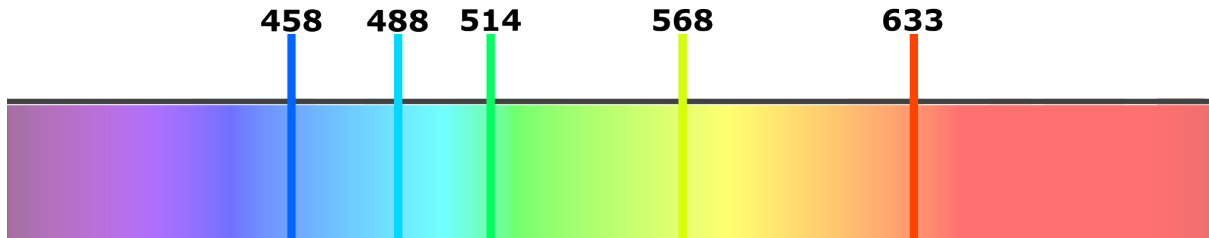


Leica 4π Microscope

Be-336

Leica SP2 AOBS with 4Pi-add on

Lasers



Objectives

Magnification	Numerical Aperture	Working Distance (mm)	Immersion	Type
2x 100x	1.35	0.22 / 0.22	glycerol	HCX PL APO

Detectors

4x spectral PMT (Photo Multiplier Tube)

2x APD (Avalanche Photo diode)

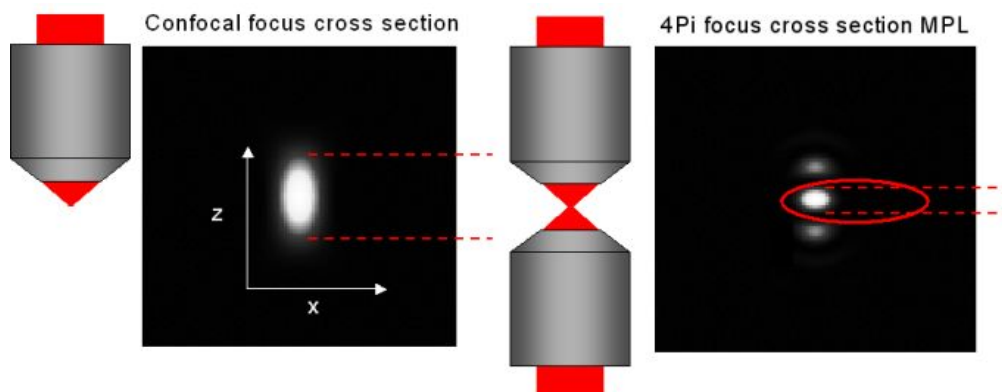
Applications

Super resolution 3D scans

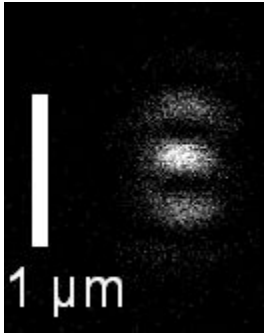
Extra info

Metal-Halide Lamp for EPI fluorescence

4Pi Principle



The excitation spot is split in 1 main lobe and 2 side lobes (Multi-photon excitation). This smaller main lobes gives the very high resolution.

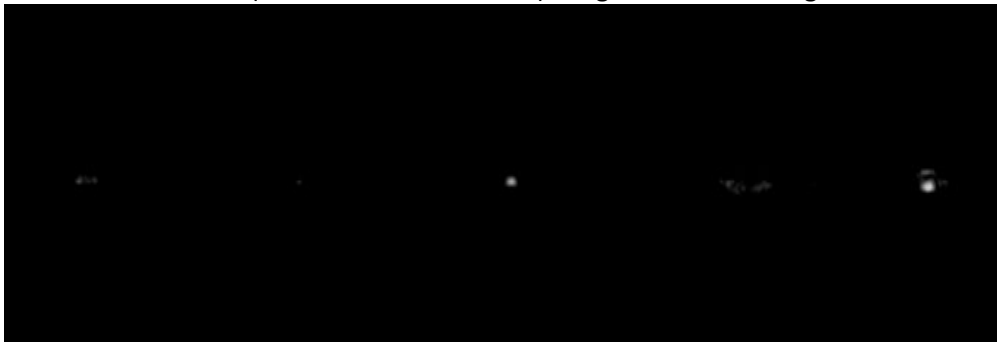


Reality, 100 nm bead XZ-image

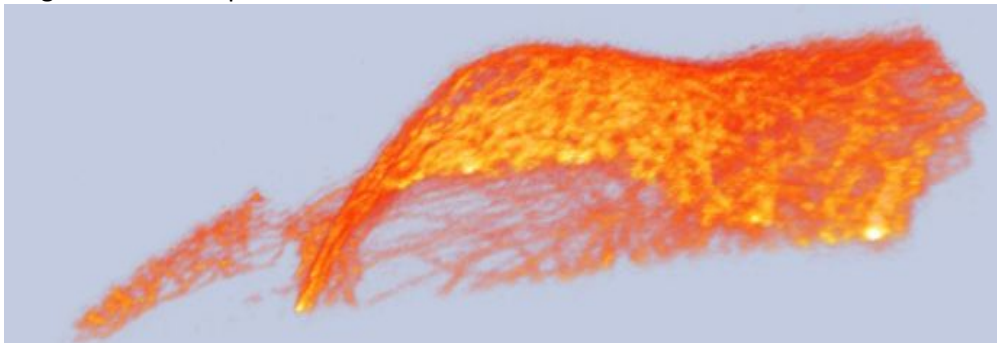
The raw data of the 4Pi microscope will contain the side lobe information (XZ image beta-tubulin).



After deconvolution (correction of side lobes) a high resolution image remains



To give a better impression look at the volume rendered HeLa cell with beta-tubulin staining.



Gert van Cappellen, beta-tubulin slides made by Jeffrey van Haren