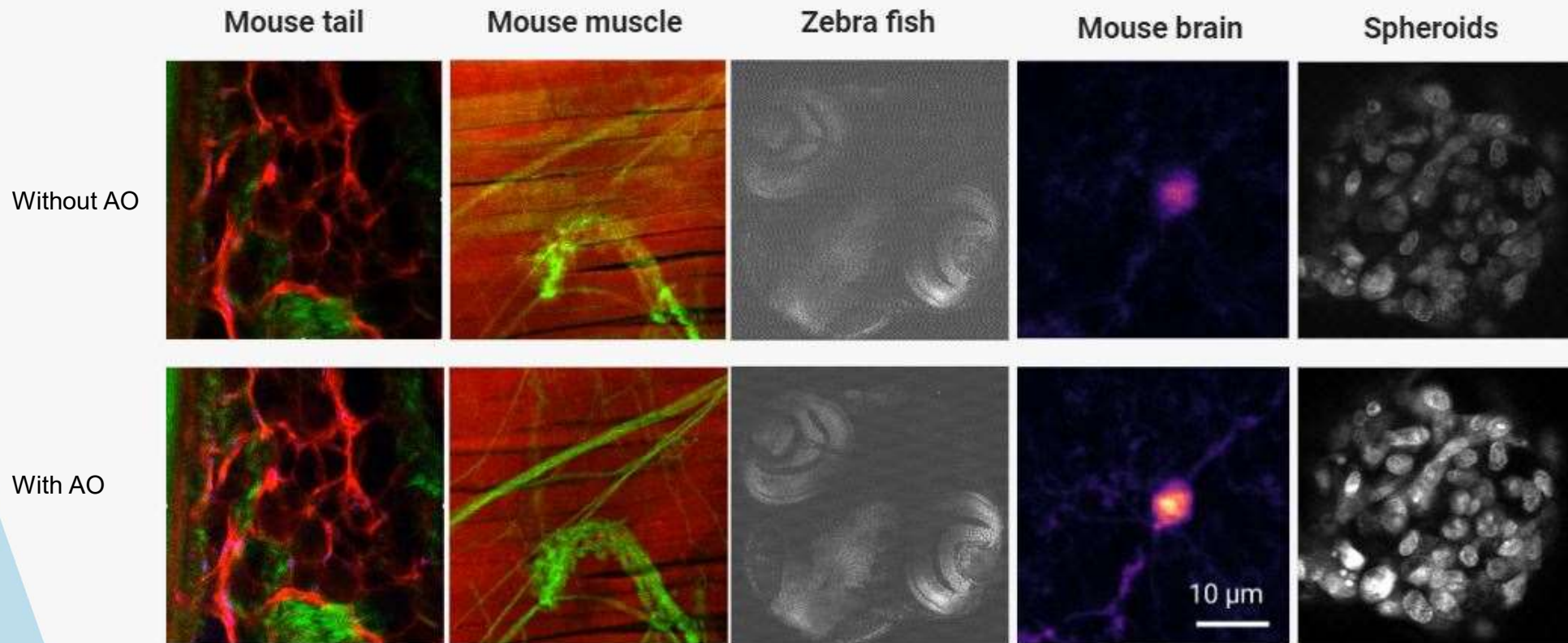


# Customer installations – 2P microscopes



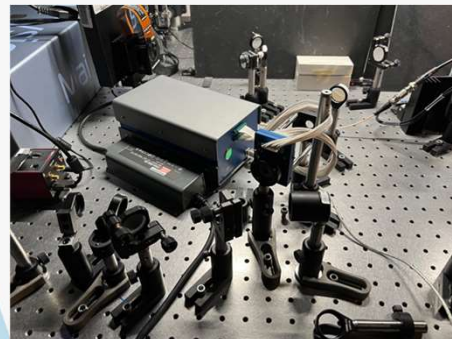
# DPP for Two-photon Microscopy



- Plug-and-play AO experiment with an existing custom 2P microscope



DELTA 7



## Single mouse brain neuronal imaging

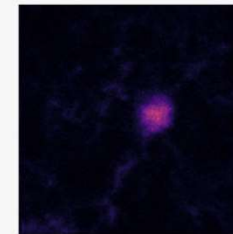
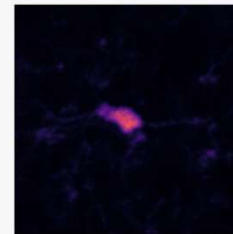
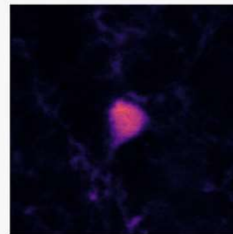
Depth from the cover slip

~ 0  $\mu\text{m}$

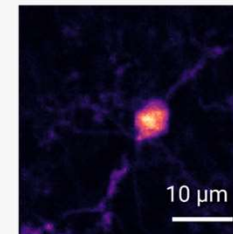
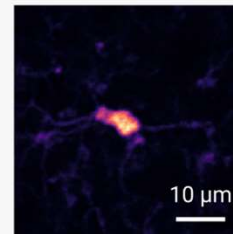
