Date: Mon Oct 17 13:51:31 PDT 2022

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

Frame size: 12 pixels

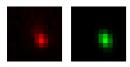
Coordinates: 127 um (x), -33.7 um (y), 18.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	396 nm	413 nm	270 nm
max	565 nm	588 nm	270 nm
Z	2.3 um	2.31 um	1.3 um
Asymmetry	0.702		
Theta	-71.5°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 562.409 (brightness)

B = 125.134 (background)

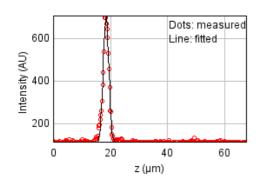
a = 0.810 px

b = -0.131 px

c = 0.464 px

xc = 6.953 pxyc = 6.765 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 34897.2225

Standard deviation: 10.66169

R^2: 0.98687 Parameters: a = 113.40801 b = 706.41604 c = 18.52839

Date: Mon Oct 17 13:51:31 PDT 2022

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

Frame size: 12 pixels

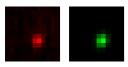
Coordinates: -163 um (x), -64.1 um (y), 17.6 um (z)

Corresponding bead: Not found

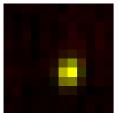
FWHM	Non corrected	Corrected	Theoretical
min	368 nm	384 nm	270 nm
max	465 nm	484 nm	270 nm
Z	2.0 um	2.01 um	1.3 um
Asymmetry	0.792		
Theta	73.2°		

### XY profile & fitting parameters :

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



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



A = 284.254 (brightness)

B = 114.055 (background)

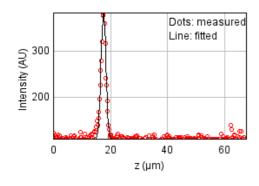
a = 0.959 px

b = 0.102 px

c = 0.652 px

xc = 6.671 pxyc = 6.983 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 19063.8229

Standard deviation: 7.88017

R^2: 0.96192 Parameters: a = 110.86149

a = 110.00140

b = 382.00187

c = 17.62529

Date: Mon Oct 17 13:51:31 PDT 2022

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

Frame size: 12 pixels

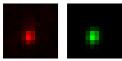
Coordinates: -122 um (x), -71.1 um (y), 13.8 um (z)

Corresponding bead: Not found

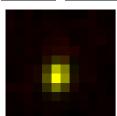
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	411 nm	270 nm
max	504 nm	525 nm	270 nm
Z	2.18 um	2.19 um	1.3 um
Asymmetry	0.782		
Theta	78.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 418.888 (brightness)

B = 120.278 (background)

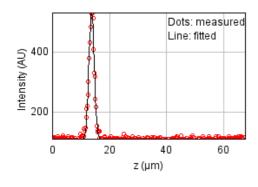
a = 0.847 px

b = 0.068 px

c = 0.542 px

xc = 5.189 pxyc = 6.753 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 21722.0521

Standard deviation: 8.41165

R^2: 0.98285 Parameters: a = 111.91440

b = 530.87912

c = 13.81746

Date: Mon Oct 17 13:51:31 PDT 2022

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

Frame size: 12 pixels

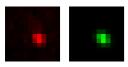
Coordinates: -105 um (x), 90.9 um (y), 17.9 um (z)

Corresponding bead: Not found

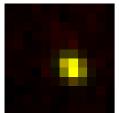
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	484 nm	504 nm	270 nm
Z	2.26 um	2.27 um	1.3 um
Asymmetry	0.794		
Theta	-47.1°		

### XY profile & fitting parameters :

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



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



A = 306.061 (brightness)

B = 117.978 (background)

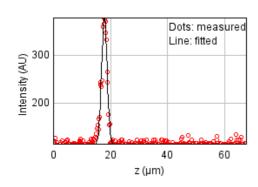
a = 0.751 px

b = -0.167 px

c = 0.727 px

xc = 6.878 pxyc = 6.503 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 23819.6952

Standard deviation: 8.80844

R^2: 0.95642 Parameters: a = 113.58198 b = 380.62263

c = 17.93607

Date: Mon Oct 17 13:51:31 PDT 2022

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

Frame size: 12 pixels

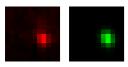
Coordinates: -152 um (x), 81.0 um (y), 18.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	421 nm	438 nm	270 nm
max	540 nm	563 nm	270 nm
Z	3.15 um	3.16 um	1.3 um
Asymmetry	0.779		
Theta	-70.7°		

### XY profile & fitting parameters :

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



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



A = 372.315 (brightness)

B = 121.933 (background)

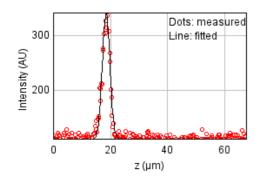
a = 0.725 px

b = -0.093 px

c = 0.492 px

xc = 7.822 pxyc = 6.504 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24651.6175

Standard deviation: 8.96094

R^2: 0.95585 Parameters: a = 111.55963 b = 342.45054 c = 18.56991

d = 1.33600

Date: Mon Oct 17 13:51:31 PDT 2022

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

Frame size: 12 pixels

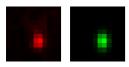
Coordinates: 17.7 um (x), 68.7 um (y), 18.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	398 nm	415 nm	270 nm
max	578 nm	602 nm	270 nm
Z	1.88 um	1.88 um	1.3 um
Asymmetry	0.689		
Theta	-89.2°		

### XY profile & fitting parameters :

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



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



A = 425.411 (brightness)

B = 119.580 (background)

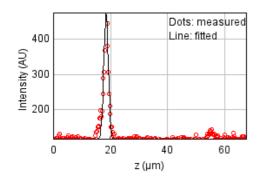
a = 0.846 px

b = -0.006 px

c = 0.402 px

xc = 6.640 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: 36585.4134

Standard deviation: 10.91653

R^2: 0.95588 Parameters: a = 116.77178 b = 475.72942 c = 18.53616

# Bead 907 (Rejected)

Date: Mon Oct 17 13:51:31 PDT 2022

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

Frame size: 12 pixels

Coordinates: -129 um (x), -12.0 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	533 nm	555 nm	270 nm
max	655 nm	682 nm	270 nm
Z	2.06 um	2.06 um	1.3 um
Asymmetry	0.813		
Theta	-87.5°		

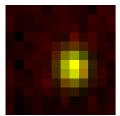
## XY profile & fitting parameters :

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





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



В:

A = 122.466 (brightness)

B = 116.568 (background)

a = 0.473 px

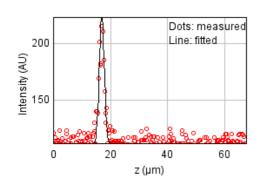
Parameters:

b = -0.007 px

c = 0.313 px

xc = 6.879 pxyc = 6.249 px

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



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

Sum of residuals squared: 14535.6034

Standard deviation: 6.88093

R^2: 0.85047

Parameters:

a = 112.35044

b = 223.31705

c = 17.04085

Date: Mon Oct 17 13:51:31 PDT 2022

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

Frame size: 12 pixels

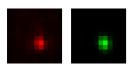
Coordinates: -44.9 um (x), -18.6 um (y), 18.3 um (z)

Corresponding bead: Not found

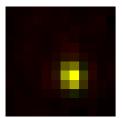
FWHM	Non corrected	Corrected	Theoretical
min	379 nm	395 nm	270 nm
max	467 nm	487 nm	270 nm
Z	1.97 um	1.98 um	1.3 um
Asymmetry	0.811		
Theta	-76.0°		

# XY profile & fitting parameters :

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



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



A = 517.328 (brightness)

B = 122.081 (background)

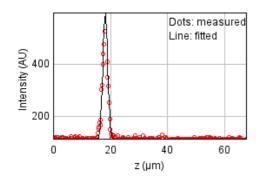
a = 0.916 px

b = -0.075 px

c = 0.633 px

xc = 6.741 pxyc = 7.113 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 42093.1963

Standard deviation: 11.70946

R^2: 0.97303 Parameters: a = 113.29420 b = 598.12422 c = 18.26547

# Bead 909 (Rejected)

Date: Mon Oct 17 13:51:31 PDT 2022

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

Frame size: 12 pixels

Coordinates: -31.2 um (x), -32.9 um (y), 57.3 um (z)

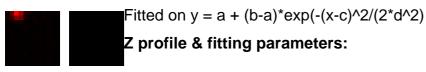
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

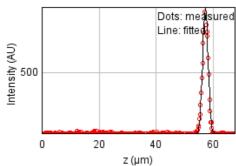
FWHM	Non corrected	Corrected	Theoretical
min	0	0	270 nm
max	0	0	270 nm
Z	2.22 um	2.23 um	1.3 um
Asymmetry	0.0		
Theta	0.0°		

### XY profile & fitting parameters :

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







Fitted on  $y = a + (b-a)^* exp(-(x-c)^2/(2^*d^2))$ Sum of residuals squared: 28891.5815

Standard deviation: 9.70100

R^2: 0.99378 Parameters: a = 116.05072 b = 915.51522 c = 57.30257

## Bead 910 (Rejected)

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

Coordinates: 33.8 um (x), -81.5 um (y), 16.2 um (z)

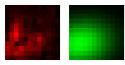
Corresponding bead: Not found

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

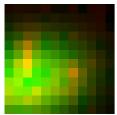
FWHM	Non corrected	Corrected	Theoretical
min	1.66 um	1.73 um	270 nm
max	2.35 um	2.45 um	270 nm
Z	1.24 um	1.24 um	1.3 um
Asymmetry	0.709		
Theta	11.4°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.590$$



A = 69.941 (brightness)

B = 112.439 (background)

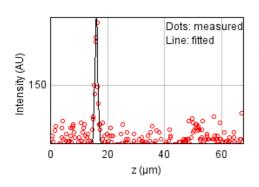
a = 0.025 px

b = 0.005 px

c = 0.047 px

xc = 1.802 pxyc = 7.856 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 12387.0405

Standard deviation: 6.35206

R^2: 0.67500 Parameters:

a = 113.91551

b = 193.00498

c = 16.18954

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

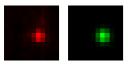
Coordinates: -114 um (x), -82.4 um (y), 18.4 um (z)

Corresponding bead: Not found

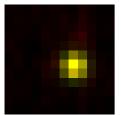
FWHM	Non corrected	Corrected	Theoretical
min	449 nm	467 nm	270 nm
max	481 nm	501 nm	270 nm
Z	2.16 um	2.16 um	1.3 um
Asymmetry	0.932		
Theta	-86.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 460.948 (brightness)

B = 120.557 (background)

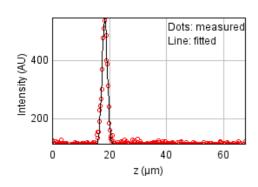
a = 0.666 px

b = -0.005 px

c = 0.580 px

xc = 7.160 pxyc = 6.190 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 22618.2431

Standard deviation: 8.58342

R^2: 0.98345 Parameters:

a = 111.92909

b = 549.46425

c = 18.42004

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

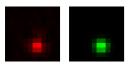
Coordinates: -93.6 um (x), -84.8 um (y), 13.9 um (z)

Corresponding bead: Not found

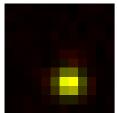
FWHM	Non corrected	Corrected	Theoretical
min	456 nm	475 nm	270 nm
max	473 nm	492 nm	270 nm
Z	2.14 um	2.15 um	1.3 um
Asymmetry	0.965		
Theta	-12.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 511.902 (brightness)

B = 123.020 (background)

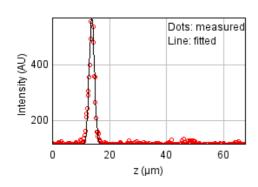
a = 0.603 px

b = -0.009 px

c = 0.643 px

xc = 6.542 pxyc = 8.178 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 32920.7569

Standard deviation: 10.35537

R^2: 0.97780 Parameters:

a = 113.97837

b = 569.69540

c = 13.88702

## **Bead 913 (Rejected)**

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

Coordinates: -121 um (x), 88.3 um (y), 18.7 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	402 nm	418 nm	270 nm
max	509 nm	531 nm	270 nm
Z	6.31 um	6.34 um	1.3 um
Asymmetry	0.788		
Theta	-62.1°		

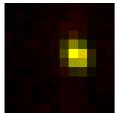
## XY profile & fitting parameters :

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





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



B = 124.879 (background)

A = 399.328 (brightness)

a = 0.763 px

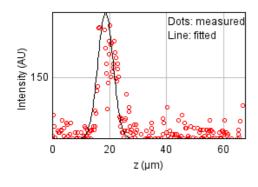
Parameters:

b = -0.130 px

c = 0.586 px

xc = 7.375 pxyc = 5.170 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 35628.3868

Standard deviation: 10.77281

R^2: 0.76323 Parameters:

a = 112.11107

b = 190.76531

c = 18.66909

d = 2.68007

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

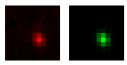
Coordinates: -73.9 um (x), 80.7 um (y), 15.0 um (z)

