 6.244 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 28187.1936

Standard deviation: 9.58201

R^2: 0.98427 Parameters: a = 113.23886 b = 602.25904 c = 7.67173

### Bead 349 (Rejected)

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

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

Frame size: 12 pixels

Coordinates: -95.8 um (x), -67.2 um (y), 8.17 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	446 nm	464 nm	270 nm
max	798 nm	831 nm	270 nm
Z	3.26 um	3.27 um	1.3 um
Asymmetry	0.559		
Theta	-23.4°		

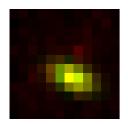
### XY profile & fitting parameters :

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





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



Parameters:

A = 231.670 (brightness)

B = 120.177 (background)

a = 0.284 px

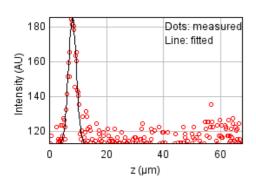
b = -0.169 px

c = 0.602 px

xc = 6.367 px

# yc = 6.946 px

### **Z profile & fitting parameters:**



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

Sum of residuals squared: 14196.2048

Standard deviation: 6.80013

R^2: 0.79272 Parameters:

a = 113.14118

b = 185.59133

c = 8.17009

## Bead 350 (Rejected)

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

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

Frame size: 12 pixels

Coordinates: 111 um (x), -91.7 um (y), 4.46 um (z)

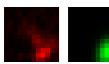
Corresponding bead: Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	658 nm	686 nm	270 nm
max	984 nm	1.02 um	270 nm
Z	3.09 um	3.1 um	1.3 um
Asymmetry	0.669		
Theta	71.2°		

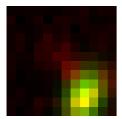
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.805$$



xc = 8.009 px

yc = 9.383 px

#### Parameters:

A = 167.785 (brightness)

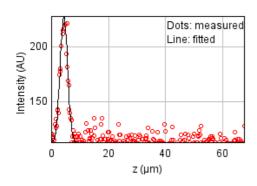
B = 122.846(background)

a = 0.292 px

b = 0.052 px

c = 0.156 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 15352.4874

Standard deviation: 7.07164

R^2: 0.89549 Parameters:

a = 112.25172

b = 227.84604

c = 4.46190

## Bead 351 (Rejected)

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

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

Frame size: 12 pixels

Coordinates: 39.8 um (x), -94.5 um (y), 4.7 um (z)

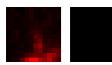
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
Z	3.74 um	3.76 um	1.3 um
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

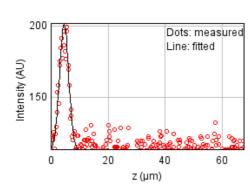
(red: the original data, green: the fit, yellow: the two merged)



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

## Z profile & fitting parameters:





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

Sum of residuals squared: 13996.3572

Standard deviation: 6.75209

R^2: 0.86705 Parameters:

a = 113.79198

b = 201.98568

c = 4.69615

## Bead 352 (Rejected)

Date: Mon Oct 17 13:50:53 PDT 2022

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

Frame size: 12 pixels

Coordinates: 72.8 um (x), 92.1 um (y), 7.38 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	446 nm	465 nm	270 nm
max	549 nm	572 nm	270 nm
Z	2.06 um	2.07 um	1.3 um
Asymmetry	0.812		
Theta	80.0°		

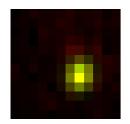
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.889$$



Parameters:

A = 222.034 (brightness)

B = 117.576 (background)

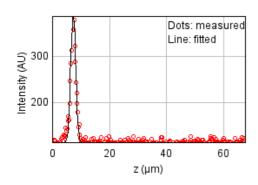
a = 0.667 px

b = 0.039 px

c = 0.451 px

xc = 7.048 pxyc = 6.714 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 20536.0214

Standard deviation: 8.17879

R^2: 0.96086 Parameters:

a = 113.37056

b = 387.11053

c = 7.38100

Date: Mon Oct 17 13:50:53 PDT 2022

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

Frame size: 12 pixels

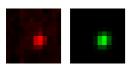
Coordinates: 107 um (x), 70.6 um (y), 6.96 um (z)

Corresponding bead: Not found

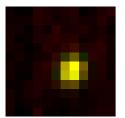
FWHM	Non corrected	Corrected	Theoretical
min	420 nm	438 nm	270 nm
max	499 nm	520 nm	270 nm
Z	2.48 um	2.49 um	1.3 um
Asymmetry	0.842		
Theta	70.1°		

#### XY profile & fitting parameters :

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



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



Parameters:

A = 219.259 (brightness)

B = 119.755 (background)

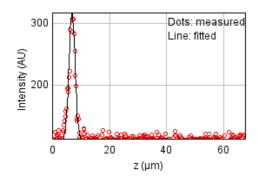
a = 0.734 px

b = 0.071 px

c = 0.564 px

xc = 6.736 pxyc = 6.472 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 19173.4521

Standard deviation: 7.90280

R^2: 0.94650 Parameters:

a = 112.22823

b = 318.09309

c = 6.96273

Date: Mon Oct 17 13:50:53 PDT 2022

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

Frame size: 12 pixels

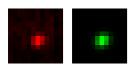
Coordinates: 158 um (x), 67.8 um (y), 7.67 um (z)

Corresponding bead: Not found

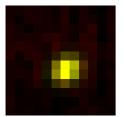
FWHM	Non corrected	Corrected	Theoretical
min	435 nm	454 nm	270 nm
max	514 nm	535 nm	270 nm
Z	2.82 um	2.83 um	1.3 um
Asymmetry	0.847		
Theta	35.5°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 240.129 (brightness)

B = 116.315 (background)

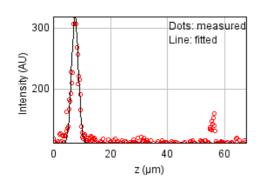
a = 0.575 px

b = 0.095 px

c = 0.640 px

xc = 6.130 pxyc = 6.487 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 32978.9870

Standard deviation: 10.36453

R^2: 0.92142 Parameters: a = 111.54147

b = 318.22707

c = 7.66990

### Bead 355 (Rejected)

Date: Mon Oct 17 13:50:53 PDT 2022

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

Frame size: 12 pixels

Coordinates: 40.7 um (x), 63.2 um (y), 7.66 um (z)

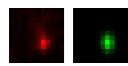
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

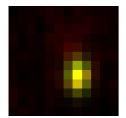
FWHM	Non corrected	Corrected	Theoretical
min	398 nm	415 nm	270 nm
max	614 nm	640 nm	270 nm
Z	2.14 um	2.15 um	1.3 um
Asymmetry	0.648		
Theta	-88.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 272.323 (brightness) B = 122.851 (background)

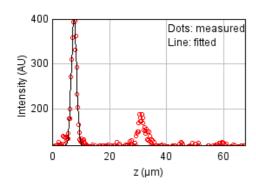
a = 0.845 px

b = -0.011 px

c = 0.356 px

xc = 7.075 pxyc = 7.079 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 66820.0137

