RO notes on experimental data in this folder: '/Users/rudolfo/Software/GitHub/BirTomo/SharedData/2025\_05/XylemA Experim&Simulation/Experimental Data'

**XylemAPolStackInt16bit.tif** holds experimental retardance and slow axis orientation data. The stack was created using the files:

/Users/rudolfo/LightFieldMicroscopy/Experiments/2024\_05\_01\_XylemJan2024/Rectified\_etc\_Images\_16bit/SMS\_2024\_0501\_1756\_1FocusNr10/XylemJan2024Cell1ZSlice10Rect\_RetCeil120nm16bit.tif

and

/Users/rudolfo/LightFieldMicroscopy/Experiments/2024\_05\_01\_XylemJan2024/Rectified\_etc\_Images\_16bit/SMS\_2024\_0501\_1756\_1FocusNr10/XylemJan2024Cell1ZSlice10Rect\_SlowAxOrient16bit.tif

To convert the 16bit integer values into radian values of retardance and slow axis orientation,

retardance values were multiplied by 120/(65535 \* 546) \* 2𝛑 = 0.00002107 = 2.107•10-5

slow axis orientation values were multiplied by 𝛑/18000 = 0.000174533 = 1.74533•10-4

-> **XylemAFloat32bitPolStack.tif**

retardance ceiling 120/546 \* 2𝛑 = 1.38 radian

Cropped XylemAFloat32bitPolStack.tif with ROI x272, y96, w1776, h1776; 1776/16=111

And disassembled into:

**XylemACrop1Float32bitRet.tif, XylemACrop1Float32bitAzim.tif**

Cropped XylemAFloat32bitPolStack.tif with ROI x512, y336, w1296, h1296; 1296/16=81

And disassembled into:

**XylemACrop2Float32bitRet.tif, XylemACrop2Float32bitAzim.tif**