Corresponding bead: Not found

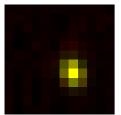
FWHM	Non corrected	Corrected	Theoretical
min	363 nm	379 nm	270 nm
max	480 nm	500 nm	270 nm
Z	1.98 um	1.99 um	1.3 um
Asymmetry	0.757		
Theta	-70.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 354.040 (brightness)

B = 118.306 (background)

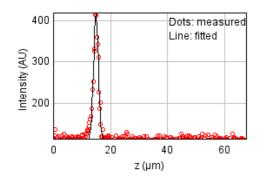
a = 0.965 px

b = -0.139 px

c = 0.633 px

xc = 6.959 pxyc = 6.903 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 25461.1516

Standard deviation: 9.10688

R^2: 0.95942 Parameters: a = 113.35724 b = 418.40660

c = 14.99674

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

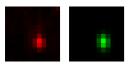
Coordinates: -24.9 um (x), 49.8 um (y), 18.7 um (z)

Corresponding bead: Not found

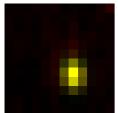
FWHM	Non corrected	Corrected	Theoretical
min	364 nm	379 nm	270 nm
max	520 nm	542 nm	270 nm
Z	1.98 um	1.99 um	1.3 um
Asymmetry	0.699		
Theta	-85.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 595.422 (brightness)

B = 127.034 (background)

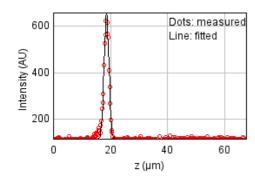
a = 1.011 px

b = -0.042 px

c = 0.499 px

xc = 7.023 pxyc = 7.261 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 26141.5073

Standard deviation: 9.22776

R^2: 0.98651 Parameters:

a = 113.71884

b = 656.54761

c = 18.69174

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

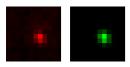
Coordinates: -107 um (x), 44.5 um (y), 18.2 um (z)

Corresponding bead: Not found

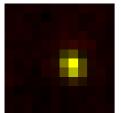
FWHM	Non corrected	Corrected	Theoretical
min	361 nm	376 nm	270 nm
max	437 nm	455 nm	270 nm
Z	1.99 um	1.99 um	1.3 um
Asymmetry	0.826		
Theta	-64.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 354.259 (brightness)

B = 119.645 (background)

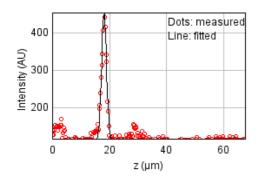
a = 0.969 px

b = -0.128 px

c = 0.764 px

xc = 6.904 pxyc = 6.272 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 54569.8430

Standard deviation: 13.33236

R^2: 0.93057 Parameters: a = 117.86079 b = 453.41537

c = 18.18523

## Bead 917 (Rejected)

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

Coordinates: -22.6 um (x), 27.7 um (y), 17.8 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	438 nm	457 nm	270 nm
max	700 nm	729 nm	270 nm
Z	2.58 um	2.6 um	1.3 um
Asymmetry	0.626		
Theta	-76.9°		

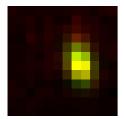
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.927$$



Parameters:

A = 288.972 (brightness)

B = 122.155 (background)

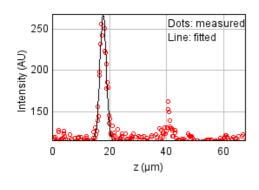
a = 0.676 px

b = -0.093 px

c = 0.295 px

xc = 7.426 pxyc = 5.769 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 20773.6371

Standard deviation: 8.22597

R^2: 0.90374 Parameters:

a = 114.69485

b = 267.66485

c = 17.84860

d = 1.09758

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

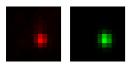
Coordinates: -116 um (x), -11.7 um (y), 18.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	401 nm	418 nm	270 nm
max	489 nm	509 nm	270 nm
Z	2.1 um	2.11 um	1.3 um
Asymmetry	0.821		
Theta	-84.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 710.726 (brightness)

B = 123.323 (background)

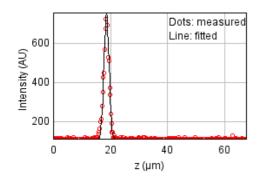
a = 0.832 px

b = -0.026 px

c = 0.565 px

xc = 7.170 pxyc = 6.738 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 35178.7132

Standard deviation: 10.70461

R^2: 0.98767 Parameters: a = 113.03671

b = 754.11039

c = 18.68367

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

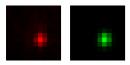
Coordinates: -105 um (x), -13.3 um (y), 18.5 um (z)

Corresponding bead: Not found

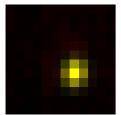
FWHM	Non corrected	Corrected	Theoretical
min	398 nm	415 nm	270 nm
max	489 nm	509 nm	270 nm
Z	2.07 um	2.08 um	1.3 um
Asymmetry	0.815		
Theta	82.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 511.807 (brightness)

B = 122.050 (background)

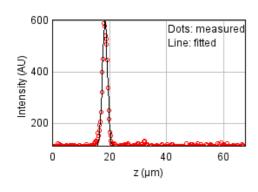
a = 0.841 px

b = 0.038 px

c = 0.567 px

xc = 7.067 pxyc = 6.940 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 25808.9318

Standard deviation: 9.16887

R^2: 0.98447 Parameters: a = 112.68424 b = 604.26059

c = 18.49352

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

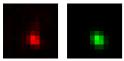
Coordinates: -55.8 um (x), -15.2 um (y), 18.8 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	401 nm	418 nm	270 nm
max	499 nm	520 nm	270 nm
Z	2.09 um	2.1 um	1.3 um
Asymmetry	0.804		
Theta	-58.4°		

### XY profile & fitting parameters :

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





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



Parameters:

A = 687.266 (brightness)

B = 125.433 (background)

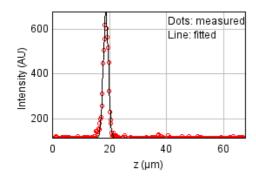
a = 0.752 px

b = -0.131 px

c = 0.620 px

xc = 6.302 pxyc = 7.445 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 26702.3988

Standard deviation: 9.32623

R^2: 0.98803 Parameters:

a = 112.62600

b = 681.14315

c = 18.80232

# Bead 921 (Rejected)

Date: Mon Oct 17 13:51:32 PDT 2022

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

Frame size: 12 pixels

Coordinates: 162 um (x), -17.1 um (y), 18.1 um (z)

Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

FWHM	Non corrected	Corrected	Theoretical
min	498 nm	519 nm	270 nm
max	593 nm	618 nm	270 nm
Z	2.72 um	2.73 um	1.3 um
Asymmetry	0.839		
Theta	-75.5°		

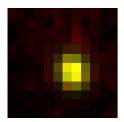
## XY profile & fitting parameters :

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





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



Parameters:

A = 187.018 (brightness)

B = 115.899 (background)

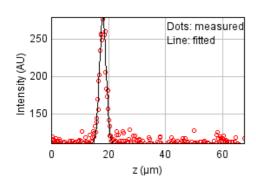
a = 0.531 px

b = -0.039 px

c = 0.391 px

xc = 6.634 pxyc = 6.386 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 13515.5311

Standard deviation: 6.63510

R^2: 0.94852

Parameters:

a = 110.64230

b = 279.45927

c = 18.11582

d = 1.15426

Date: Mon Oct 17 13:51:33 PDT 2022

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

Frame size: 12 pixels

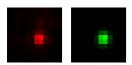
Coordinates: -117 um (x), -19.3 um (y), 18.7 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	396 nm	412 nm	270 nm
max	454 nm	473 nm	270 nm
Z	1.94 um	1.95 um	1.3 um
Asymmetry	0.872		
Theta	80.7°		

### XY profile & fitting parameters :

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



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



A = 527.384 (brightness)

B = 117.002 (background)

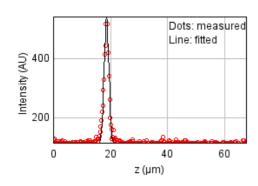
a = 0.851 px

b = 0.032 px

c = 0.657 px

xc = 6.602 pxyc = 6.321 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 26948.6331

Standard deviation: 9.36913

R^2: 0.97740 Parameters: a = 113.53760 b = 542.13018

c = 18.69721

Date: Mon Oct 17 13:51:33 PDT 2022

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

Frame size: 12 pixels

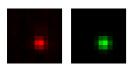
Coordinates: -102 um (x), -28.3 um (y), 18.6 um (z)

Corresponding bead: Not found

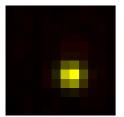
FWHM	Non corrected	Corrected	Theoretical
min	423 nm	440 nm	270 nm
max	435 nm	453 nm	270 nm
Z	2.07 um	2.08 um	1.3 um
Asymmetry	0.973		
Theta	-27.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 526.334 (brightness)

B = 120.565 (background)

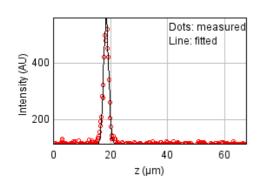
a = 0.720 px

b = -0.017 px

c = 0.743 px

xc = 6.686 pxyc = 7.108 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 30808.0656

Standard deviation: 10.01758

R^2: 0.97805 Parameters: a = 112.83256

b = 563.12819

c = 18.55051

## Bead 924 (Rejected)

Date: Mon Oct 17 13:51:33 PDT 2022

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

Frame size: 12 pixels

Coordinates: 86.0 um (x), -31.2 um (y), 15.9 um (z)

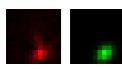
Corresponding bead: Not found

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

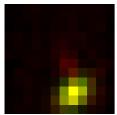
FWHM	Non corrected	Corrected	Theoretical
min	459 nm	478 nm	270 nm
max	629 nm	655 nm	270 nm
Z	2.74 um	2.75 um	1.3 um
Asymmetry	0.73		
Theta	44.3°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.887$$



Parameters:

A = 271.724 (brightness)

B = 118.375 (background)

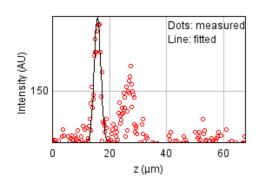
a = 0.484 px

b = 0.149 px

c = 0.491 px

xc = 7.065 pxyc = 9.235 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 37757.5147

Standard deviation: 11.09002

R^2: 0.62134 Parameters:

a = 115.82384

b = 199.77299

c = 15.88843

d = 1.16180

Date: Mon Oct 17 13:51:33 PDT 2022

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

Frame size: 12 pixels

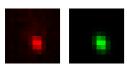
Coordinates: 144 um (x), -37.3 um (y), 18.5 um (z)

Corresponding bead: Not found

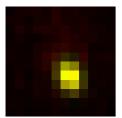
FWHM	Non corrected	Corrected	Theoretical
min	409 nm	426 nm	270 nm
max	556 nm	579 nm	270 nm
Z	2.26 um	2.27 um	1.3 um
Asymmetry	0.735		
Theta	-71.0°		

### XY profile & fitting parameters :

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



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



A = 395.493 (brightness)

B = 118.800 (background)

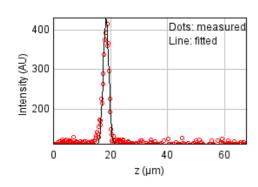
a = 0.764 px

b = -0.114 px

c = 0.473 px

xc = 6.493 pxyc = 7.107 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 25092.9738

Standard deviation: 9.04080

R^2: 0.96742 Parameters:

a = 111.56340

b = 430.15896

c = 18.53144

Date: Mon Oct 17 13:51:33 PDT 2022

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

Frame size: 12 pixels

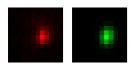
Coordinates: 86.5 um (x), -44.3 um (y), 18.5 um (z)

Corresponding bead: Not found

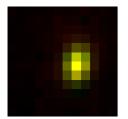
FWHM	Non corrected	Corrected	Theoretical
min	433 nm	451 nm	270 nm
max	625 nm	650 nm	270 nm
Z	2.11 um	2.11 um	1.3 um
Asymmetry	0.693		
Theta	80.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 433.502 (brightness)

B = 121.477 (background)

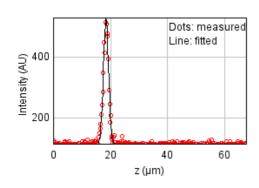
a = 0.707 px

b = 0.058 px

c = 0.353 px

xc = 7.116 pxyc = 5.821 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24011.4535

Standard deviation: 8.84382

R^2: 0.98050 Parameters:

a = 112.43454

b = 531.79444

c = 18.51627

Date: Mon Oct 17 13:51:33 PDT 2022

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

Frame size: 12 pixels

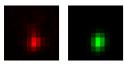
Coordinates: 56.1 um (x), -54.6 um (y), 18.9 um (z)

Corresponding bead: Not found

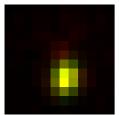
FWHM	Non corrected	Corrected	Theoretical
min	432 nm	450 nm	270 nm
max	573 nm	596 nm	270 nm
Z	2.04 um	2.05 um	1.3 um
Asymmetry	0.754		
Theta	82.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 604.777 (brightness)

B = 126.494 (background)