Standard deviation: 14.75313

R^2: 0.89315 Parameters:

a = 117.48660

b = 400.44220

c = 7.65834

## Bead 356 (Rejected)

Date: Mon Oct 17 13:50:53 PDT 2022

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

Frame size: 12 pixels

Coordinates: 42.6 um (x), 60.5 um (y), 5.58 um (z)

Corresponding bead: Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	471 nm	490 nm	270 nm
max	651 nm	678 nm	270 nm
Z	2.12 um	2.13 um	1.3 um
Asymmetry	0.723		
Theta	40.7°		

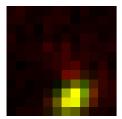
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.821$$



Parameters:

A = 200.715 (brightness)

B = 122.433 (background)

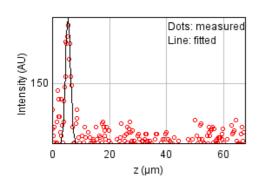
a = 0.440 px

b = 0.143 px

c = 0.483 px

xc = 6.735 pxyc = 9.551 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 15672.4376

Standard deviation: 7.14495

R^2: 0.70276 Parameters: a = 115.04652 b = 188.30138

c = 5.57671

## Bead 357 (Rejected)

Date: Mon Oct 17 13:50:53 PDT 2022

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

Frame size: 12 pixels

Coordinates: -2.78 um (x), 58.4 um (y), 5.26 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	716 nm	745 nm	270 nm
max	800 nm	833 nm	270 nm
Z	1.93 um	1.94 um	1.3 um
Asymmetry	0.895		
Theta	23.7°		

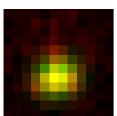
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.821$$



Parameters:

A = 117.439 (brightness)

B = 119.696 (background)

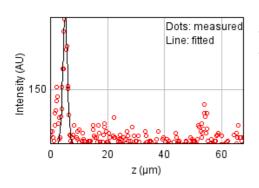
a = 0.218 px

b = 0.019 px

c = 0.253 px

xc = 5.347 pxyc = 6.921 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 17741.6546

Standard deviation: 7.60200

R^2: 0.71053 Parameters:

a = 114.81178

b = 197.74231

c = 5.26337

## Bead 358 (Rejected)

Date: Mon Oct 17 13:50:54 PDT 2022

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

Frame size: 12 pixels

Coordinates: -32.3 um (x), 39.3 um (y), 7.77 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	472 nm	492 nm	270 nm
max	844 nm	879 nm	270 nm
Z	2.37 um	2.38 um	1.3 um
Asymmetry	0.56		
Theta	-79.5°		

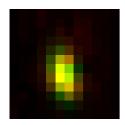
### XY profile & fitting parameters :

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





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



$$A = 42$$

A = 424.070 (brightness)

B = 122.568 (background)

a = 0.588 px

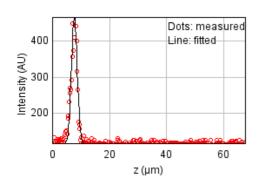
Parameters:

b = -0.074 px

c = 0.202 px

xc = 5.402 pxyc = 6.675 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 52988.5586

Standard deviation: 13.13778

R^2: 0.94765

Parameters:

a = 114.15913

b = 467.48539

c = 7.77017

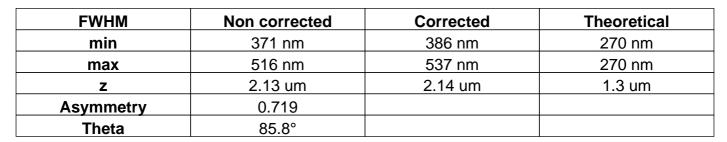
Date: Mon Oct 17 13:50:54 PDT 2022

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

Frame size: 12 pixels

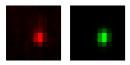
Coordinates: -35.0 um (x), 36.1 um (y), 7.4 um (z)

Corresponding bead: Not found

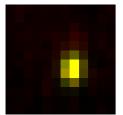


#### XY profile & fitting parameters :

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



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



Parameters:

A = 467.687 (brightness)

B = 122.294 (background)

a = 0.974 px

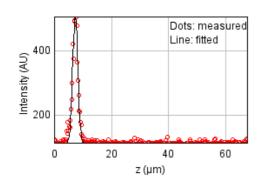
b = 0.034 px

c = 0.507 px

xc = 6.798 px

yc = 6.502 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 30977.1718

Standard deviation: 10.04504

R^2: 0.97174 Parameters: a = 114.20967 b = 505.45437

c = 7.40041

Date: Mon Oct 17 13:50:54 PDT 2022

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

Frame size: 12 pixels

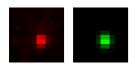
Coordinates: -94.9 um (x), 14.0 um (y), 7.56 um (z)

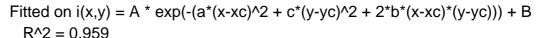
Corresponding bead: Not found

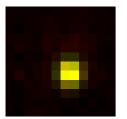
FWHM	Non corrected	Corrected	Theoretical
min	413 nm	430 nm	270 nm
max	473 nm	492 nm	270 nm
Z	2.46 um	2.47 um	1.3 um
Asymmetry	0.874		
Theta	-87.0°		

#### XY profile & fitting parameters :

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







Parameters:

A = 407.442 (brightness)

B = 119.847 (background)

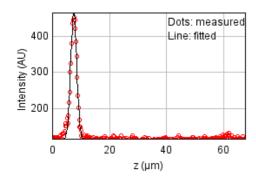
a = 0.787 px

b = -0.010 px

c = 0.601 px

xc = 6.511 pxyc = 6.755 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 15355.5911

Standard deviation: 7.07236

R^2: 0.98472 Parameters: a = 114.16236

b = 466.96989

c = 7.56282

## Bead 361 (Rejected)

Date: Mon Oct 17 13:50:54 PDT 2022

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

Frame size: 12 pixels

Coordinates: 124 um (x), 8.65 um (y), 7.97 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	454 nm	472 nm	270 nm
max	517 nm	538 nm	270 nm
Z	2.38 um	2.39 um	1.3 um
Asymmetry	0.878		
Theta	-71.9°		

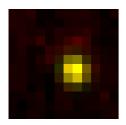
### XY profile & fitting parameters :

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





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



Parameters:  $\Delta = 211.545$ 

A = 211.545 (brightness)

B = 117.981 (background)

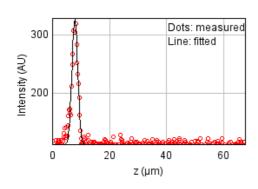
a = 0.638 px

b = -0.044 px

c = 0.517 px

xc = 6.700 pxyc = 6.172 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 19599.2774

