**List of GUV objects generated with Mathematica Notebook BirefrObjectGenerator[month]2023.nb**

with the following optical settings in mind:

Number of microlenses: 31 or 11

Pixels per microlens: 17

Number of voxels per microlens (supersampling): 1 or 3

Magnification: 60

NA of objective: 1.2

Wavelength of light: 0.55 µm

camera pixel size: 6.5 µm

refractive index of medium: water n=1.35

**guv1.h5 -> guvBir[radius=3.5, membrane thickness=1, Δn=0.1]**

single voxel deep slice through center of GUV, Volume shape: [1,9,9]

A picture containing diagram, plot, line, screenshot

Description automatically generatedA picture containing screenshot, colorfulness

Description automatically generated

Additional information in: guvMay26.docx,

**guv2.h5 -> guvBir[radius=3.5, membrane thickness=1, Δn=-0.1]**

single voxel deep slice through center of GUV, Volume shape: [1,9,9]

A picture containing screenshot, line, plot, diagram

Description automatically generatedA picture containing screenshot, colorfulness

Description automatically generated

Additional information in: guvMay26.docx,

**guv1B\_GT.h5 ->guvBir[radius=3.5, membrane thickness=1, Δn=0.1]**

Volume shape: [15, 61, 61]

**guv2B\_GT.h5 ->guvBir[radius=3.5, membrane thickness=1, Δn=-0.1]**

Volume shape: [15, 61, 61]

**guv3\_GT.h5 ->guvBir[radius=6.5, membrane thickness=1, Δn=0.01]**

Volume shape: [15, 61, 61]

A picture containing pattern, symmetry, colorfulness, art

Description automatically generated A picture containing screenshot, colorfulness, plot, line

Description automatically generated

Additional information in: guvsMay26.docx, guvsJuly12.docx, guvsJuly18.docx

**guv3N1\_GT.h5 ->guvBir[radius=6.5, membrane thickness=1, Δn=0.01]**

**with noise added to GUV and volume data**

Volume shape: [15, 61, 61]

**guv3BN1\_GT.h5 ->guvBir[radius=6.5, membrane thickness=1, Δn=0.002]**

**with noise added to GUV and volume data**

Volume shape: [15, 61, 61]

**guv3N2\_GT.h5 ->guvBir[radius=6.5, membrane thickness=1, Δn=0.002]**

**with (larger) noise added to GUV and volume data**

Volume shape: [15, 61, 61]

**guv3BN2\_GT.h5 ->guvBir[radius=6.5, membrane thickness=1, Δn=0.002]**

**with (larger) noise added to GUV and volume data**

Volume shape: [15, 61, 61]

**guv3N3\_GT.h5 ->guvBir[radius=6.5, membrane thickness=1, Δn=0.01]**

**with noise added to GUV and volume data, volume noise symmetric to Δn=0.**

Volume shape: [15, 61, 61]

**guv4\_GT.h5 -> guvBir[radius=9.5, membrane thickness=1, Δn=0.01]**

Volume shape: [23, 91, 91]

Additional information in: guvsJuly18.docx

**guv4N1\_GT.h5-> guvBir[radius=9.5, membrane thickness=1, Δn=0.01]**

**with noise added to GUV and volume data**

Volume shape: [23, 91, 91], mean background ∆n=0.0004

Additional information in: guvsJuly18.docx

**guv4N2\_GT.h5-> guvBir[radius=9.5, membrane thickness=1, Δn=0.01]**

**with (larger) noise added to GUV and volume data**

Volume shape: [23, 91, 91], mean background ∆n=0.002

Additional information in: guvsJuly18.docx

**guv4BN1\_GT.h5-> guvBir[radius=9.5, membrane thickness=1, Δn=0.002]**

**with noise added to GUV and volume data**

Volume shape: [23, 91, 91], mean background ∆n=0.0004

**guv4BN2\_GT.h5-> guvBir[radius=9.5, membrane thickness=1, Δn=0.002]**

**with (larger) noise added to GUV and volume data**

Volume shape: [23, 91, 91], mean background ∆n=0.002

**guv5\_GT -> guvBir[radius=19.5, membrane thickness=3, ∆n=0.01]**

for guv5, everything is tripled compared to guv3, including radius and membrane thickness

Volume shape: [45, 183, 183]

**guv6\_GT -> guvBir[radius=18.5, membrane thickness=1, ∆n=0.01]**

for guv6, everything is tripled compared to guv3, except for the membrane thickness which remains one voxel; the radius of 18.5 was chosen to make the middle of the membrane the same physical distance from the GUV center for both, guv3 and guv6.

Volume shape: [45, 183, 183]

**guv7\_GT -> guvBir[radius=30.5, membrane thickness=1, ∆n=0.01]**

for guv7, everything is multiplied by 5 compared to guv3, except for the membrane thickness which remains one voxel; the radius of 30.5 was chosen to make the middle of the membrane the same physical distance from the GUV center as for guv3, guv6, and guv7", {75, 305, 305}}

Volume shape: [75, 305, 305]

The file guv7\_GT.h5 is 223 Mbyte, which is too big for uploading to GitHub