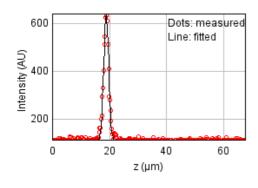
a = 0.715 px

b = 0.038 px

c = 0.414 px

xc = 6.163 pxyc = 7.507 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 21670.9814

Standard deviation: 8.40176

R^2: 0.98842 Parameters:

a = 113.52939

b = 639.97613

c = 18.92571

## Bead 928 (Rejected)

Date: Mon Oct 17 13:51:33 PDT 2022

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

Frame size: 12 pixels

Coordinates: 162 um (x), -68.7 um (y), 18.3 um (z)

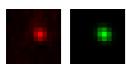
Corresponding bead: Not found

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

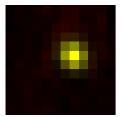
FWHM	Non corrected	Corrected	Theoretical
min	445 nm	463 nm	270 nm
max	508 nm	529 nm	270 nm
Z	2.71 um	2.72 um	1.3 um
Asymmetry	0.876		
Theta	-57.2°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 348.244 (brightness)

B = 119.456 (background)

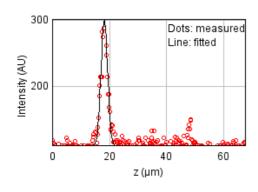
a = 0.632 px

b = -0.072 px

c = 0.566 px

xc = 6.891 pxyc = 4.987 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 24513.2046

Standard deviation: 8.93575

R^2: 0.92688 Parameters:

a = 112.00976

b = 300.98411

c = 18.27003

d = 1.14902

## Bead 929 (Rejected)

Date: Mon Oct 17 13:51:33 PDT 2022

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

Frame size: 12 pixels

Coordinates: 33.7 um (x), -81.5 um (y), 16.2 um (z)

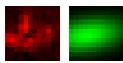
Corresponding bead: Not found

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

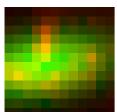
FWHM	Non corrected	Corrected	Theoretical
min	1.25 um	1.3 um	270 nm
max	2.8 um	2.91 um	270 nm
Z	1.24 um	1.24 um	1.3 um
Asymmetry	0.447		
Theta	8.9°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.535$$



A = 74.295 (brightness)

B = 113.178 (background)

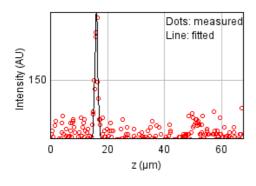
a = 0.019 px

b = 0.010 px

c = 0.084 px

xc = 3.353 pxyc = 5.888 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 12387.0405

Standard deviation: 6.35206

R^2: 0.67500 Parameters:

a = 113.91551

b = 193.00498

c = 16.18954

Date: Mon Oct 17 13:51:33 PDT 2022

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

Frame size: 12 pixels

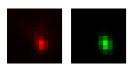
Coordinates: -30.1 um (x), 91.6 um (y), 18.9 um (z)

Corresponding bead: Not found

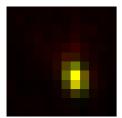
FWHM	Non corrected	Corrected	Theoretical
min	362 nm	377 nm	270 nm
max	531 nm	553 nm	270 nm
Z	1.9 um	1.91 um	1.3 um
Asymmetry	0.681		
Theta	-74.0°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 560.277 (brightness)

B = 125.101 (background)

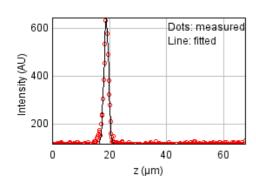
a = 0.985 px

b = -0.146 px

c = 0.518 px

xc = 6.994 pxyc = 7.232 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 29974.2033

Standard deviation: 9.88109

R^2: 0.98307 Parameters:

a = 114.62777

b = 642.69677

c = 18.94446

Date: Mon Oct 17 13:51:33 PDT 2022

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

Frame size: 12 pixels

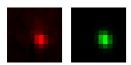
Coordinates: -152 um (x), 81.0 um (y), 18.6 um (z)

Corresponding bead: Not found

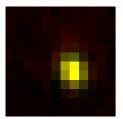
FWHM	Non corrected	Corrected	Theoretical
min	422 nm	439 nm	270 nm
max	542 nm	564 nm	270 nm
Z	3.15 um	3.16 um	1.3 um
Asymmetry	0.778		
Theta	-70.8°		

### XY profile & fitting parameters :

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



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



A = 372.187 (brightness)

B = 121.478 (background)

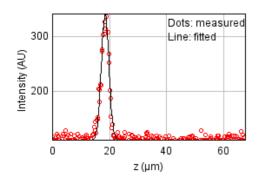
a = 0.722 px

b = -0.092 px

c = 0.489 px

xc = 6.822 pxyc = 6.504 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24651.6175

Standard deviation: 8.96094

R^2: 0.95585 Parameters:

a = 111.55963

b = 342.45054

c = 18.56991

d = 1.33600

Date: Mon Oct 17 13:51:34 PDT 2022

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

Frame size: 12 pixels

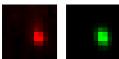
Coordinates: -18.2 um (x), 76.8 um (y), 18.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	408 nm	425 nm	270 nm
max	579 nm	603 nm	270 nm
Z	2.34 um	2.35 um	1.3 um
Asymmetry	0.705		
Theta	-78.3°		

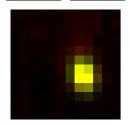
### XY profile & fitting parameters :

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





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



Parameters:

A = 458.499 (brightness)

B = 124.146 (background)

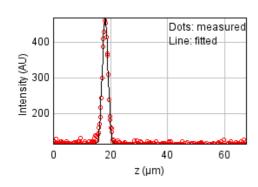
a = 0.788 px

b = -0.080 px

c = 0.417 px

xc = 7.465 pxyc = 6.616 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 16915.6428

Standard deviation: 7.42292

R^2: 0.98263 Parameters:

a = 113.34681

b = 468.10914

c = 18.21801

Date: Mon Oct 17 13:51:34 PDT 2022

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

Frame size: 12 pixels

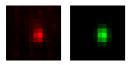
Coordinates: -14.6 um (x), 65.2 um (y), 18.6 um (z)

Corresponding bead: Not found

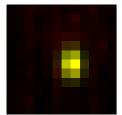
FWHM	Non corrected	Corrected	Theoretical
min	380 nm	395 nm	270 nm
max	534 nm	556 nm	270 nm
Z	1.88 um	1.89 um	1.3 um
Asymmetry	0.711		
Theta	-88.1°		

### XY profile & fitting parameters :

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



Fitted on  $i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B$  $R^2 = 0.928$ 



Parameters:

A = 386.466 (brightness)

B = 118.553 (background)

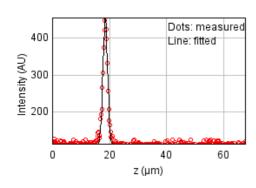
a = 0.930 px

b = -0.015 px

c = 0.471 px

xc = 6.633 pxyc = 5.955 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 17609.4910

Standard deviation: 7.57363

R^2: 0.97606 Parameters:

a = 114.35504

b = 455.82709

c = 18.60226

Date: Mon Oct 17 13:51:34 PDT 2022

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

Frame size: 12 pixels

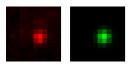
Coordinates: -136 um (x), 60.8 um (y), 18.1 um (z)

Corresponding bead: Not found

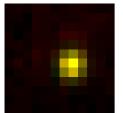
FWHM	Non corrected	Corrected	Theoretical
min	460 nm	479 nm	270 nm
max	502 nm	523 nm	270 nm
Z	2.57 um	2.58 um	1.3 um
Asymmetry	0.915		
Theta	84.2°		

### XY profile & fitting parameters :

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



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



A = 255.798 (brightness)

B = 120.318 (background)

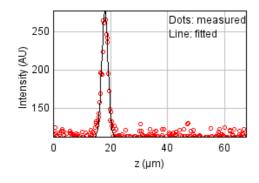
a = 0.634 px

b = 0.010 px

c = 0.533 px

xc = 6.831 pxyc = 6.159 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 15305.0609

Standard deviation: 7.06071

R^2: 0.93682 Parameters: a = 112.75317 b = 278.29487

c = 18.14259d = 1.09007

Date: Mon Oct 17 13:51:34 PDT 2022

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

Frame size: 12 pixels

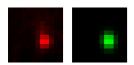
Coordinates: 80.6 um (x), 47.0 um (y), 18.6 um (z)

Corresponding bead: Not found

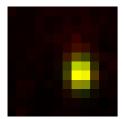
FWHM	Non corrected	Corrected	Theoretical
min	435 nm	453 nm	270 nm
max	573 nm	596 nm	270 nm
Z	2.37 um	2.38 um	1.3 um
Asymmetry	0.76		
Theta	-85.9°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 419.639 (brightness)

B = 124.662 (background)

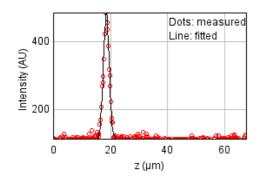
a = 0.707 px

b = -0.021 px

c = 0.411 px

xc = 7.457 pxyc = 6.772 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 19668.9170

Standard deviation: 8.00426

R^2: 0.98198 Parameters: a = 113.12283

b = 486.63343

c = 18.62187

d = 1.00669

Date: Mon Oct 17 13:51:34 PDT 2022

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

Frame size: 12 pixels

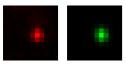
Coordinates: -108 um (x), 39.5 um (y), 18.9 um (z)

Corresponding bead: Not found

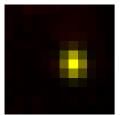
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	412 nm	270 nm
max	488 nm	509 nm	270 nm
Z	2.16 um	2.16 um	1.3 um
Asymmetry	0.81		
Theta	-85.1°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 563.471 (brightness)

B = 124.810 (background)

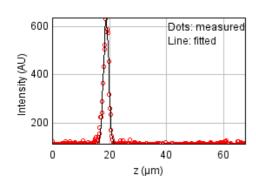
a = 0.856 px

b = -0.025 px

c = 0.565 px

xc = 7.048 pxyc = 5.925 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 36021.5695

Standard deviation: 10.83209

R^2: 0.98147 Parameters: a = 113.16935 b = 634.47594 c = 18.90904

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Date: Mon Oct 17 13:51:34 PDT 2022

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

Frame size: 12 pixels

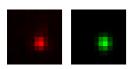
Coordinates: -65.4 um (x), 29.2 um (y), 47.7 um (z)

Corresponding bead: Not found

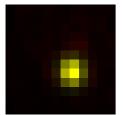
FWHM	Non corrected	Corrected	Theoretical
min	424 nm	441 nm	270 nm
max	494 nm	514 nm	270 nm
Z	2.01 um	2.02 um	1.3 um
Asymmetry	0.858		
Theta	-86.9°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 904.538 (brightness)

B = 131.999 (background)

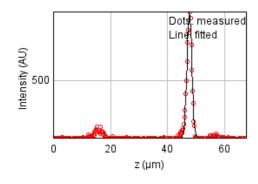
a = 0.747 px

b = -0.011 px

c = 0.551 px

xc = 6.750 pxyc = 6.830 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 108661.273

Standard deviation: 18.81344

R^2: 0.97719 Parameters: a = 119.75030 b = 960.66661

c = 47.70816

# Bead 938 (Rejected)

Date: Mon Oct 17 13:51:34 PDT 2022

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

Frame size: 12 pixels

Coordinates: 52.0 um (x), 18.9 um (y), 16.3 um (z)

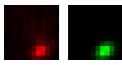
Corresponding bead: Not found

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

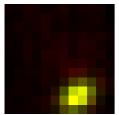
FWHM	Non corrected	Corrected	Theoretical
min	451 nm	470 nm	270 nm
max	615 nm	641 nm	270 nm
Z	3.12 um	3.13 um	1.3 um
Asymmetry	0.733		
Theta	34.9°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 278.913 (brightness)

B = 121.275 (background)

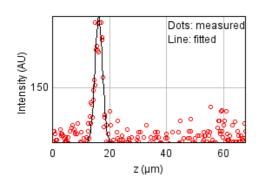
a = 0.454 px

b = 0.143 px

c = 0.560 px

xc = 7.474 pxyc = 9.532 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 18802.3745

Standard deviation: 7.82595

R^2: 0.79104 Parameters:

a = 112.95210

b = 197.65646

c = 16.31488

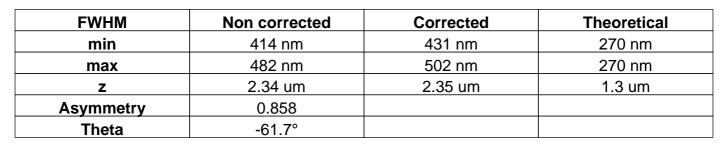
Date: Mon Oct 17 13:51:35 PDT 2022

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

Frame size: 12 pixels

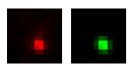
Coordinates: -51.1 um (x), 8.15 um (y), 19.3 um (z)

Corresponding bead: Not found

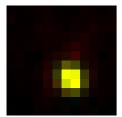


## XY profile & fitting parameters :

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



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



Parameters:

A = 635.730 (brightness)

B = 126.102 (background)

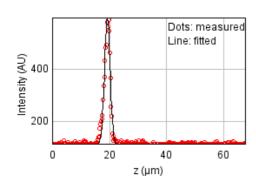
a = 0.737 px

b = -0.086 px

c = 0.623 px

xc = 6.533 pxyc = 7.452 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 40620.0054

Standard deviation: 11.50273

R^2: 0.97765 Parameters:

a = 114.23335

b = 598.03245

c = 19.32563

# Bead 940 (Rejected)

Date: Mon Oct 17 13:51:35 PDT 2022

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

Frame size: 12 pixels

Coordinates: -129 um (x), -12.0 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	528 nm	550 nm	270 nm
max	649 nm	676 nm	270 nm
Z	2.06 um	2.06 um	1.3 um
Asymmetry	0.814		
Theta	-87.4°		

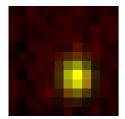
## XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.853$$



Parameters:

A = 122.578 (brightness)

B = 117.026 (background)

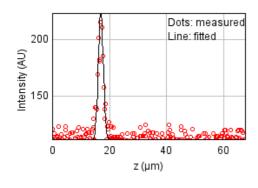
a = 0.480 px

b = -0.007 px

c = 0.319 px

xc = 6.881 pxyc = 7.251 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 14535.6034

Standard deviation: 6.88093

R^2: 0.85047

Parameters:

a = 112.35044

b = 223.31705

c = 17.04085

# **Bead 941 (Rejected)**

Date: Mon Oct 17 13:51:35 PDT 2022

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

Frame size: 12 pixels

Coordinates: -47.5 um (x), -45.8 um (y), 18.1 um (z)

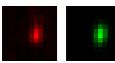
Corresponding bead: Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	394 nm	410 nm	270 nm
max	671 nm	699 nm	270 nm
Z	1.94 um	1.94 um	1.3 um
Asymmetry	0.587		
Theta	83.2°		

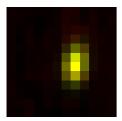
## XY profile & fitting parameters :

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





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



Parameters:

A = 392.604 (brightness)

B = 120.142 (background)

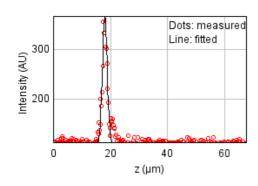
a = 0.857 px

b = 0.067 px

c = 0.306 px

xc = 7.019 pxyc = 5.742 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 28211.2438

Standard deviation: 9.58610

R^2: 0.93468

Parameters:

a = 114.08320

b = 366.47492

c = 18.10617

Date: Mon Oct 17 13:51:35 PDT 2022

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

Frame size: 12 pixels

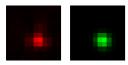
Coordinates: -61.9 um (x), -62.9 um (y), 19.0 um (z)

Corresponding bead: Not found

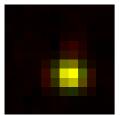
FWHM	Non corrected	Corrected	Theoretical
min	479 nm	499 nm	270 nm
max	508 nm	529 nm	270 nm
Z	2.04 um	2.05 um	1.3 um
Asymmetry	0.944		
Theta	-35.7°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 620.809 (brightness)

B = 127.975 (background)

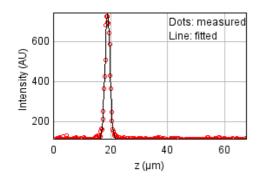
a = 0.542 px

b = -0.030 px

c = 0.563 px

xc = 6.620 pxyc = 7.200 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24590.2265

Standard deviation: 8.94977

R^2: 0.99095 Parameters:

a = 113.47950

b = 748.83630

c = 19.03226

Date: Mon Oct 17 13:51:35 PDT 2022

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

Frame size: 12 pixels

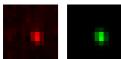
Coordinates: -118 um (x), 89.7 um (y), 18.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	345 nm	360 nm	270 nm
max	457 nm	476 nm	270 nm
Z	2.22 um	2.23 um	1.3 um
Asymmetry	0.755		
Theta	-78.6°		

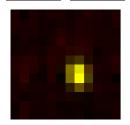
### XY profile & fitting parameters :

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





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



Parameters:

A = 311.499 (brightness)

B = 119.594 (background)

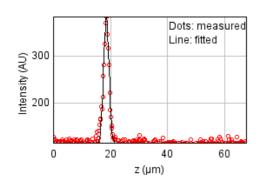
a = 1.107 px

b = -0.094 px

c = 0.661 px

xc = 6.859 pxyc = 6.582 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 16639.4522

Standard deviation: 7.36208

R^2: 0.96996 Parameters:

a = 113.41104

b = 385.97692

c = 18.62262

# Bead 944 (Rejected)

Date: Mon Oct 17 13:51:35 PDT 2022

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

Frame size: 12 pixels

Coordinates: -121 um (x), 88.3 um (y), 18.7 um (z)

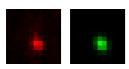
Corresponding bead: Not found

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

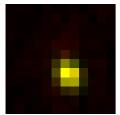
FWHM	Non corrected	Corrected	Theoretical
min	403 nm	419 nm	270 nm
max	511 nm	532 nm	270 nm
Z	6.31 um	6.34 um	1.3 um
Asymmetry	0.788		
Theta	-62.2°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 399.167 (brightness) B = 124.416 (background)

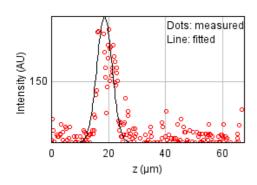
a = 0.759 px

b = -0.130 px

c = 0.583 px

xc = 6.375 pxyc = 7.170 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 35628.3868

Standard deviation: 10.77281

R^2: 0.76323 Parameters:

a = 112.11107

b = 190.76531

c = 18.66909

d = 2.68007

# Bead 945 (Rejected)

Date: Mon Oct 17 13:51:35 PDT 2022

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

Frame size: 12 pixels

Coordinates: -76.2 um (x), 71.5 um (y), 15.4 um (z)

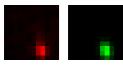
Corresponding bead: Not found

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

FWHM	Non corrected	Corrected	Theoretical
min	367 nm	382 nm	270 nm
max	547 nm	569 nm	270 nm
Z	4.1 um	4.11 um	1.3 um
Asymmetry	0.671		
Theta	-77.7°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 517.720 (brightness)

B = 125.484 (background)

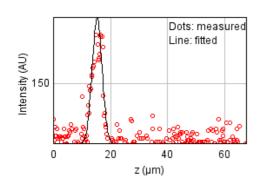
a = 0.972 px

b = -0.114 px

c = 0.474 px

xc = 7.707 pxyc = 9.474 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 16724.9997

Standard deviation: 7.38098

R^2: 0.82567 Parameters:

a = 112.59178

b = 191.45071

c = 15.40081

# Bead 946 (Rejected)

Date: Mon Oct 17 13:51:35 PDT 2022

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

Frame size: 12 pixels

Coordinates: 218 nm (x), 59.6 um (y), 16.0 um (z)

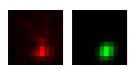
Corresponding bead: Not found

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

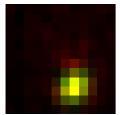
FWHM	Non corrected	Corrected	Theoretical
min	471 nm	490 nm	270 nm
max	566 nm	589 nm	270 nm
Z	3.45 um	3.46 um	1.3 um
Asymmetry	0.832		
Theta	56.1°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 280.970 (brightness) B = 121.871 (background)

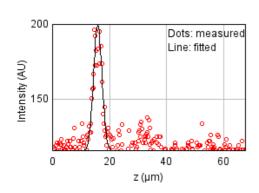
a = 0.548 px

b = 0.086 px

c = 0.477 px

xc = 6.992 pxyc = 8.526 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 18045.7242

Standard deviation: 7.66687

R^2: 0.81320 Parameters:

a = 115.34546

b = 200.27398

c = 15.97373

Date: Mon Oct 17 13:51:35 PDT 2022

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

Frame size: 12 pixels

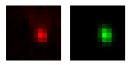
Coordinates: 77.1 um (x), 54.9 um (y), 18.9 um (z)

Corresponding bead: Not found

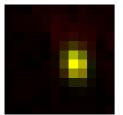
FWHM	Non corrected	Corrected	Theoretical
min	401 nm	417 nm	270 nm
max	555 nm	579 nm	270 nm
Z	2.28 um	2.29 um	1.3 um
Asymmetry	0.721		
Theta	-79.4°		

## 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 = 389.100 (brightness)

B = 122.619 (background)

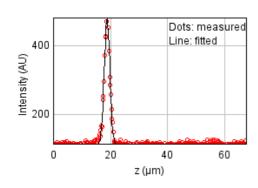
a = 0.823 px

b = -0.072 px

c = 0.448 px

xc = 7.275 pxyc = 5.918 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 15406.3558

Standard deviation: 7.08404

R^2: 0.98490 Parameters: a = 113.22600 b = 481.53774

c = 18.88218

Date: Mon Oct 17 13:51:35 PDT 2022

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

Frame size: 12 pixels

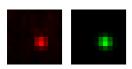
Coordinates: -121 um (x), 50.3 um (y), 18.6 um (z)

Corresponding bead: Not found

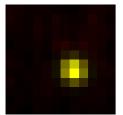
FWHM	Non corrected	Corrected	Theoretical
min	417 nm	435 nm	270 nm
max	442 nm	460 nm	270 nm
Z	2.3 um	2.31 um	1.3 um
Asymmetry	0.945		
Theta	-49.3°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 347.375 (brightness)

B = 119.113 (background)

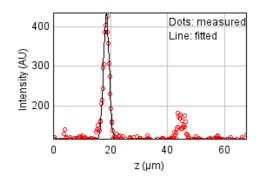
a = 0.735 px

b = -0.041 px

c = 0.723 px

xc = 6.934 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: 55285.4154

Standard deviation: 13.41949

R^2: 0.93228 Parameters: a = 115.79372 b = 435.14941 c = 18.62395

Date: Mon Oct 17 13:51:36 PDT 2022

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

Frame size: 12 pixels

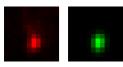
Coordinates: 65.8 um (x), 36.5 um (y), 19.1 um (z)

Corresponding bead: Not found

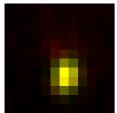
FWHM	Non corrected	Corrected	Theoretical
min	436 nm	455 nm	270 nm
max	588 nm	613 nm	270 nm
Z	2.19 um	2.2 um	1.3 um
Asymmetry	0.742		
Theta	83.2°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 499.358 (brightness)

B = 126.252 (background)

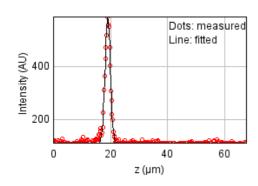
a = 0.700 px

b = 0.037 px

c = 0.392 px

xc = 6.184 pxyc = 7.368 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 23070.2815

Standard deviation: 8.66877

R^2: 0.98563 Parameters: a = 113.81108 b = 585.04911 c = 19.10843

Date: Mon Oct 17 13:51:36 PDT 2022

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

Frame size: 12 pixels

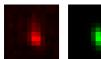
Coordinates: -22.6 um (x), 27.7 um (y), 17.8 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	434 nm	453 nm	270 nm
max	692 nm	721 nm	270 nm
Z	2.58 um	2.6 um	1.3 um
Asymmetry	0.628		
Theta	-76.9°		

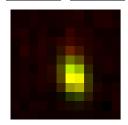
### XY profile & fitting parameters :

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





Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.927$$



Parameters:

A = 289.686 (brightness)

B = 123.307 (background)

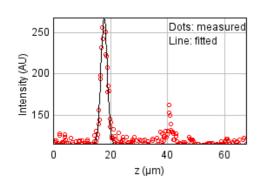
a = 0.689 px

b = -0.095 px

c = 0.302 px

xc = 6.427 pxyc = 6.774 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 20773.6371

Standard deviation: 8.22597

R^2: 0.90374 Parameters:

a = 114.69485

b = 267.66485

c = 17.84860

Date: Mon Oct 17 13:51:36 PDT 2022

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

Frame size: 12 pixels

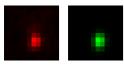
Coordinates: 50.0 um (x), 11.3 um (y), 19.1 um (z)

Corresponding bead: Not found

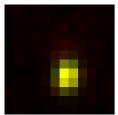
FWHM	Non corrected	Corrected	Theoretical
min	396 nm	413 nm	270 nm
max	529 nm	551 nm	270 nm
Z	2.06 um	2.07 um	1.3 um
Asymmetry	0.749		
Theta	85.8°		

### XY profile & fitting parameters :

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



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



A = 539.524 (brightness)

B = 124.272 (background)

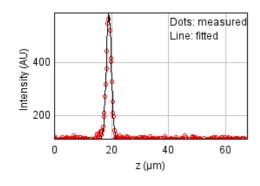
a = 0.852 px

b = 0.027 px

c = 0.482 px

xc = 6.321 pxyc = 7.283 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 19150.1502