Standard deviation: 7.99007

R^2: 0.94806

Parameters:

a = 112.22323

b = 327.75134

c = 7.96614

## Bead 362 (Rejected)

Date: Mon Oct 17 13:50:54 PDT 2022

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

Frame size: 12 pixels

Coordinates: -27.5 um (x), -3.63 um (y), 17.0 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
Z	2.15 um	2.16 um	1.3 um
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

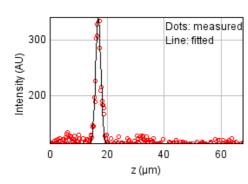
(red: the original data, green: the fit, yellow: the two merged)



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

## Z profile & fitting parameters:





Fitted on  $y = a + (b-a)^* \exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 25220.8199

Standard deviation: 9.06380

R^2: 0.93420 Parameters: a = 114.51343 b = 340.80139 c = 16.99386

Date: Mon Oct 17 13:50:54 PDT 2022

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

Frame size: 12 pixels

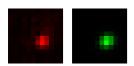
Coordinates: -119 um (x), -13.0 um (y), 7.66 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	435 nm	453 nm	270 nm
max	491 nm	512 nm	270 nm
Z	2.29 um	2.3 um	1.3 um
Asymmetry	0.884		
Theta	44.0°		

### XY profile & fitting parameters :

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



Fitted 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 = 391.195 (brightness)

B = 120.495 (background)

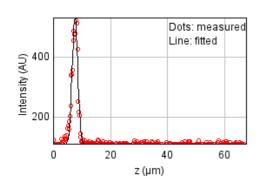
a = 0.630 px

b = 0.077 px

c = 0.636 px

xc = 7.099 pxyc = 6.661 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 50432.8290

Standard deviation: 12.81703

R^2: 0.96256 Parameters: a = 112.15457 b = 529.90440 c = 7.65683

Date: Mon Oct 17 13:50:55 PDT 2022

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

Frame size: 12 pixels

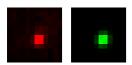
Coordinates: -108 um (x), -14.1 um (y), 7.7 um (z)

Corresponding bead: Not found

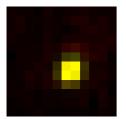
FWHM	Non corrected	Corrected	Theoretical
min	388 nm	404 nm	270 nm
max	447 nm	465 nm	270 nm
Z	2.66 um	2.67 um	1.3 um
Asymmetry	0.867		
Theta	71.0°		

#### XY profile & fitting parameters :

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



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



A = 474.223 (brightness)

B = 122.949(background)

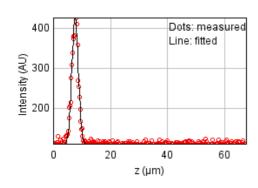
a = 0.870 px

b = 0.068 px

c = 0.695 px

xc = 6.493 pxyc = 6.508 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 18291.6944

Standard deviation: 7.71894

R^2: 0.97879 Parameters: a = 111.43485b = 425.50222

c = 7.70057

### Bead 365 (Rejected)

Date: Mon Oct 17 13:50:55 PDT 2022

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

Frame size: 12 pixels

Coordinates: 42.1 um (x), -45.0 um (y), 4.03 um (z)

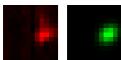
Corresponding bead: Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	542 nm	565 nm	270 nm
max	705 nm	735 nm	270 nm
Z	4.22 um	4.23 um	1.3 um
Asymmetry	0.769		
Theta	46.4°		

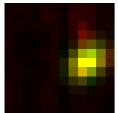
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.882$$



xc = 8.540 pxyc = 5.893 px

#### Parameters:

A = 261.959 (brightness)

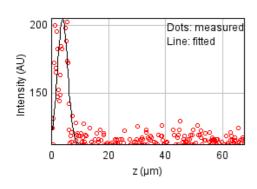
B = 118.839 (background)

a = 0.368 px

b = 0.093 px

c = 0.358 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 32631.5056

Standard deviation: 10.30978

R^2: 0.77398

Parameters:

a = 112.63010

b = 205.01942

c = 4.03310

### Bead 366 (Rejected)

Date: Mon Oct 17 13:50:55 PDT 2022

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

Frame size: 12 pixels

Coordinates: -98.0 um (x), -55.3 um (y), 5.92 um (z)

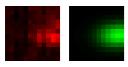
Corresponding bead: Not found

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

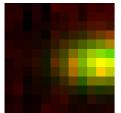
FWHM	Non corrected	Corrected	Theoretical
min	877 nm	913 nm	270 nm
max	1.49 um	1.55 um	270 nm
Z	1.63 um	1.64 um	1.3 um
Asymmetry	0.59		
Theta	2.6°		

### XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.784$$



A = 101.524 (brightness)

B = 115.178 (background)

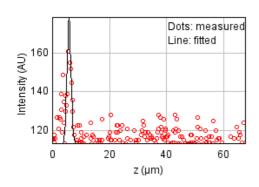
a = 0.061 px

b = 0.005 px

c = 0.174 px

xc = 10.363 pxyc = 5.906 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16726.5832

Standard deviation: 7.38133

R^2: 0.57731 Parameters:

a = 113.15658

b = 178.28201

c = 5.92049

### Bead 367 (Rejected)

Date: Mon Oct 17 13:50:55 PDT 2022

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

Frame size: 12 pixels

Coordinates: 85.2 um (x), -65.8 um (y), 5.31 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	485 nm	505 nm	270 nm
max	886 nm	923 nm	270 nm
Z	2.87 um	2.88 um	1.3 um
Asymmetry	0.547		
Theta	39.0°		

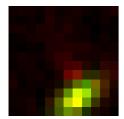
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.796$$



Parameters:

A = 177.705 (brightness)

B = 120.617 (background)

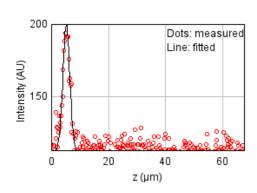
a = 0.330 px

b = 0.196 px

c = 0.412 px

xc = 7.068 pxyc = 9.487 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 11752.2914

Standard deviation: 6.18717

R^2: 0.85783 Parameters:

a = 112.18190

b = 200.04458

c = 5.31471

Date: Mon Oct 17 13:50:55 PDT 2022

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

Frame size: 12 pixels

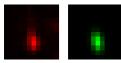
Coordinates: 16.7 um (x), -68.2 um (y), 8.0 um (z)

Corresponding bead: Not found

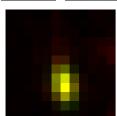
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	658 nm	685 nm	270 nm
Z	2.17 um	2.18 um	1.3 um
Asymmetry	0.585		
Theta	-79.5°		

### XY profile & fitting parameters :

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



Fitted 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 = 718.835 (brightness)

B = 133.273 (background)

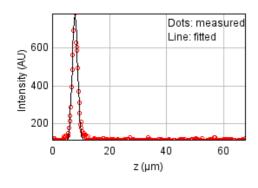
a = 0.886 px

b = -0.106 px

c = 0.330 px

xc = 5.876 pxyc = 7.661 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 50352.1604