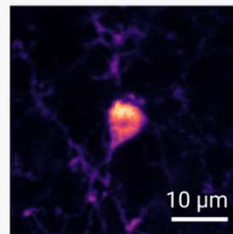
~ 96  $\mu\text{m}$

~ 150  $\mu\text{m}$

Without AO



With AO



Objective lens:  
XLUMPLFLN20XW, NA = 1,  
water immersion, Olympus Corp.

- Down to ~150  $\mu\text{m}$  deep into brain tissue
- **Wavefront sensorless measurement** and **active compensation** of system and sample induced optical aberrations by DELTA 7



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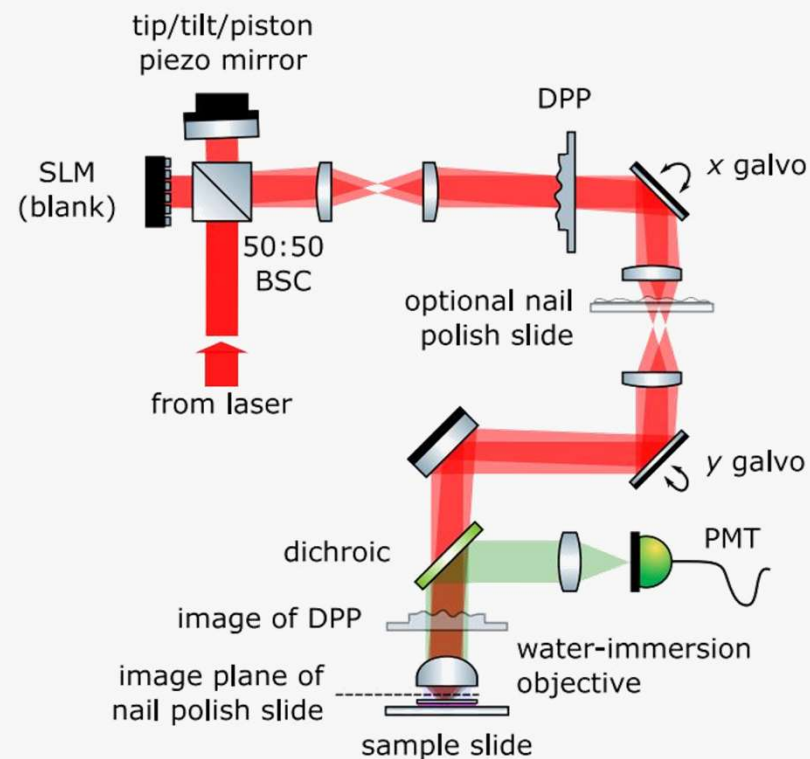
DELTA 7 installed in a two-photon microscope setup for biological imaging at Medical University of Innsbruck