Standard deviation: 7.89800

R^2: 0.98738 Parameters: a = 113.45308 b = 585.31255 c = 19.13562

Date: Mon Oct 17 13:51:36 PDT 2022

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

Frame size: 12 pixels

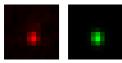
Coordinates: -119 um (x), -2.06 um (y), 18.6 um (z)

Corresponding bead: Not found

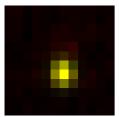
FWHM	Non corrected	Corrected	Theoretical
min	396 nm	413 nm	270 nm
max	479 nm	499 nm	270 nm
Z	2.09 um	2.09 um	1.3 um
Asymmetry	0.827		
Theta	-87.6°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 411.277 (brightness)

B = 120.131 (background)

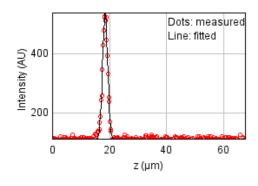
a = 0.855 px

b = -0.011 px

c = 0.585 px

xc = 5.880 pxyc = 6.847 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 16565.0805

Standard deviation: 7.34561

R^2: 0.98677 Parameters: a = 112.50196 b = 538.49580

c = 18.55018

Date: Mon Oct 17 13:51:36 PDT 2022

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

Frame size: 12 pixels

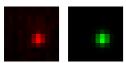
Coordinates: -147 um (x), -3.98 um (y), 18.5 um (z)

Corresponding bead: Not found

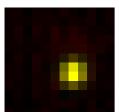
FWHM	Non corrected	Corrected	Theoretical
min	428 nm	446 nm	270 nm
max	455 nm	474 nm	270 nm
Z	2.34 um	2.35 um	1.3 um
Asymmetry	0.94		
Theta	76.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 301.040 (brightness)

B = 116.213 (background)

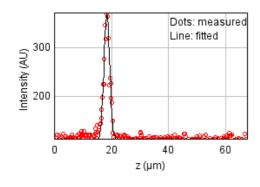
a = 0.728 px

b = 0.019 px

c = 0.651 px

xc = 7.009 pxyc = 6.611 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 23889.2918

Standard deviation: 8.82130

R^2: 0.95542 Parameters:

a = 111.47577

b = 371.14055

c = 18.45791

Date: Mon Oct 17 13:51:36 PDT 2022

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

Frame size: 12 pixels

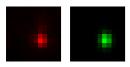
Coordinates: -35.4 um (x), -26.5 um (y), 19.1 um (z)

Corresponding bead: Not found

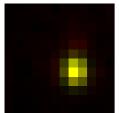
FWHM	Non corrected	Corrected	Theoretical
min	396 nm	412 nm	270 nm
max	510 nm	531 nm	270 nm
Z	2.09 um	2.1 um	1.3 um
Asymmetry	0.776		
Theta	-86.8°		

### XY profile & fitting parameters :

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



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



A = 731.352 (brightness)

B = 127.063 (background)

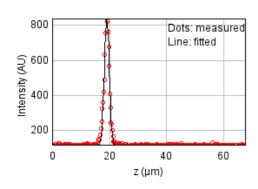
a = 0.856 px

b = -0.019 px

c = 0.516 px

xc = 7.217 pxyc = 6.835 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 31169.7583

Standard deviation: 10.07622

R^2: 0.99135 Parameters:

a = 114.31846

b = 837.29156

c = 19.14295

Date: Mon Oct 17 13:51:36 PDT 2022

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

Frame size: 12 pixels

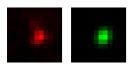
Coordinates: 98.0 um (x), -36.2 um (y), 18.9 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	463 nm	482 nm	270 nm
max	566 nm	590 nm	270 nm
Z	2.14 um	2.15 um	1.3 um
Asymmetry	0.817		
Theta	67.5°		

## XY profile & fitting parameters :

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



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



A = 354.714 (brightness)

B = 121.830 (background)

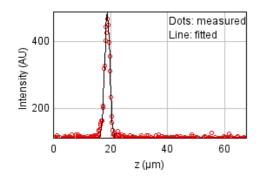
a = 0.596 px

b = 0.074 px

c = 0.449 px

xc = 6.586 pxyc = 5.878 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 23308.8759

Standard deviation: 8.71348

R^2: 0.97705 Parameters: a = 112.35911 b = 489.86505 c = 18.93734

Date: Mon Oct 17 13:51:36 PDT 2022

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

Frame size: 12 pixels

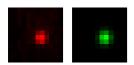
Coordinates: -150 um (x), -38.6 um (y), 19.0 um (z)

Corresponding bead: Not found

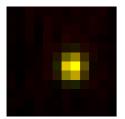
FWHM	Non corrected	Corrected	Theoretical
min	430 nm	448 nm	270 nm
max	483 nm	503 nm	270 nm
Z	2.41 um	2.42 um	1.3 um
Asymmetry	0.891		
Theta	85.6°		

### XY profile & fitting parameters :

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



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



A = 417.993 (brightness)

B = 117.514 (background)

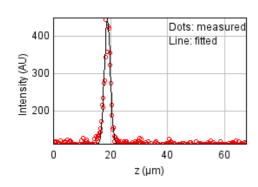
a = 0.725 px

b = 0.012 px

c = 0.577 px

xc = 6.683 pxyc = 6.105 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 33454.0318

Standard deviation: 10.43891

R^2: 0.96397 Parameters: a = 111.77109

b = 450.20500

c = 18.97932

Date: Mon Oct 17 13:51:36 PDT 2022

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

Frame size: 12 pixels

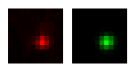
Coordinates: -50.6 um (x), -59.0 um (y), 18.8 um (z)

Corresponding bead: Not found

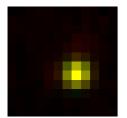
FWHM	Non corrected	Corrected	Theoretical
min	465 nm	484 nm	270 nm
max	481 nm	501 nm	270 nm
Z	2.12 um	2.13 um	1.3 um
Asymmetry	0.966		
Theta	62.8°		

### XY profile & fitting parameters :

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



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



A = 469.678 (brightness)

B = 123.668 (background)

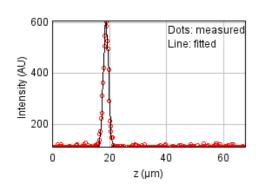
a = 0.613 px

b = 0.017 px

c = 0.589 px

xc = 7.051 pxyc = 6.830 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 17751.8130

Standard deviation: 7.60418

R^2: 0.98963 Parameters: a = 112.12195 b = 607.27660

c = 18.83952

Date: Mon Oct 17 13:51:36 PDT 2022

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

Frame size: 12 pixels

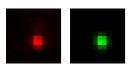
Coordinates: -122 um (x), -64.9 um (y), 19.0 um (z)

Corresponding bead: Not found

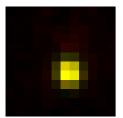
FWHM	Non corrected	Corrected	Theoretical
min	412 nm	430 nm	270 nm
max	474 nm	494 nm	270 nm
Z	2.28 um	2.29 um	1.3 um
Asymmetry	0.87		
Theta	-82.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 569.914 (brightness)

B = 121.094 (background)

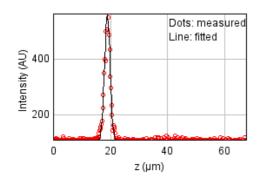
a = 0.786 px

b = -0.024 px

c = 0.601 px

xc = 6.429 pxyc = 6.700 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 25998.7572

Standard deviation: 9.20253

R^2: 0.98284 Parameters: a = 111.99002 b = 560.25726

c = 18.96767

Date: Mon Oct 17 13:51:37 PDT 2022

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

Frame size: 12 pixels

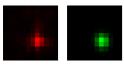
Coordinates: -19.8 um (x), -65.1 um (y), 18.8 um (z)

Corresponding bead: Not found

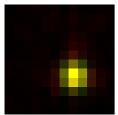
FWHM	Non corrected	Corrected	Theoretical
min	432 nm	450 nm	270 nm
max	497 nm	518 nm	270 nm
Z	1.9 um	1.91 um	1.3 um
Asymmetry	0.87		
Theta	-85.8°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 603.675 (brightness)

B = 124.591 (background)

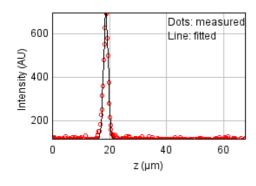
a = 0.718 px

b = -0.013 px

c = 0.544 px

xc = 7.141 pxyc = 7.303 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24106.7213

Standard deviation: 8.86135

R^2: 0.98894 Parameters: a = 114.15258 b = 701.94879

c = 18.81483

# Bead 960 (Rejected)

Date: Mon Oct 17 13:51:37 PDT 2022

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

Frame size: 12 pixels

Coordinates: 162 um (x), -68.7 um (y), 18.3 um (z)

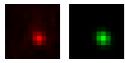
Corresponding bead: Not found

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

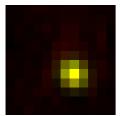
FWHM	Non corrected	Corrected	Theoretical
min	443 nm	461 nm	270 nm
max	505 nm	526 nm	270 nm
Z	2.71 um	2.72 um	1.3 um
Asymmetry	0.876		
Theta	-57.3°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 348.520 (brightness) B = 120.290 (background)

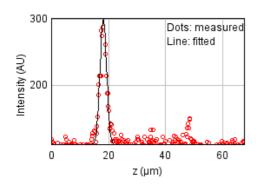
a = 0.639 px

b = -0.072 px

c = 0.573 px

xc = 6.891 pxyc = 6.988 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24513.2046

Standard deviation: 8.93575

R^2: 0.92688 Parameters:

a = 112.00976

b = 300.98411

c = 18.27003

Date: Mon Oct 17 13:51:37 PDT 2022

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

Frame size: 12 pixels

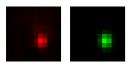
Coordinates: 98.0 um (x), 89.4 um (y), 19.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	393 nm	409 nm	270 nm
max	504 nm	525 nm	270 nm
Z	2.1 um	2.11 um	1.3 um
Asymmetry	0.778		
Theta	-88.9°		

## XY profile & fitting parameters :

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



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



A = 435.247 (brightness)

B = 119.704 (background)

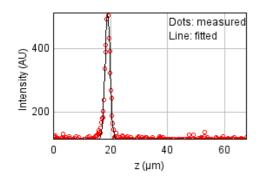
a = 0.871 px

b = -0.007 px

c = 0.528 px

xc = 7.293 pxyc = 7.020 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 20435.4509

Standard deviation: 8.15874

R^2: 0.98203 Parameters: a = 113.29814

b = 516.96019

c = 19.04959

# Bead 962 (Rejected)

Date: Mon Oct 17 13:51:37 PDT 2022

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

Frame size: 12 pixels

Coordinates: 89.7 um (x), 79.3 um (y), 15.9 um (z)

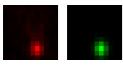
Corresponding bead: Not found

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

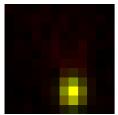
FWHM	Non corrected	Corrected	Theoretical
min	413 nm	430 nm	270 nm
max	531 nm	553 nm	270 nm
Z	4.06 um	4.08 um	1.3 um
Asymmetry	0.778		
Theta	-89.6°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 383.069 (brightness)

B = 122.341 (background)

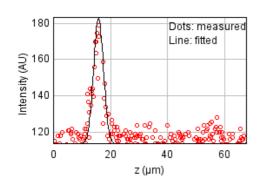
a = 0.787 px

b = -0.002 px

c = 0.476 px

xc = 6.889 pxyc = 9.094 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 15929.3547

Standard deviation: 7.20327

R^2: 0.79447 Parameters:

a = 113.55514

b = 183.36498

c = 15.89957

Date: Mon Oct 17 13:51:37 PDT 2022

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

Frame size: 12 pixels

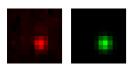
Coordinates: -136 um (x), 60.8 um (y), 18.1 um (z)

Corresponding bead: Not found

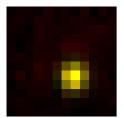
FWHM	Non corrected	Corrected	Theoretical
min	458 nm	477 nm	270 nm
max	500 nm	520 nm	270 nm
Z	2.57 um	2.58 um	1.3 um
Asymmetry	0.916		
Theta	84.2°		

### XY profile & fitting parameters :

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



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



A = 255.802 (brightness)

B = 120.939 (background)

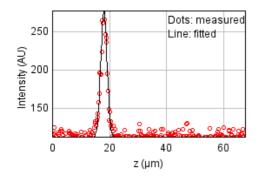
a = 0.640 px

b = 0.010 px

c = 0.538 px

xc = 6.831 pxyc = 7.160 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 15305.0609

Standard deviation: 7.06071

R^2: 0.93682 Parameters: a = 112.75317 b = 278.29487 c = 18.14259

Date: Mon Oct 17 13:51:37 PDT 2022

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

Frame size: 12 pixels

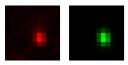
Coordinates: -23.7 um (x), 51.7 um (y), 18.9 um (z)

Corresponding bead: Not found

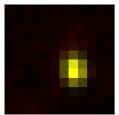
FWHM	Non corrected	Corrected	Theoretical
min	386 nm	403 nm	270 nm
max	522 nm	543 nm	270 nm
Z	2.13 um	2.13 um	1.3 um
Asymmetry	0.741		
Theta	-82.1°		