Standard deviation: 12.80678

R^2: 0.98426 Parameters:

a = 114.31339

b = 781.24158

c = 7.99780

### Bead 369 (Rejected)

Date: Mon Oct 17 13:50:55 PDT 2022

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

Frame size: 12 pixels

Coordinates: 92.3 um (x), -86.5 um (y), 7.77 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	420 nm	437 nm	270 nm
max	748 nm	779 nm	270 nm
Z	3.27 um	3.28 um	1.3 um
Asymmetry	0.561		
Theta	-58.7°		

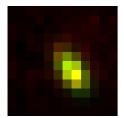
### XY profile & fitting parameters :

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





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



Parameters:

A = 240.528 (brightness)

B = 117.254 (background)

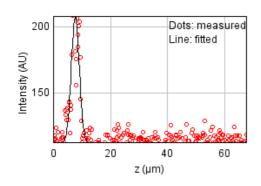
a = 0.620 px

b = -0.232 px

c = 0.381 px

xc = 6.547 pxyc = 6.573 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 25928.9838

Standard deviation: 9.19017

R^2: 0.78425 Parameters:

a = 112.56422

b = 207.86622

c = 7.77401

Date: Mon Oct 17 13:50:55 PDT 2022

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

Frame size: 12 pixels

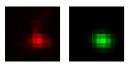
Coordinates: -16.6 um (x), -87.2 um (y), 7.38 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	512 nm	533 nm	270 nm
max	631 nm	657 nm	270 nm
Z	1.92 um	1.93 um	1.3 um
Asymmetry	0.811		
Theta	-14.4°		

### XY profile & fitting parameters :

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



Fitted 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 = 341.720 (brightness)

B = 119.728 (background)

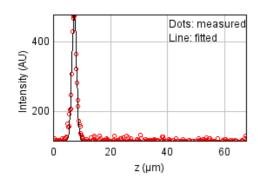
a = 0.348 px

b = -0.042 px

c = 0.502 px

xc = 6.761 pxyc = 6.969 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 29617.5262

Standard deviation: 9.82212

R^2: 0.96608 Parameters: a = 114.10571

b = 480.01245

c = 7.38341

## Bead 371 (Rejected)

Date: Mon Oct 17 13:50:56 PDT 2022

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

Frame size: 12 pixels

Coordinates: -55.7 um (x), 94.2 um (y), 7.61 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	437 nm	455 nm	270 nm
max	547 nm	570 nm	270 nm
Z	2.01 um	2.01 um	1.3 um
Asymmetry	0.799		
Theta	-75.6°		

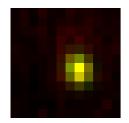
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.885$$



Parameters:

A = 247.965 (brightness)

B = 122.234 (background)

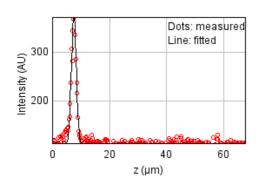
a = 0.687 px

b = -0.061 px

c = 0.464 px

xc = 6.910 pxyc = 6.191 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 19435.9924

Standard deviation: 7.95672

R^2: 0.95728 Parameters:

a = 113.84044

b = 371.56647

c = 7.61244

Date: Mon Oct 17 13:50:56 PDT 2022

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

Frame size: 12 pixels

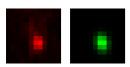
Coordinates: 37.5 um (x), 79.1 um (y), 7.77 um (z)

Corresponding bead: Not found

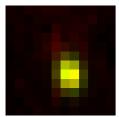
FWHM	Non corrected	Corrected	Theoretical
min	429 nm	447 nm	270 nm
max	601 nm	626 nm	270 nm
Z	2.61 um	2.62 um	1.3 um
Asymmetry	0.715		
Theta	-78.9°		

#### XY profile & fitting parameters :

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



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



Parameters:

A = 346.949 (brightness)

B = 124.158 (background)

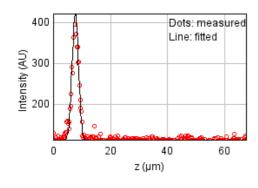
a = 0.714 px

b = -0.068 px

c = 0.385 px

xc = 6.483 pxyc = 6.979 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 30904.2949

Standard deviation: 10.03322

R^2: 0.96269 Parameters:

a = 113.45243

b = 421.17525

c = 7.77131

Date: Mon Oct 17 13:50:56 PDT 2022

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

Frame size: 12 pixels

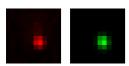
Coordinates: -80.4 um (x), 73.9 um (y), 7.84 um (z)

Corresponding bead: Not found

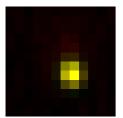
FWHM	Non corrected	Corrected	Theoretical
min	384 nm	400 nm	270 nm
max	466 nm	486 nm	270 nm
Z	2.34 um	2.35 um	1.3 um
Asymmetry	0.823		
Theta	-80.2°		

## XY profile & fitting parameters :

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



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



A = 480.385 (brightness)

B = 121.720 (background)

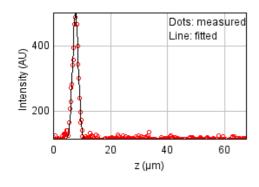
a = 0.902 px

b = -0.049 px

c = 0.626 px

xc = 6.700 pxyc = 6.801 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 25230.7084

Standard deviation: 9.06558

R^2: 0.97844 Parameters: a = 113.95615

b = 502.58942

c = 7.83673

# Bead 374 (Rejected)

Date: Mon Oct 17 13:50:56 PDT 2022

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

Frame size: 12 pixels

Coordinates: 101 um (x), 59.3 um (y), 7.35 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	402 nm	419 nm	270 nm
max	545 nm	568 nm	270 nm
Z	2.42 um	2.43 um	1.3 um
Asymmetry	0.737		
Theta	-70.8°		

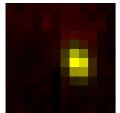
## XY profile & fitting parameters :

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





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



B = 125.487

(background)

A = 241.858 (brightness)

a = 0.789 px

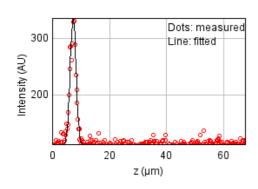
Parameters:

b = -0.118 px

c = 0.492 px

xc = 7.383 pxyc = 5.998 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 21881.9708

Standard deviation: 8.44256

R^2: 0.94685

Parameters:

a = 113.25509b = 336.19444

c = 7.34948

Date: Mon Oct 17 13:50:56 PDT 2022

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

Frame size: 12 pixels

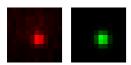
Coordinates: 114 um (x), 58.1 um (y), 7.33 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	430 nm	448 nm	270 nm
max	478 nm	498 nm	270 nm
Z	2.57 um	2.58 um	1.3 um
Asymmetry	0.9		
Theta	-82.3°		

## XY profile & fitting parameters :

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



Fitted 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 = 315.995 (brightness)