Courtesy of Group of Prof. [Alexander Jesacher](#)

# DPP for Two-photon Microscopy



- DPP combined with F-SHARP technique for fast ( $\sim 1$  sec) aberration measurement



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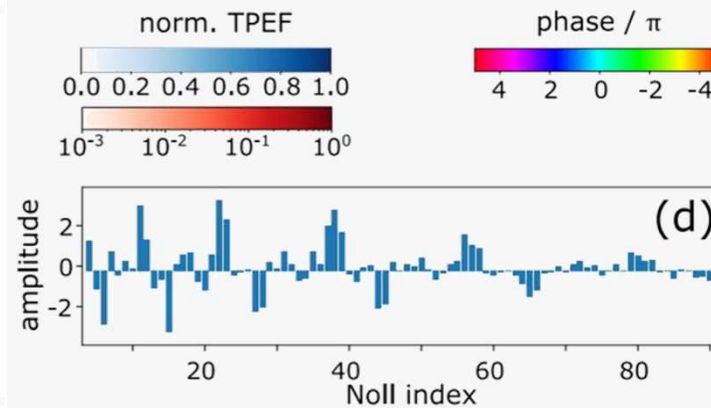
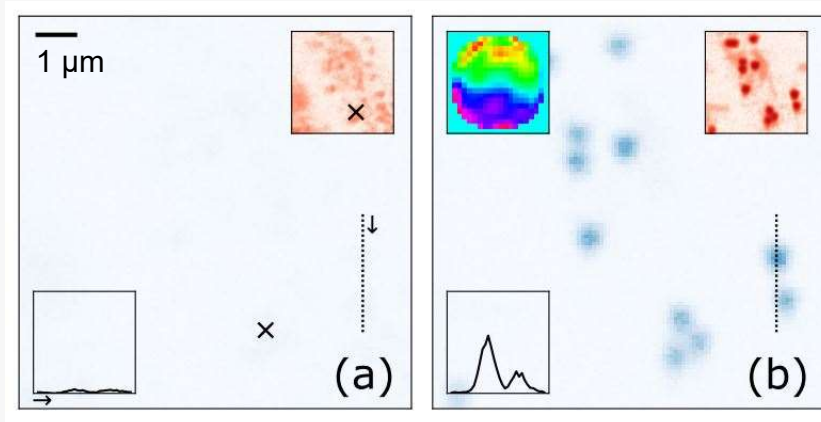
DELTA 7 installed in a two-photon microscope setup for biological imaging at Medical University of Innsbruck

Courtesy of Group of Prof. [Alexander Jesacher](#)

# DPP for Two-photon Microscopy



- DPP combined with F-SHARP technique for fast ( $\sim 1$  sec) aberration measurement
- 500 nm beads aberrated by a nail polished slide