## XY profile & fitting parameters :

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



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



A = 496.980 (brightness)

B = 127.148 (background)

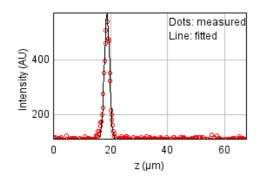
a = 0.891 px

b = -0.055 px

c = 0.501 px

xc = 7.133 pxyc = 6.630 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 22547.3491

Standard deviation: 8.56996

R^2: 0.98456 Parameters: a = 113.42868 b = 568.90001

c = 18.85118

Date: Mon Oct 17 13:51:37 PDT 2022

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

Frame size: 12 pixels

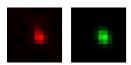
Coordinates: -7.57 um (x), 25.6 um (y), 19.6 um (z)

Corresponding bead: Not found

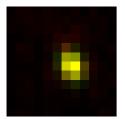
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	411 nm	270 nm
max	531 nm	553 nm	270 nm
Z	1.96 um	1.96 um	1.3 um
Asymmetry	0.743		
Theta	-68.3°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 512.756 (brightness)

B = 121.079 (background)

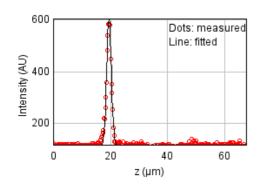
a = 0.809 px

b = -0.132 px

c = 0.528 px

xc = 6.609 pxyc = 5.945 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 29846.9378

Standard deviation: 9.86009

R^2: 0.98091 Parameters: a = 115.52348

L COE 07007

b = 605.07297

c = 19.56490

Date: Mon Oct 17 13:51:38 PDT 2022

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

Frame size: 12 pixels

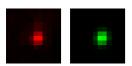
Coordinates: -67.7 um (x), 8.93 um (y), 19.5 um (z)

Corresponding bead: Not found

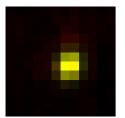
FWHM	Non corrected	Corrected	Theoretical
min	400 nm	417 nm	270 nm
max	490 nm	510 nm	270 nm
Z	2.22 um	2.23 um	1.3 um
Asymmetry	0.817		
Theta	77.5°		

## XY profile & fitting parameters :

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



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



A = 557.339 (brightness)

B = 122.230 (background)

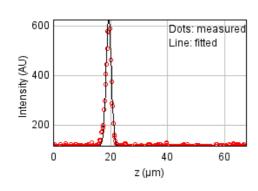
a = 0.825 px

b = 0.059 px

c = 0.572 px

xc = 6.481 pxyc = 5.925 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 36337.0304

Standard deviation: 10.87941

R^2: 0.98132 Parameters: a = 113.83087 b = 627.46123 c = 19.45387

Date: Mon Oct 17 13:51:38 PDT 2022

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

Frame size: 12 pixels

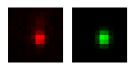
Coordinates: -35.5 um (x), 716 nm (y), 19.5 um (z)

Corresponding bead: Not found

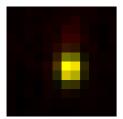
FWHM	Non corrected	Corrected	Theoretical
min	398 nm	415 nm	270 nm
max	509 nm	530 nm	270 nm
Z	2.24 um	2.25 um	1.3 um
Asymmetry	0.782		
Theta	-89.3°		

## XY profile & fitting parameters :

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



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



A = 589.307 (brightness)

B = 126.046 (background)

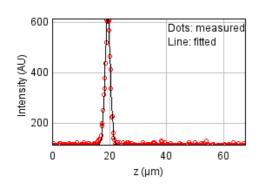
a = 0.846 px

b = -0.004 px

c = 0.518 px

xc = 6.423 pxyc = 6.243 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24883.5767

Standard deviation: 9.00300

R^2: 0.98674 Parameters: a = 113.25881 b = 616.93237

c = 19.46027

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Date: Mon Oct 17 13:51:38 PDT 2022

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

Frame size: 12 pixels

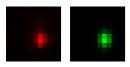
Coordinates: -16.0 um (x), -26.7 um (y), 19.3 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	415 nm	432 nm	270 nm
max	545 nm	567 nm	270 nm
Z	2.09 um	2.1 um	1.3 um
Asymmetry	0.761		
Theta	87.9°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 705.963 (brightness)

B = 123.465 (background)

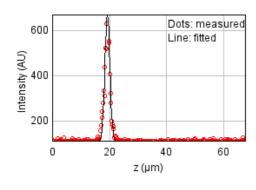
a = 0.780 px

b = 0.012 px

c = 0.453 px

xc = 7.105 pxyc = 6.741 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 66222.7748

Standard deviation: 14.68705

R^2: 0.96932 Parameters: a = 113.77973 b = 668.12961 c = 19.33512

Date: Mon Oct 17 13:51:38 PDT 2022

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

Frame size: 12 pixels

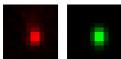
Coordinates: 72.5 um (x), -34.5 um (y), 19.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	453 nm	471 nm	270 nm
max	631 nm	657 nm	270 nm
Z	2.51 um	2.52 um	1.3 um
Asymmetry	0.718		
Theta	89.9°		

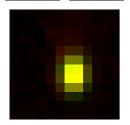
### XY profile & fitting parameters :

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





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



Parameters:

A = 426.711(brightness)

B = 119.917(background)

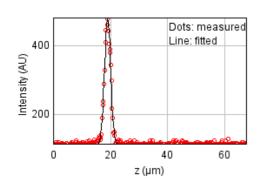
a = 0.655 px

b = 0.001 px

c = 0.337 px

xc = 6.504 pxyc = 6.534 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 19606.5287

Standard deviation: 7.99155

R^2: 0.98260 Parameters: a = 112.52428

b = 482.33521

c = 19.06474

# Bead 970 (Rejected)

Date: Mon Oct 17 13:51:38 PDT 2022

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

Frame size: 12 pixels

Coordinates: -47.5 um (x), -45.8 um (y), 18.1 um (z)

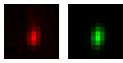
Corresponding bead: Not found

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

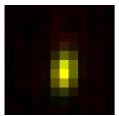
FWHM	Non corrected	Corrected	Theoretical
min	395 nm	411 nm	270 nm
max	673 nm	701 nm	270 nm
Z	1.94 um	1.94 um	1.3 um
Asymmetry	0.587		
Theta	83.2°		

## XY profile & fitting parameters :

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



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



A = 392.579 (brightness) B = 119.594 (background)

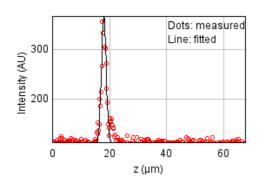
a = 0.852 px

b = 0.066 px

c = 0.304 px

xc = 6.019 pxyc = 6.741 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 28211.2438

Standard deviation: 9.58610

R^2: 0.93468 Parameters:

a = 114.08320

b = 366.47492

c = 18.10617

Date: Mon Oct 17 13:51:38 PDT 2022

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

Frame size: 12 pixels

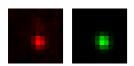
Coordinates: 138 um (x), -95.3 um (y), 19.2 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	431 nm	449 nm	270 nm
max	502 nm	523 nm	270 nm
Z	2.3 um	2.3 um	1.3 um
Asymmetry	0.859		
Theta	-74.8°		

### XY profile & fitting parameters :

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



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



A = 340.714 (brightness)

B = 115.314 (background)

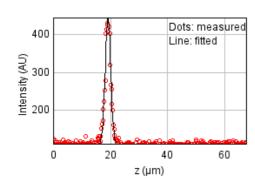
a = 0.710 px

b = -0.048 px

c = 0.546 px

xc = 6.294 pxyc = 6.786 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 18106.0916

Standard deviation: 7.67968

R^2: 0.97857 Parameters: a = 111.25164 b = 444.35887

c = 19.19663

Date: Mon Oct 17 13:51:39 PDT 2022

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

Frame size: 12 pixels

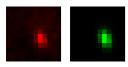
Coordinates: 88.5 um (x), 82.5 um (y), 18.5 um (z)

Corresponding bead: Not found

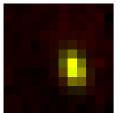
FWHM	Non corrected	Corrected	Theoretical
min	378 nm	393 nm	270 nm
max	602 nm	627 nm	270 nm
Z	2.16 um	2.17 um	1.3 um
Asymmetry	0.627		
Theta	-73.5°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 217.344 (brightness)

B = 121.420 (background)

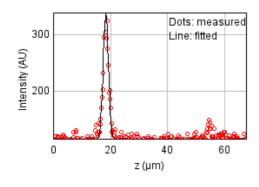
a = 0.895 px

b = -0.156 px

c = 0.416 px

xc = 7.157 pxyc = 6.542 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 29367.6838

Standard deviation: 9.78060

R^2: 0.92226 Parameters: a = 115.36193 b = 337.89840 c = 18.45079

Date: Mon Oct 17 13:51:39 PDT 2022

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

Frame size: 12 pixels

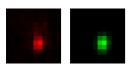
Coordinates: -2.28 um (x), 55.7 um (y), 19.6 um (z)

Corresponding bead: Not found

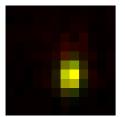
FWHM	Non corrected	Corrected	Theoretical
min	385 nm	401 nm	270 nm
max	546 nm	569 nm	270 nm
Z	1.94 um	1.95 um	1.3 um
Asymmetry	0.705		
Theta	84.8°		

### 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 = 516.417 (brightness)

B = 125.008 (background)

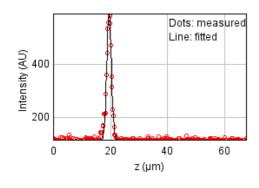
a = 0.902 px

b = 0.041 px

c = 0.454 px

xc = 6.614 pxyc = 7.138 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24278.9439

Standard deviation: 8.89295

R^2: 0.98339 Parameters: a = 114.24262 b = 590.00826

c = 19.59350

## Bead 974 (Rejected)

Date: Mon Oct 17 13:51:39 PDT 2022

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

Frame size: 12 pixels

Coordinates: -12.4 um (x), 47.8 um (y), 15.7 um (z)

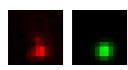
Corresponding bead: Not found

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

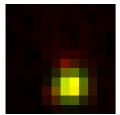
FWHM	Non corrected	Corrected	Theoretical
min	532 nm	554 nm	270 nm
max	559 nm	582 nm	270 nm
Z	3.94 um	3.95 um	1.3 um
Asymmetry	0.952		
Theta	55.3°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 398.664 (brightness)

B = 124.714 (background)

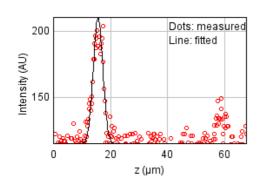
a = 0.460 px

b = 0.021 px

c = 0.444 px

xc = 6.602 pxyc = 8.430 px

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



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

Sum of residuals squared: 23436.7023

Standard deviation: 8.73734

R^2: 0.82437

Parameters:

a = 115.70867

b = 210.32839

c = 15.73691

Date: Mon Oct 17 13:51:39 PDT 2022

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

Frame size: 12 pixels

Coordinates: -12.8 um (x), 36.0 um (y), 18.6 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	427 nm	445 nm	270 nm
max	664 nm	692 nm	270 nm
Z	2.0 um	2.01 um	1.3 um
Asymmetry	0.643		
Theta	-81.4°		

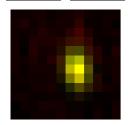
## XY profile & fitting parameters :

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





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



Parameters:

A = 227.815 (brightness)

B = 120.167 (background)

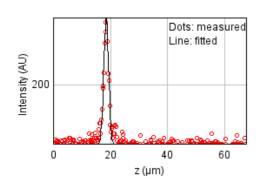
a = 0.726 px

b = -0.064 px

c = 0.314 px

xc = 6.733 pxyc = 5.948 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 18149.9575

Standard deviation: 7.68898

R^2: 0.92310 Parameters: a = 114.80808

b = 297.46980

c = 18.57939

Date: Mon Oct 17 13:51:39 PDT 2022

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

Frame size: 12 pixels

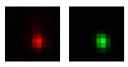
Coordinates: -16.3 um (x), -17.5 um (y), 20.1 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	394 nm	411 nm	270 nm
max	514 nm	535 nm	270 nm
Z	1.89 um	1.89 um	1.3 um
Asymmetry	0.767		
Theta	-83.0°		

## XY profile & fitting parameters :

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



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



A = 817.917 (brightness)

B = 129.767 (background)

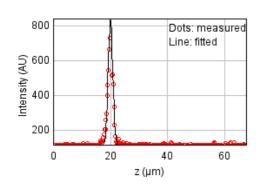
a = 0.858 px

b = -0.043 px

c = 0.514 px

xc = 6.735 pxyc = 7.217 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 85517.2094

Standard deviation: 16.69005

R^2: 0.97443 Parameters:

a = 115.31794

b = 841.09149

c = 20.08345

Date: Mon Oct 17 13:51:39 PDT 2022

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

Frame size: 12 pixels

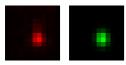
Coordinates: -6.22 um (x), -25.6 um (y), 19.4 um (z)