B = 122.372 (background)

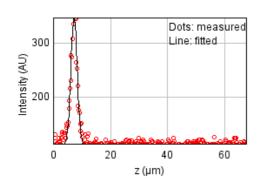
a = 0.722 px

b = -0.018 px

c = 0.589 px

xc = 6.360 pxyc = 6.400 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 19048.2372

Standard deviation: 7.87695

R^2: 0.96023 Parameters: a = 112.52191 b = 348.03280

c = 7.32711

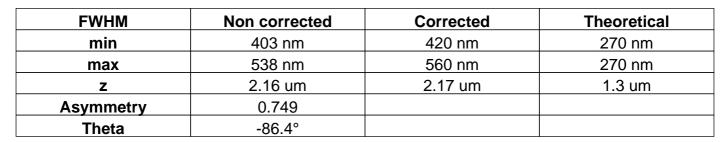
Date: Mon Oct 17 13:50:56 PDT 2022

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

Frame size: 12 pixels

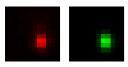
Coordinates: 1.42 um (x), 2.05 um (y), 8.13 um (z)

Corresponding bead: Not found



## XY profile & fitting parameters :

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



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



Parameters:

A = 741.229 (brightness)

B = 126.453 (background)

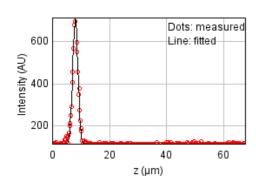
a = 0.824 px

b = -0.023 px

c = 0.465 px

xc = 7.455 pxyc = 7.194 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 35478.7169

Standard deviation: 10.75016

R^2: 0.98601 Parameters: a = 114.32037 b = 710.61259

c = 8.13284d = 0.91659

Date: Mon Oct 17 13:50:56 PDT 2022

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

Frame size: 12 pixels

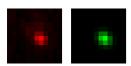
Coordinates: 125 um (x), 969 nm (y), 8.07 um (z)

Corresponding bead: Not found

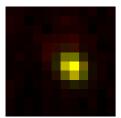
FWHM	Non corrected	Corrected	Theoretical
min	417 nm	434 nm	270 nm
max	513 nm	535 nm	270 nm
Z	2.46 um	2.47 um	1.3 um
Asymmetry	0.813		
Theta	-51.1°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 297.149 (brightness)

B = 117.113 (background)

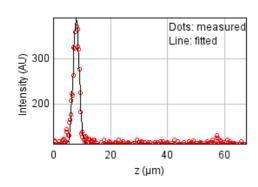
a = 0.668 px

b = -0.128 px

c = 0.613 px

xc = 6.758 pxyc = 6.096 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 20288.6883

Standard deviation: 8.12939

R^2: 0.96818 Parameters:

a = 111.35273

b = 389.93596

c = 8.07497

# Bead 378 (Rejected)

Date: Mon Oct 17 13:50:56 PDT 2022

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

Frame size: 12 pixels

Coordinates: 159 um (x), -11.8 um (y), 6.88 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	461 nm	480 nm	270 nm
max	630 nm	656 nm	270 nm
Z	3.3 um	3.32 um	1.3 um
Asymmetry	0.731		
Theta	-17.8°		

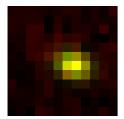
# XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.840$$



Parameters:

A = 114.234 (brightness)

B = 115.300 (background)

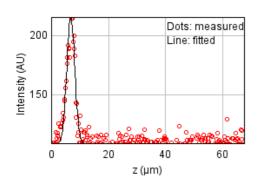
a = 0.365 px

b = -0.086 px

c = 0.604 px

xc = 6.696 pxyc = 5.936 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 14257.7661

Standard deviation: 6.81485

R^2: 0.89247 Parameters:

a = 108.94769

b = 215.24566

c = 6.88321

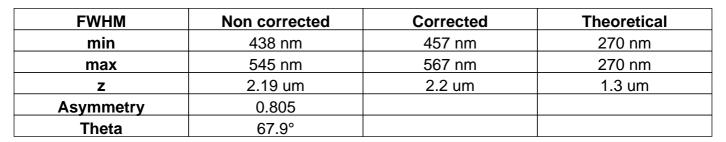
Date: Mon Oct 17 13:50:57 PDT 2022

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

Frame size: 12 pixels

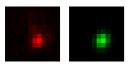
Coordinates: 77.6 um (x), -30.2 um (y), 8.25 um (z)

Corresponding bead: Not found

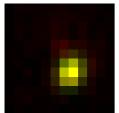


## XY profile & fitting parameters :

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



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



A = 434.852 (brightness)

B = 121.950 (background)

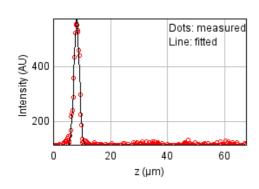
a = 0.663 px

b = 0.086 px

c = 0.487 px

xc = 6.709 pxyc = 6.953 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 30018.7953

Standard deviation: 9.88843

R^2: 0.98076 Parameters:

a = 114.25550

b = 577.78154

c = 8.25381

Date: Mon Oct 17 13:50:57 PDT 2022

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

Frame size: 12 pixels

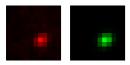
Coordinates: -143 um (x), -37.3 um (y), 7.77 um (z)

Corresponding bead: Not found

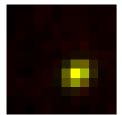
FWHM	Non corrected	Corrected	Theoretical
min	397 nm	414 nm	270 nm
max	494 nm	515 nm	270 nm
Z	2.31 um	2.32 um	1.3 um
Asymmetry	0.804		
Theta	36.3°		

## XY profile & fitting parameters :

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



Fitted 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 = 317.297 (brightness)

B = 116.392 (background)

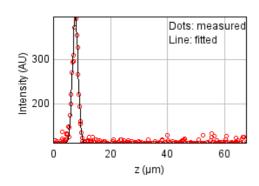
a = 0.655 px

b = 0.143 px

c = 0.744 px

xc = 7.223 pxyc = 7.096 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 20783.5111

Standard deviation: 8.22792

R^2: 0.96740 Parameters: a = 111.40589

b = 397.98663

c = 7.76908

# Bead 381 (Rejected)

Date: Mon Oct 17 13:50:57 PDT 2022

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

Frame size: 12 pixels

Coordinates: -116 um (x), -52.2 um (y), 5.21 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
Z	4.28 um	4.3 um	1.3 um
Asymmetry	0.0		
Theta	0.0°		

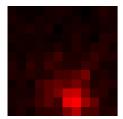
## XY profile & fitting parameters :

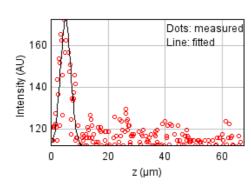
(red: the original data, green: the fit, yellow: the two merged)



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

# Z profile & fitting parameters:





Fitted on  $y = a + (b-a)^* exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 17592.9241