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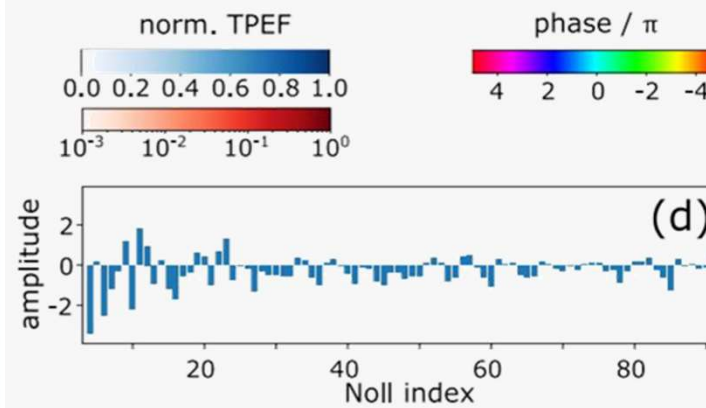
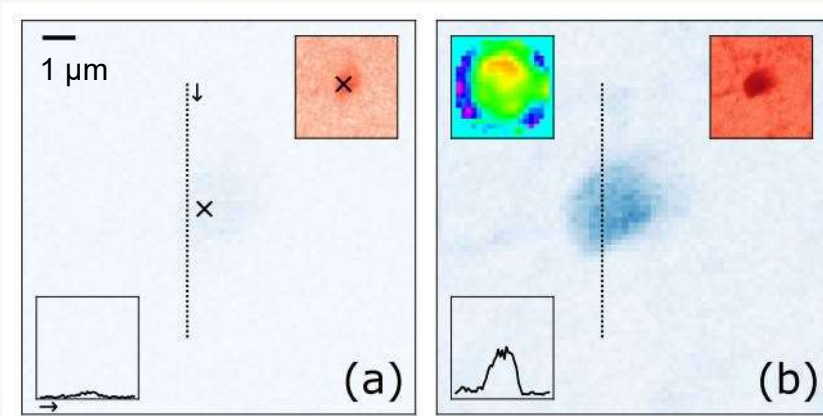
DELTA 7 installed in a two-photon microscope setup for biological imaging at Medical University of Innsbruck

Courtesy of Group of Prof. [Alexander Jesacher](#)

# DPP for Two-photon Microscopy



- DPP combined with F-SHARP technique for fast ( $\sim 1$  sec) aberration measurement
- 200  $\mu\text{m}$  deep into mouse brain tissue

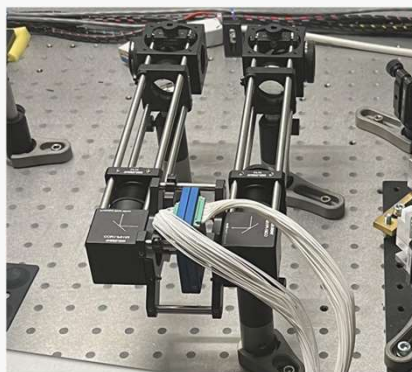
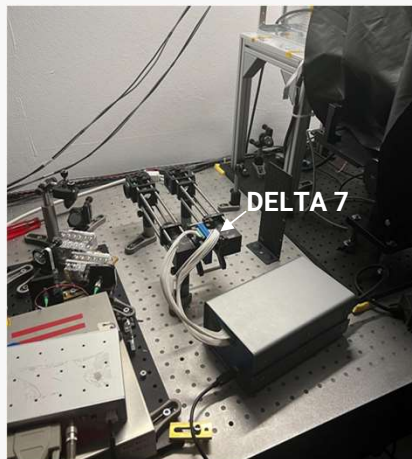


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DELTA 7 installed in a two-photon microscope setup for biological imaging at Medical University of Innsbruck

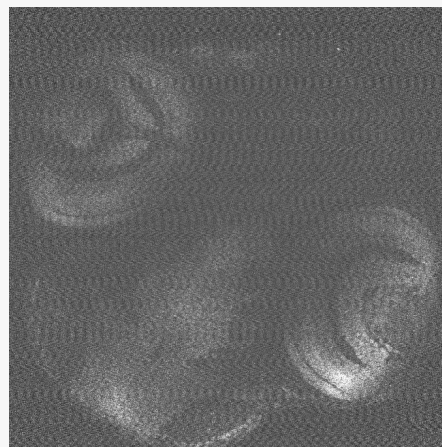
Courtesy of Group of Prof. [Alexander Jesacher](#)