Corresponding bead: Not found

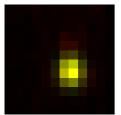
FWHM	Non corrected	Corrected	Theoretical
min	426 nm	444 nm	270 nm
max	535 nm	558 nm	270 nm
Z	2.0 um	2.0 um	1.3 um
Asymmetry	0.796		
Theta	-86.8°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 513.556 (brightness)

B = 120.832 (background)

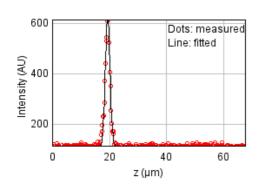
a = 0.739 px

b = -0.015 px

c = 0.469 px

xc = 6.722 pxyc = 6.758 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 26010.9405

Standard deviation: 9.20468

R^2: 0.98448 Parameters:

a = 114.16222

b = 617.00397

c = 19.43999

Date: Mon Oct 17 13:51:39 PDT 2022

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

Frame size: 12 pixels

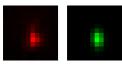
Coordinates: 41.4 um (x), -38.4 um (y), 19.4 um (z)

Corresponding bead : Not found

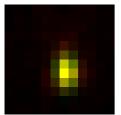
FWHM	Non corrected	Corrected	Theoretical
min	375 nm	391 nm	270 nm
max	597 nm	621 nm	270 nm
Z	2.19 um	2.2 um	1.3 um
Asymmetry	0.629		
Theta	-87.2°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 582.924 (brightness)

B = 122.963 (background)

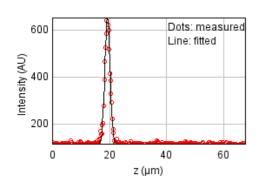
a = 0.951 px

b = -0.028 px

c = 0.378 px

xc = 6.226 pxyc = 6.831 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 22593.5874

Standard deviation: 8.57874

R^2: 0.98917 Parameters: a = 113.08339

a = 110.00000

b = 650.71625

c = 19.37723

Date: Mon Oct 17 13:51:40 PDT 2022

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

Frame size: 12 pixels

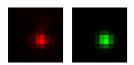
Coordinates: -37.5 um (x), -61.6 um (y), 19.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	467 nm	486 nm	270 nm
max	496 nm	516 nm	270 nm
Z	1.89 um	1.89 um	1.3 um
Asymmetry	0.942		
Theta	-67.3°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 550.189 (brightness)

B = 122.818 (background)

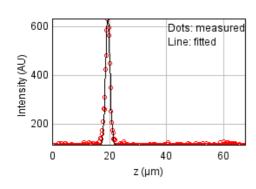
a = 0.605 px

b = -0.025 px

c = 0.556 px

xc = 6.763 pxyc = 6.671 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 24598.0889

Standard deviation: 8.95120

R^2: 0.98557 Parameters: a = 114.55116 b = 635.78624

c = 19.49470

Date: Mon Oct 17 13:51:40 PDT 2022

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

Frame size: 12 pixels

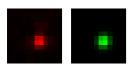
Coordinates: -87.2 um (x), -77.9 um (y), 19.5 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	437 nm	455 nm	270 nm
max	474 nm	494 nm	270 nm
Z	2.16 um	2.17 um	1.3 um
Asymmetry	0.921		
Theta	72.3°		

### XY profile & fitting parameters :

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



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



A = 744.605 (brightness)

B = 125.944 (background)

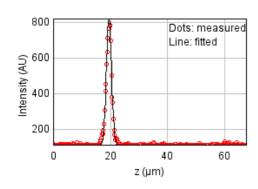
a = 0.694 px

b = 0.031 px

c = 0.607 px

xc = 6.597 pxyc = 6.691 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 42328.7188

Standard deviation: 11.74217

R^2: 0.98810 Parameters: a = 113.88833

b = 821.17914

c = 19.54098

## **Bead 981 (Rejected)**

Date: Mon Oct 17 13:51:40 PDT 2022

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

Frame size: 12 pixels

Coordinates: -164 um (x), 75.2 um (y), 18.7 um (z)

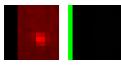
Corresponding bead: Not found

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

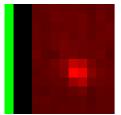
FWHM	Non corrected	Corrected	Theoretical
min	2.94 um	3.06 um	270 nm
max	5.81 um	6.06 um	270 nm
Z	2.41 um	2.42 um	1.3 um
Asymmetry	0.505		
Theta	-89.0°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.757$$



Parameters:

A = 297.374 (brightness)

B = -129.417 (background)

a = 0.016 px

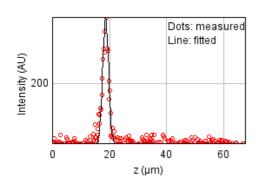
b = -0.000 px

c = 0.004 px

xc = 7.603 px

yc = 5.512 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 17854.1424

Standard deviation: 7.62606

R^2: 0.93918 Parameters: a = 110.87816

b = 298.79357c = 18.73686

# Bead 982 (Rejected)

Date: Mon Oct 17 13:51:40 PDT 2022

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

Frame size: 12 pixels

Coordinates: -48.1 um (x), 65.3 um (y), 11.8 um (z)

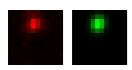
Corresponding bead: Not found

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

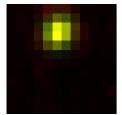
FWHM	Non corrected	Corrected	Theoretical
min	499 nm	520 nm	270 nm
max	574 nm	598 nm	270 nm
Z	4.14 um	4.16 um	1.3 um
Asymmetry	0.869		
Theta	67.7°		

## XY profile & fitting parameters :

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



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



A = 432.332 (brightness)

B = 117.507 (background)

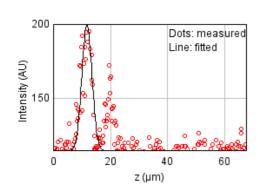
a = 0.520 px

b = 0.046 px

c = 0.426 px

xc = 5.173 pxyc = 2.536 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 44337.3319

Standard deviation: 12.01754

R^2: 0.67984 Parameters:

a = 114.67576

b = 200.23307

c = 11.84260

Date: Mon Oct 17 13:51:40 PDT 2022

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

Frame size: 12 pixels

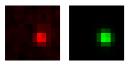
Coordinates: -126 um (x), 58.9 um (y), 19.0 um (z)

Corresponding bead: Not found

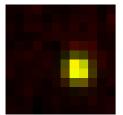
FWHM	Non corrected	Corrected	Theoretical
min	439 nm	457 nm	270 nm
max	492 nm	512 nm	270 nm
Z	2.46 um	2.47 um	1.3 um
Asymmetry	0.892		
Theta	-74.2°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 253.049 (brightness)

B = 118.444 (background)

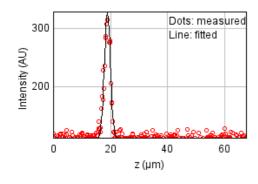
a = 0.687 px

b = -0.037 px

c = 0.565 px

xc = 7.396 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: 19338.6330

Standard deviation: 7.93677

R^2: 0.95045 Parameters: a = 112.17643 b = 328.27115 c = 18.99678

Date: Mon Oct 17 13:51:40 PDT 2022

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

Frame size: 12 pixels

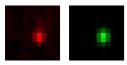
Coordinates: -130 um (x), 56.6 um (y), 19.2 um (z)

Corresponding bead: Not found

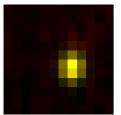
FWHM	Non corrected	Corrected	Theoretical
min	398 nm	415 nm	270 nm
max	520 nm	541 nm	270 nm
Z	2.01 um	2.02 um	1.3 um
Asymmetry	0.766		
Theta	86.2°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 245.535 (brightness)

B = 117.538 (background)

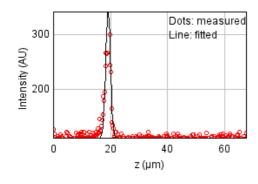
a = 0.844 px

b = 0.023 px

c = 0.498 px

xc = 6.990 pxyc = 6.332 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 26647.7149

Standard deviation: 9.31667

R^2: 0.92833 Parameters: a = 112.48157 b = 341.45741

c = 19.22920

Date: Mon Oct 17 13:51:40 PDT 2022

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

Frame size: 12 pixels

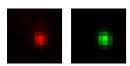
Coordinates: -21.8 um (x), 44.9 um (y), 19.8 um (z)

Corresponding bead: Not found

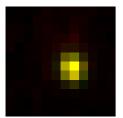
FWHM	Non corrected	Corrected	Theoretical
min	409 nm	426 nm	270 nm
max	490 nm	511 nm	270 nm
Z	1.98 um	1.99 um	1.3 um
Asymmetry	0.833		
Theta	-75.1°		

## XY profile & fitting parameters :

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



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



A = 597.690 (brightness)

B = 122.840 (background)

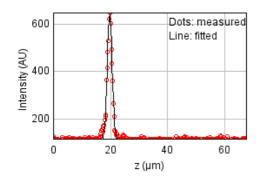
a = 0.788 px

b = -0.061 px

c = 0.574 px

xc = 6.771 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: 26275.7635

Standard deviation: 9.25142

R^2: 0.98602 Parameters:

a = 113.43314

b = 647.90838

c = 19.82820

Date: Mon Oct 17 13:51:40 PDT 2022

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

Frame size: 12 pixels

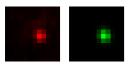
Coordinates: -128 um (x), 13.8 um (y), 19.5 um (z)

Corresponding bead: Not found

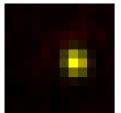
FWHM	Non corrected	Corrected	Theoretical
min	389 nm	405 nm	270 nm
max	451 nm	469 nm	270 nm
Z	2.19 um	2.2 um	1.3 um
Asymmetry	0.863		
Theta	-74.4°		

## XY profile & fitting parameters :

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



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



A = 416.112 (brightness)

B = 118.650 (background)

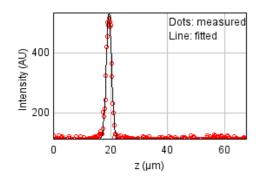
a = 0.870 px

b = -0.058 px

c = 0.677 px

xc = 7.215 pxyc = 5.877 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 25413.5735

Standard deviation: 9.09837

R^2: 0.98024 Parameters: a = 112.65212

b = 533.26997

c = 19.54471

Date: Mon Oct 17 13:51:40 PDT 2022

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

Frame size: 12 pixels

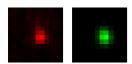
Coordinates: 27.6 um (x), -4.71 um (y), 19.4 um (z)

Corresponding bead: Not found

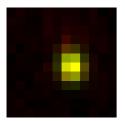
FWHM	Non corrected	Corrected	Theoretical
min	437 nm	455 nm	270 nm
max	551 nm	574 nm	270 nm
Z	1.9 um	1.91 um	1.3 um
Asymmetry	0.793		
Theta	-83.2°		

### XY profile & fitting parameters :

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



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



A = 294.600 (brightness)

B = 117.961 (background)

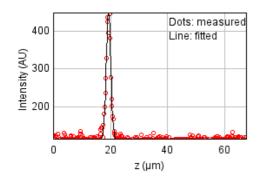
a = 0.698 px

b = -0.031 px

c = 0.445 px

xc = 6.602 pxyc = 5.891 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 23465.1176

Standard deviation: 8.74263

R^2: 0.96722 Parameters:

a = 114.13010

b = 447.46177

c = 19.38987

## Bead 988 (Rejected)

Date: Mon Oct 17 13:51:41 PDT 2022

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

Frame size: 12 pixels

Coordinates: 35.8 um (x), -6.25 um (y), 11.1 um (z)

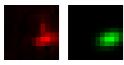
Corresponding bead: Not found

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

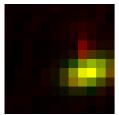
FWHM	Non corrected	Corrected	Theoretical
min	504 nm	525 nm	270 nm
max	830 nm	864 nm	270 nm
Z	3.85 um	3.86 um	1.3 um
Asymmetry	0.608		
Theta	17.2°		

## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.857$$



Parameters:

A = 253.285 (brightness) B = 119.616 (background)

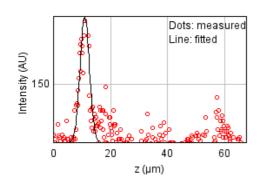
a = 0.224 px

b = 0.094 px

c = 0.499 px

xc = 8.705 pxyc = 6.905 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 20807.5398

Standard deviation: 8.23268

R^2: 0.76194 Parameters: a = 115.88913

a = 113.00913

b = 190.28846

c = 11.08007

Date: Mon Oct 17 13:51:41 PDT 2022

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

Frame size: 12 pixels

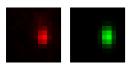
Coordinates: 45.9 um (x), -47.2 um (y), 19.5 um (z)

Corresponding bead: Not found

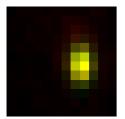
FWHM	Non corrected	Corrected	Theoretical
min	408 nm	425 nm	270 nm
max	650 nm	677 nm	270 nm
Z	2.93 um	2.94 um	1.3 um
Asymmetry	0.627		
Theta	-89.8°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 491.368 (brightness)