Standard deviation: 7.57007

R^2: 0.73418 Parameters: a = 112.19097 b = 172.71556 c = 5.21320

Date: Mon Oct 17 13:50:57 PDT 2022

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

Frame size: 12 pixels

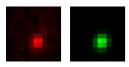
Coordinates: -131 um (x), -73.9 um (y), 7.69 um (z)

Corresponding bead: Not found

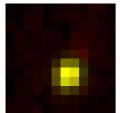
FWHM	Non corrected	Corrected	Theoretical
min	454 nm	473 nm	270 nm
max	524 nm	546 nm	270 nm
Z	2.23 um	2.24 um	1.3 um
Asymmetry	0.865		
Theta	70.7°		

## XY profile & fitting parameters :

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



Fitted 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 = 269.293 (brightness)

B = 117.813 (background)

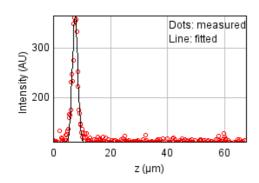
a = 0.634 px

b = 0.051 px

c = 0.506 px

xc = 6.388 pxyc = 7.280 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 21325.3828

Standard deviation: 8.33449

R^2: 0.95610 Parameters: a = 111.17947

b = 364.26939

c = 7.68903

# Bead 383 (Rejected)

Date: Mon Oct 17 13:50:57 PDT 2022

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

Frame size: 12 pixels

Coordinates: -160 um (x), -90.9 um (y), 7.58 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	416 nm	434 nm	270 nm
max	687 nm	716 nm	270 nm
Z	3.07 um	3.08 um	1.3 um
Asymmetry	0.606		
Theta	43.2°		

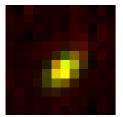
## XY profile & fitting parameters :

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





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



Parameters:

A = 207.462 (brightness)

B = 115.943 (background)

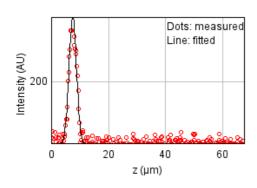
a = 0.513 px

b = 0.244 px

c = 0.544 px

xc = 5.879 pxyc = 6.541 px

## **Z profile & fitting parameters:**



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

Sum of residuals squared: 14993.5434

Standard deviation: 6.98848

R^2: 0.95741 Parameters:

a = 109.98763

b = 295.64567

c = 7.58223

Date: Mon Oct 17 13:50:58 PDT 2022

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

Frame size: 12 pixels

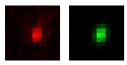
Coordinates: -121 um (x), -95.1 um (y), 7.93 um (z)

Corresponding bead: Not found

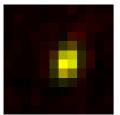
FWHM	Non corrected	Corrected	Theoretical
min	398 nm	414 nm	270 nm
max	574 nm	598 nm	270 nm
Z	2.8 um	2.81 um	1.3 um
Asymmetry	0.692		
Theta	72.9°		

## XY profile & fitting parameters :

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



Fitted 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 = 277.901 (brightness)

B = 117.894 (background)

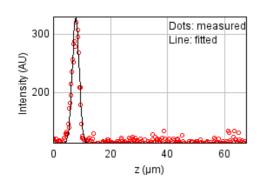
a = 0.810 px

b = 0.124 px

c = 0.445 px

xc = 6.439 pxyc = 5.815 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 25057.4060

Standard deviation: 9.03439

R^2: 0.94405 Parameters: a = 112.91687 b = 329.89284

c = 7.92655

# Bead 385 (Rejected)

Date: Mon Oct 17 13:50:58 PDT 2022

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

Frame size: 12 pixels

Coordinates: -66.9 um (x), 72.3 um (y), 6.57 um (z)

Corresponding bead: Not found

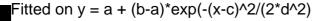
Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
Z	4.37 um	4.39 um	1.3 um
Asymmetry	0.0		
Theta	0.0°		

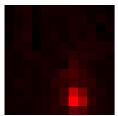
## XY profile & fitting parameters :

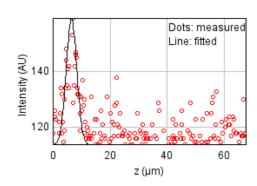
(red: the original data, green: the fit, yellow: the two merged)





# Z profile & fitting parameters:





Fitted on y = a +  $(b-a)*exp(-(x-c)^2/(2*d^2)$ Sum of residuals squared: 20378.6981

Standard deviation: 8.14740

R^2: 0.57447 Parameters: a = 113.75535b = 158.89860c = 6.56769

Date: Mon Oct 17 13:50:58 PDT 2022

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

Frame size: 12 pixels

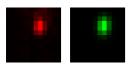
Coordinates: 1.73 um (x), 68.0 um (y), 15.0 um (z)

Corresponding bead: Not found

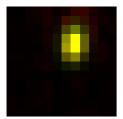
FWHM	Non corrected	Corrected	Theoretical
min	420 nm	437 nm	270 nm
max	626 nm	652 nm	270 nm
Z	2.21 um	2.22 um	1.3 um
Asymmetry	0.671		
Theta	85.4°		

## XY profile & fitting parameters :

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



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



A = 539.191 (brightness)

B = 118.770 (background)

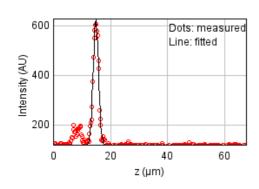
a = 0.759 px

b = 0.033 px

c = 0.345 px

xc = 6.843 pxyc = 3.535 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 99521.6605

Standard deviation: 18.00485

R^2: 0.94968 Parameters:

a = 118.51983

b = 629.38299

c = 14.95429

# Bead 387 (Rejected)

Date: Mon Oct 17 13:50:58 PDT 2022

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

Frame size: 12 pixels

Coordinates: 42.6 um (x), 60.5 um (y), 5.58 um (z)

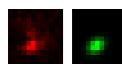
Corresponding bead: Not found

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

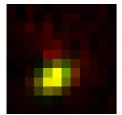
FWHM	Non corrected	Corrected	Theoretical
min	455 nm	474 nm	270 nm
max	636 nm	662 nm	270 nm
Z	2.12 um	2.13 um	1.3 um
Asymmetry	0.715		
Theta	35.2°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.821$$



Parameters:

A = 206.056 (brightness) B = 122.207 (background)

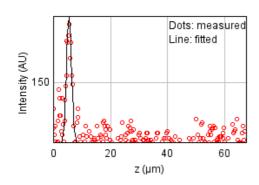
a = 0.437 px

b = 0.149 px

c = 0.543 px

xc = 4.740 pxyc = 7.541 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 15672.4376

Standard deviation: 7.14495

R^2: 0.70276 Parameters: a = 115.04652

b = 188.30138

c = 5.57671

# Bead 388 (Rejected)

Date: Mon Oct 17 13:50:59 PDT 2022

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

Frame size: 12 pixels

Coordinates: 155 um (x), 32.4 um (y), 5.7 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	465 nm	484 nm	270 nm
max	519 nm	540 nm	270 nm
Z	3.1 um	3.11 um	1.3 um
Asymmetry	0.897		
Theta	-5.4°		