# DPP for Two-photon Microscopy

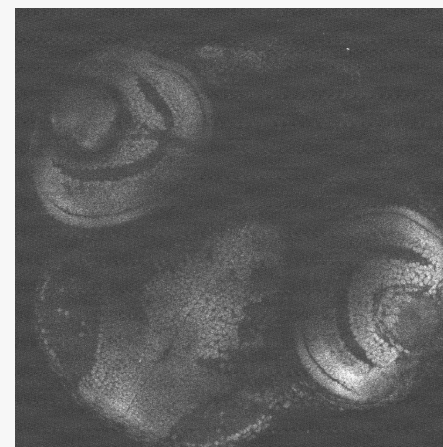


## Zebrafish frontal face

Without AO



With AO



- Down to  $\sim 250 \mu\text{m}$  deep into the Zebrafish eye
- **Wavefront sensorless measurement** and **active compensation** of system and sample induced optical aberrations by DELTA 7

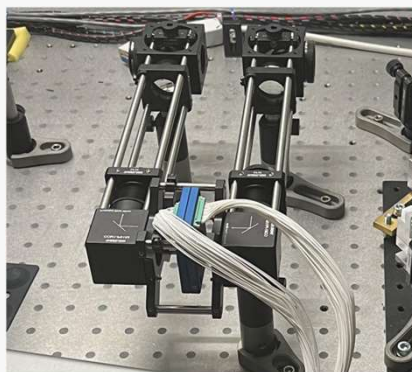
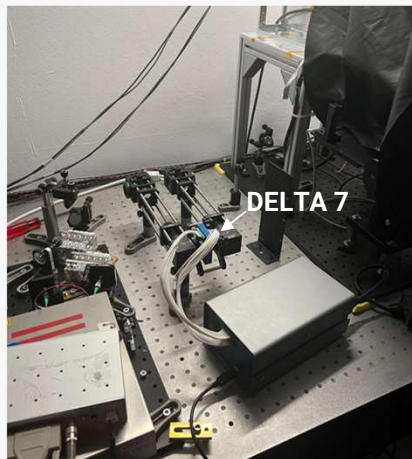


DELTA 7 installed in a two-photon microscope (MPX-1040) in collaboration with Prospective Instruments

Courtesy of Dr. Stefanie Kiderlen & Dr. Lukas Krainer  
<https://www.p-inst.com/>

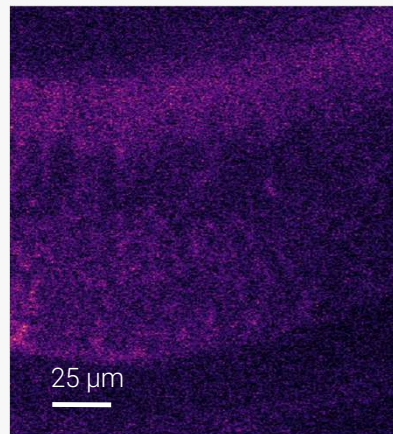
Objective lens:  
Olympus XLPlan N  
Magnification: 20x  
NA: 1.0  
Immersion: water

# DPP for Two-photon Microscopy

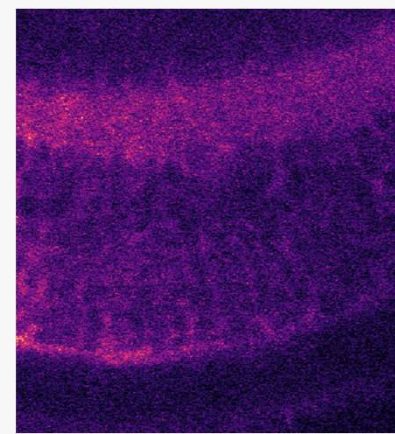


## Zebrafish retina

Without AO



With AO



- Down to  $\sim 250 \mu\text{m}$  deep into the Zebrafish eye
- **Wavefront sensorless measurement** and **active compensation** of system and sample induced optical aberrations by DELTA 7



DELTA 7 installed in a two-photon microscope (MPX-1040) in collaboration with Prospective Instruments

Courtesy of Dr. Stefanie Kiderlen & Dr. Lukas Krainer  
<https://www.p-inst.com/>

Objective lens:  
Olympus XLPlan N  
Magnification: 20x  
NA: 1.0  
Immersion: water