B = 122.505 (background)

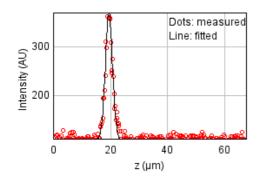
a = 0.808 px

b = -0.002 px

c = 0.318 px

xc = 7.646 pxyc = 5.826 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 25805.5627

Standard deviation: 9.16827

R^2: 0.95954 Parameters: a = 112.70220 b = 368.42767

c = 19.53035

- 10100000

Date: Mon Oct 17 13:51:41 PDT 2022

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

Frame size: 12 pixels

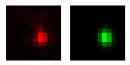
Coordinates: 79.5 um (x), -60.1 um (y), 19.1 um (z)

Corresponding bead: Not found

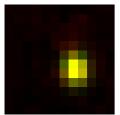
FWHM	Non corrected	Corrected	Theoretical
min	437 nm	455 nm	270 nm
max	554 nm	577 nm	270 nm
Z	2.42 um	2.43 um	1.3 um
Asymmetry	0.788		
Theta	-83.8°		

# XY profile & fitting parameters :

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



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



A = 364.521 (brightness)

B = 118.717 (background)

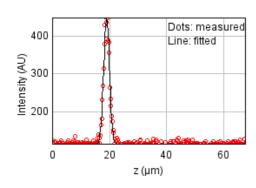
a = 0.700 px

b = -0.029 px

c = 0.440 px

xc = 7.236 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: 21010.0622

Standard deviation: 8.27265

R^2: 0.97685 Parameters: a = 113.68047 b = 450.09038 c = 19.06853

Date: Mon Oct 17 13:51:41 PDT 2022

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

Frame size: 12 pixels

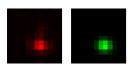
Coordinates: -52.0 um (x), -72.8 um (y), 20.0 um (z)

Corresponding bead: Not found

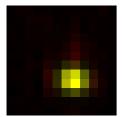
FWHM	Non corrected	Corrected	Theoretical
min	432 nm	450 nm	270 nm
max	502 nm	523 nm	270 nm
Z	2.21 um	2.22 um	1.3 um
Asymmetry	0.861		
Theta	-9.5°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 527.908 (brightness)

B = 122.625 (background)

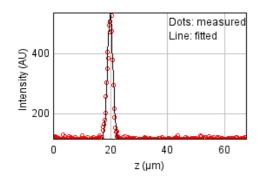
a = 0.537 px

b = -0.030 px

c = 0.713 px

xc = 6.795 pxyc = 7.611 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 33555.4662

Standard deviation: 10.45472

R^2: 0.97502 Parameters:

a = 113.54321

b = 539.91675

c = 19.97966

Date: Mon Oct 17 13:51:41 PDT 2022

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

Frame size: 12 pixels

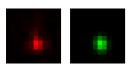
Coordinates: 26.0 um (x), -77.4 um (y), 19.6 um (z)

Corresponding bead: Not found

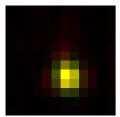
FWHM	Non corrected	Corrected	Theoretical
min	424 nm	441 nm	270 nm
max	524 nm	546 nm	270 nm
Z	1.96 um	1.97 um	1.3 um
Asymmetry	0.808		
Theta	-79.6°		

### XY profile & fitting parameters :

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



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



A = 597.255 (brightness)

B = 124.197 (background)

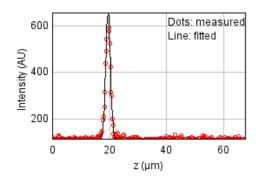
a = 0.739 px

b = -0.046 px

c = 0.497 px

xc = 6.285 pxyc = 7.266 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 25921.8165

Standard deviation: 9.18890

R^2: 0.98633 Parameters:

a = 114.26622

b = 654.22045

c = 19.58422

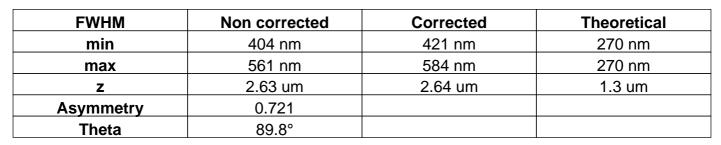
Date: Mon Oct 17 13:51:41 PDT 2022

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

Frame size: 12 pixels

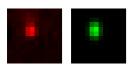
Coordinates: 75.2 um (x), 72.0 um (y), 11.8 um (z)

Corresponding bead: Not found

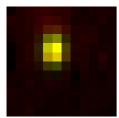


## XY profile & fitting parameters :

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



Fitted on 
$$i(x,y) = A * exp(-(a*(x-xc)^2 + c*(y-yc)^2 + 2*b*(x-xc)*(y-yc))) + B R^2 = 0.904$$



A = 362.166 (brightness)

B = 120.295 (background)

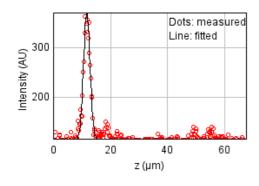
a = 0.822 px

b = 0.001 px

c = 0.427 px

xc = 4.659 pxyc = 4.235 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 30990.3249

Standard deviation: 10.04717

R^2: 0.94638 Parameters:

a = 115.97983

b = 369.94930

c = 11.79991

Date: Mon Oct 17 13:51:42 PDT 2022

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

Frame size: 12 pixels

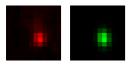
Coordinates: 84.7 um (x), 38.0 um (y), 19.7 um (z)

Corresponding bead: Not found

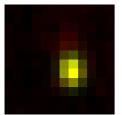
FWHM	Non corrected	Corrected	Theoretical
min	411 nm	428 nm	270 nm
max	569 nm	592 nm	270 nm
Z	2.15 um	2.16 um	1.3 um
Asymmetry	0.722		
Theta	-84.6°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 411.114 (brightness)

B = 120.342 (background)

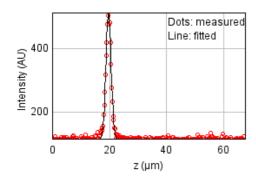
a = 0.792 px

b = -0.036 px

c = 0.418 px

xc = 6.813 pxyc = 6.681 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 15339.7907

Standard deviation: 7.06872

R^2: 0.98656 Parameters:

a = 113.72565

b = 514.38866

c = 19.74858

Date: Mon Oct 17 13:51:42 PDT 2022

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

Frame size: 12 pixels

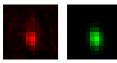
Coordinates: -12.8 um (x), 36.0 um (y), 18.6 um (z)

Corresponding bead: Not found

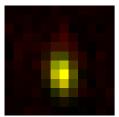
FWHM	Non corrected	Corrected	Theoretical
min	425 nm	443 nm	270 nm
max	662 nm	689 nm	270 nm
Z	2.0 um	2.01 um	1.3 um
Asymmetry	0.643		
Theta	-81.4°		

### XY profile & fitting parameters :

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



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



Parameters:

A = 227.957 (brightness)

B = 120.534 (background)

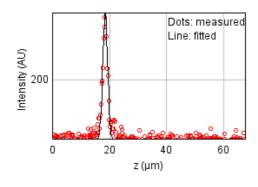
a = 0.732 px

b = -0.064 px

c = 0.316 px

xc = 5.733 pxyc = 6.949 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 18149.9575

Standard deviation: 7.68898

R^2: 0.92310 Parameters: a = 114.80808 b = 297.46980

c = 18.57939

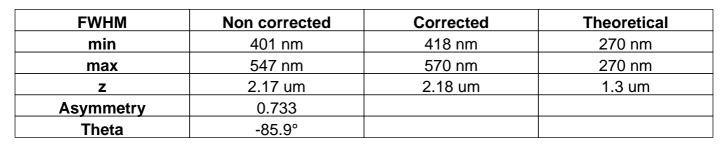
Date: Mon Oct 17 13:51:42 PDT 2022

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

Frame size: 12 pixels

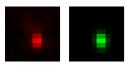
Coordinates: 11.3 um (x), 26.3 um (y), 20.0 um (z)

Corresponding bead: Not found



## XY profile & fitting parameters :

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



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



A = 644.608 (brightness)

B = 129.121 (background)

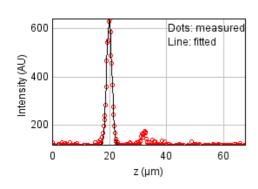
a = 0.831 px

b = -0.027 px

c = 0.450 px

xc = 6.526 pxyc = 6.977 px

## Z profile & fitting parameters:



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

Sum of residuals squared: 44263.1324

Standard deviation: 12.00748

R^2: 0.97769 Parameters: a = 117.04393

a = 117.04550

b = 641.08801

c = 20.00182

Date: Mon Oct 17 13:51:42 PDT 2022

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

Frame size: 12 pixels

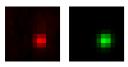
Coordinates: -90.6 um (x), 15.3 um (y), 19.6 um (z)

Corresponding bead : Not found

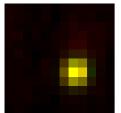
FWHM	Non corrected	Corrected	Theoretical
min	445 nm	464 nm	270 nm
max	491 nm	511 nm	270 nm
Z	2.16 um	2.17 um	1.3 um
Asymmetry	0.907		
Theta	75.3°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 343.040 (brightness)

B = 121.926 (background)

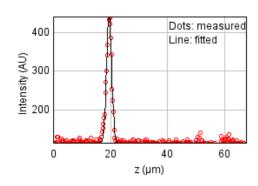
a = 0.669 px

b = 0.029 px

c = 0.565 px

xc = 7.325 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: 20252.1860

Standard deviation: 8.12207

R^2: 0.97370 Parameters: a = 114.19643 b = 440.83737

c = 19.60301

## Bead 998 (Rejected)

Date: Mon Oct 17 13:51:42 PDT 2022

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

Frame size: 12 pixels

Coordinates: -61.1 um (x), 1.38 um (y), 20.3 um (z)

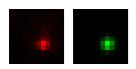
Corresponding bead: Not found

Reason of rejection: R or C parameter off limits.

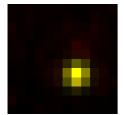
FWHM	Non corrected	Corrected	Theoretical
min	418 nm	435 nm	270 nm
max	438 nm	457 nm	270 nm
Z	2.07 um	2.08 um	1.3 um
Asymmetry	0.953		
Theta	76.5°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 527.103 (brightness)

B = 124.063 (background)

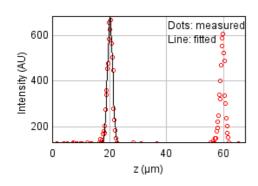
a = 0.766 px

b = 0.016 px

c = 0.702 px

xc = 7.061 pxyc = 7.226 px

### Z profile & fitting parameters:



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

Sum of residuals squared: 1410465.12

Standard deviation: 67.78163

R^2: 0.59553 Parameters:

a = 129.75226

b = 684.12243

c = 20.29166

Date: Mon Oct 17 13:51:42 PDT 2022

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

Frame size: 12 pixels

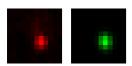
Coordinates: 117 um (x), -5.11 um (y), 19.9 um (z)

Corresponding bead: Not found

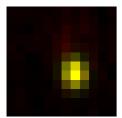
FWHM	Non corrected	Corrected	Theoretical
min	421 nm	438 nm	270 nm
max	543 nm	566 nm	270 nm
Z	2.16 um	2.17 um	1.3 um
Asymmetry	0.775		
Theta	-83.7°		

### 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 = 455.980 (brightness)

B = 119.212 (background)

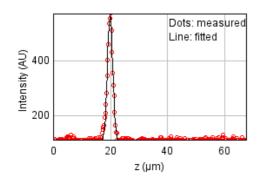
a = 0.754 px

b = -0.033 px

c = 0.458 px

xc = 6.916 pxyc = 6.736 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 20367.1983

Standard deviation: 8.14510

R^2: 0.98661 Parameters: a = 111.92850

b = 573.26845

c = 19.94538

Date: Mon Oct 17 13:51:42 PDT 2022

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

Frame size: 12 pixels

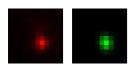
Coordinates: 46.8 um (x), -17.9 um (y), 20.0 um (z)

Corresponding bead: Not found

FWHM	Non corrected	Corrected	Theoretical
min	417 nm	434 nm	270 nm
max	523 nm	545 nm	270 nm
Z	1.92 um	1.93 um	1.3 um
Asymmetry	0.797		
Theta	-79.6°		

## XY profile & fitting parameters :

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



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



Parameters:

A = 583.694 (brightness)

B = 126.175 (background)

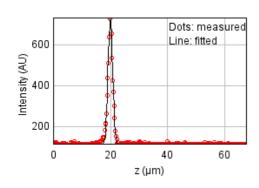
a = 0.763 px

b = -0.050 px

c = 0.500 px

xc = 6.875 pxyc = 7.005 px

# Z profile & fitting parameters:



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

Sum of residuals squared: 23850.6655

Standard deviation: 8.81416

R^2: 0.99016 Parameters: a = 113.19665 b = 730.62618

c = 20.03846