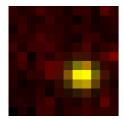
# XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.765$$



Parameters:

A = 86.392 (brightness)

B = 115.341 (background)

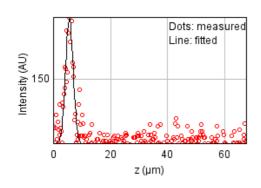
a = 0.500 px

b = -0.012 px

c = 0.619 px

xc = 7.550 pxyc = 7.091 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 15247.8414

Standard deviation: 7.04750

R^2: 0.80030 Parameters:

a = 110.04688

b = 188.72387

c = 5.69614

Date: Mon Oct 17 13:50:59 PDT 2022

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

Frame size: 12 pixels

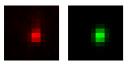
Coordinates: -45.0 um (x), 9.55 um (y), 8.45 um (z)

Corresponding bead: Not found

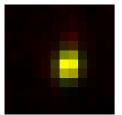
FWHM	Non corrected	Corrected	Theoretical
min	404 nm	421 nm	270 nm
max	523 nm	545 nm	270 nm
Z	2.03 um	2.04 um	1.3 um
Asymmetry	0.772		
Theta	81.8°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 602.566 (brightness)

B = 123.354 (background)

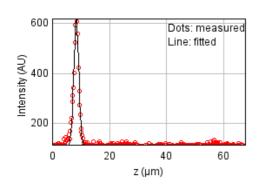
a = 0.815 px

b = 0.047 px

c = 0.497 px

xc = 6.465 pxyc = 6.106 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 34611.4636

Standard deviation: 10.61795

R^2: 0.98005 Parameters: a = 114.74748 b = 621.17906 c = 8.44855

# Bead 390 (Rejected)

Date: Mon Oct 17 13:50:59 PDT 2022

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

Frame size: 12 pixels

Coordinates: 146 um (x), -1.61 um (y), 8.17 um (z)

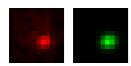
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

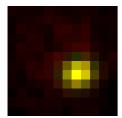
FWHM	Non corrected	Corrected	Theoretical
min	491 nm	512 nm	270 nm
max	560 nm	583 nm	270 nm
Z	3.32 um	3.34 um	1.3 um
Asymmetry	0.877		
Theta	18.9°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 228.303 (brightness)

B = 121.778 (background)

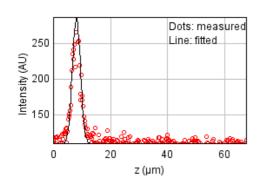
a = 0.441 px

b = 0.039 px

c = 0.543 px

xc = 7.216 pxyc = 6.821 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 31982.3997

Standard deviation: 10.20672

R^2: 0.91030 Parameters: a = 110.30321

b = 285.87194

c = 8.16764

# Bead 391 (Rejected)

Date: Mon Oct 17 13:50:59 PDT 2022

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

Frame size: 12 pixels

Coordinates: 156 um (x), -6.11 um (y), 7.51 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	432 nm	449 nm	270 nm
max	615 nm	641 nm	270 nm
Z	2.69 um	2.7 um	1.3 um
Asymmetry	0.701		
Theta	-23.9°		

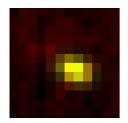
## XY profile & fitting parameters :

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





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



Parameters:

A = 142.147 (brightness)

B = 115.411 (background)

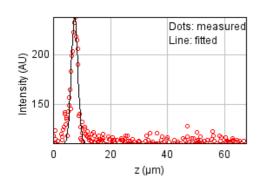
a = 0.414 px

b = -0.136 px

c = 0.660 px

xc = 6.625 pxyc = 6.256 px

#### Z profile & fitting parameters:



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

Sum of residuals squared: 16011.9157

Standard deviation: 7.22192

R^2: 0.89817 Parameters: a = 110.20777

b = 237.94970

c = 7.51342

Date: Mon Oct 17 13:50:59 PDT 2022

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

Frame size: 12 pixels

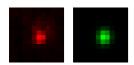
Coordinates: 90.7 um (x), -17.0 um (y), 8.25 um (z)

Corresponding bead: Not found

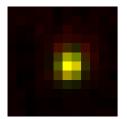
FWHM	Non corrected	Corrected	Theoretical
min	456 nm	475 nm	270 nm
max	523 nm	545 nm	270 nm
Z	2.42 um	2.43 um	1.3 um
Asymmetry	0.872		
Theta	84.1°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.920$$



Parameters:

A = 337.082 (brightness)

B = 120.394(background)

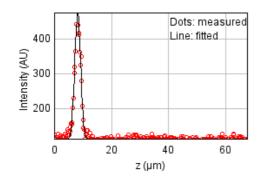
a = 0.644 px

b = 0.016 px

c = 0.493 px

xc = 6.308 pxyc = 5.943 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 31670.0567

Standard deviation: 10.15676

R^2: 0.97006 Parameters: a = 113.53933

b = 475.77409

c = 8.25112

Date: Mon Oct 17 13:50:59 PDT 2022

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

Frame size: 12 pixels

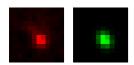
Coordinates: 119 um (x), -44.5 um (y), 8.08 um (z)

Corresponding bead: Not found

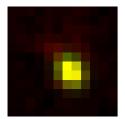
FWHM	Non corrected	Corrected	Theoretical
min	447 nm	465 nm	270 nm
max	564 nm	588 nm	270 nm
Z	2.85 um	2.86 um	1.3 um
Asymmetry	0.792		
Theta	-58.2°		

## XY profile & fitting parameters :

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



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



A = 297.242 (brightness)

B = 119.154 (background)

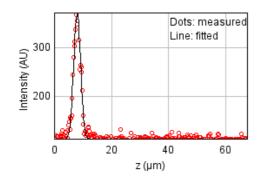
a = 0.603 px

b = -0.112 px

c = 0.491 px

xc = 6.385 pxyc = 6.563 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 22221.0701

Standard deviation: 8.50772

R^2: 0.96538 Parameters: a = 111.87582

b = 372.32519

c = 8.07544

# Bead 394 (Rejected)

Date: Mon Oct 17 13:51:00 PDT 2022

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

Frame size: 12 pixels

Coordinates: 159 um (x), -47.4 um (y), 5.54 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	434 nm	452 nm	270 nm
max	706 nm	735 nm	270 nm
Z	3.05 um	3.06 um	1.3 um
Asymmetry	0.615		
Theta	-14.8°		

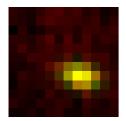
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.792$$



Parameters:

A = 89.126 (brightness)

B = 115.572 (background)

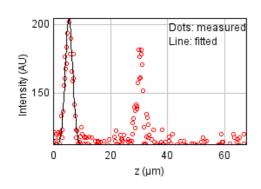
a = 0.298 px

b = -0.109 px

c = 0.682 px

xc = 7.336 pxyc = 7.023 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 50415.0676

Standard deviation: 12.81478

R^2: 0.61676 Parameters:

a = 112.89960

b = 204.27090

c = 5.54413

# Bead 395 (Rejected)

Date: Mon Oct 17 13:51:00 PDT 2022

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

Frame size: 12 pixels

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

Corresponding bead: Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	492 nm	512 nm	270 nm
max	645 nm	671 nm	270 nm
Z	3.23 um	3.24 um	1.3 um
Asymmetry	0.763		
Theta	70.3°		

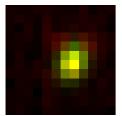
## XY profile & fitting parameters :

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





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



Parameters:

A = 194.346 (brightness)

B = 117.969 (background)

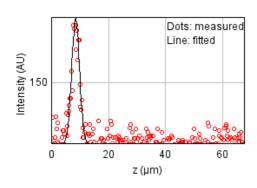
a = 0.529 px

b = 0.074 px

c = 0.349 px

xc = 6.799 pxyc = 5.696 px

Z profile & fitting parameters:



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

Sum of residuals squared: 12750.9470

Standard deviation: 6.44469

R^2: 0.83396 Parameters:

a = 111.64441

b = 190.67976

c = 8.57529

# Bead 396 (Rejected)

Date: Mon Oct 17 13:51:00 PDT 2022

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

Frame size: 12 pixels

Coordinates: 151 um (x), -51.5 um (y), 6.29 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	475 nm	495 nm	270 nm
max	623 nm	649 nm	270 nm
Z	3.71 um	3.72 um	1.3 um
Asymmetry	0.763		
Theta	-32.7°		

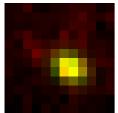
# XY profile & fitting parameters :

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





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



xc = 6.613 pxyc = 6.515 px

#### Parameters:

A = 114.488 (brightness)

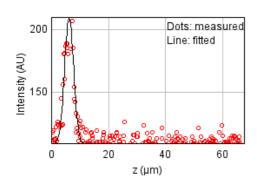
B = 112.730 (background)

a = 0.419 px

b = -0.113 px

c = 0.522 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 15150.7662

Standard deviation: 7.02503

R^2: 0.88588 Parameters:

a = 109.39769

b = 209.89756

c = 6.29064

Date: Mon Oct 17 13:51:00 PDT 2022

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

Frame size: 12 pixels

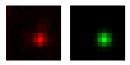
Coordinates: -62.5 um (x), -67.6 um (y), 7.83 um (z)

Corresponding bead: Not found

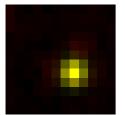
FWHM	Non corrected	Corrected	Theoretical
min	451 nm	470 nm	270 nm
max	484 nm	504 nm	270 nm
Z	2.05 um	2.06 um	1.3 um
Asymmetry	0.931		
Theta	83.9°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 429.636 (brightness)

B = 125.162 (background)

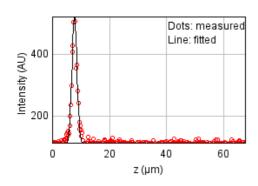
a = 0.659 px

b = 0.009 px

c = 0.573 px

xc = 6.934 pxyc = 6.910 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 33649.7005

Standard deviation: 10.46939

R^2: 0.97045 Parameters: a = 114.44812

b = 520.92018

c = 7.83142

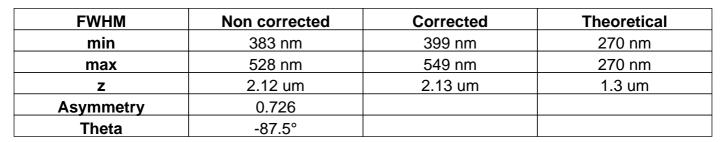
Date: Mon Oct 17 13:51:00 PDT 2022

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

Frame size: 12 pixels

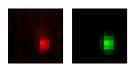
Coordinates: 78.6 um (x), 76.2 um (y), 7.95 um (z)

Corresponding bead: Not found

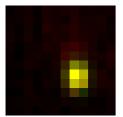


## XY profile & fitting parameters :

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



Fitted 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 = 270.163 (brightness)

B = 119.694 (background)

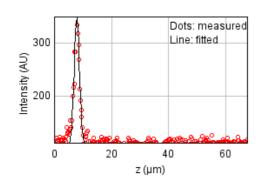
a = 0.915 px

b = -0.019 px

c = 0.483 px

xc = 7.318 pxyc = 7.215 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 22026.6877

Standard deviation: 8.47043

R^2: 0.94565 Parameters: a = 113.22149 b = 348.47908

c = 7.95453

Date: Mon Oct 17 13:51:00 PDT 2022

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

Frame size: 12 pixels

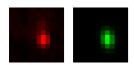
Coordinates: -57.2 um (x), 68.9 um (y), 7.98 um (z)

Corresponding bead: Not found

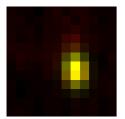
FWHM	Non corrected	Corrected	Theoretical
min	405 nm	422 nm	270 nm
max	620 nm	646 nm	270 nm
Z	2.32 um	2.33 um	1.3 um
Asymmetry	0.653		
Theta	-84.0°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.930$$



Parameters:

A = 384.014 (brightness)

B = 121.394 (background)

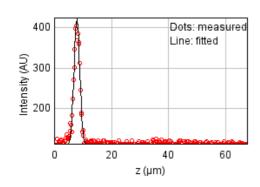
a = 0.813 px

b = -0.049 px

c = 0.354 px

xc = 7.040 pxyc = 6.399 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 21742.0376

Standard deviation: 8.41552

R^2: 0.97079 Parameters:

a = 113.54791

b = 423.48032

c = 7.97978

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

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

Frame size: 12 pixels

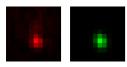
Coordinates: -44.0 um (x), 68.7 um (y), 8.43 um (z)

Corresponding bead: Not found

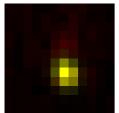
FWHM	Non corrected	Corrected	Theoretical
min	391 nm	407 nm	270 nm
max	499 nm	520 nm	270 nm
Z	1.75 um	1.75 um	1.3 um
Asymmetry	0.783		
Theta	-72.9°		

## XY profile & fitting parameters :

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



Fitted 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 = 408.973 (brightness)

B = 126.935 (background)

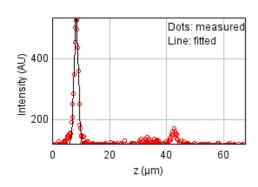
a = 0.848 px

b = -0.095 px

c = 0.567 px

xc = 6.208 pxyc = 7.100 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 43571.6209

Standard deviation: 11.91332

R^2: 0.95859 Parameters:

a = 118.61459

b = 537.62450

c = 8.42538