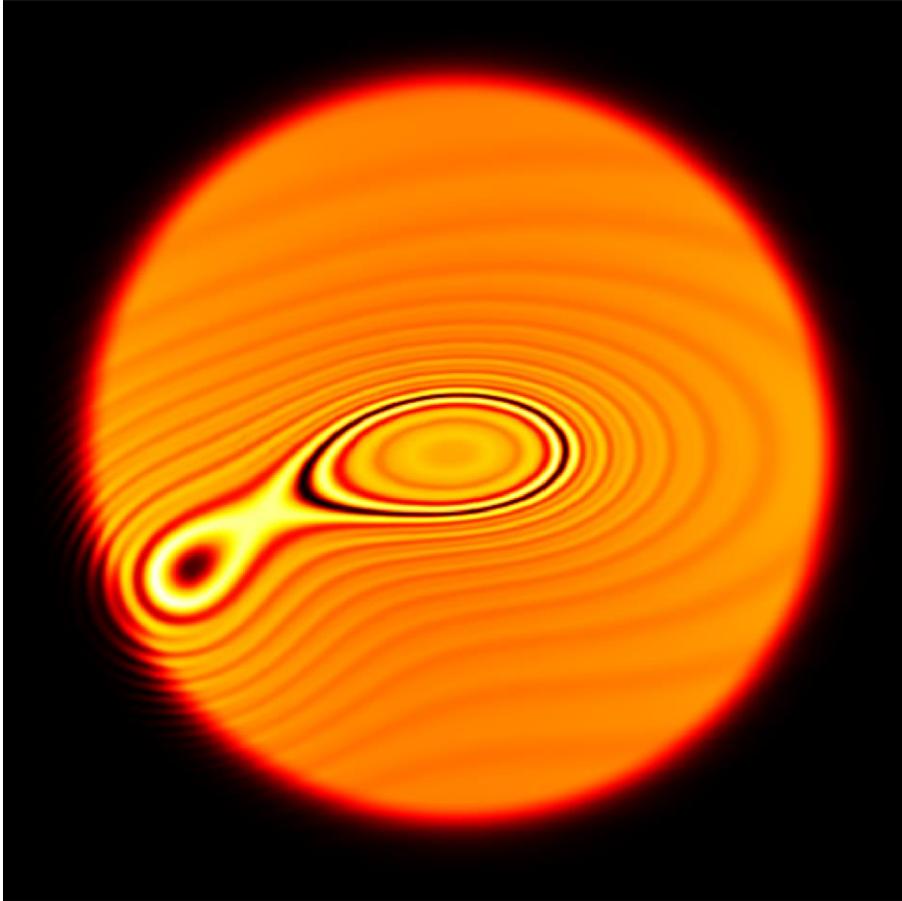


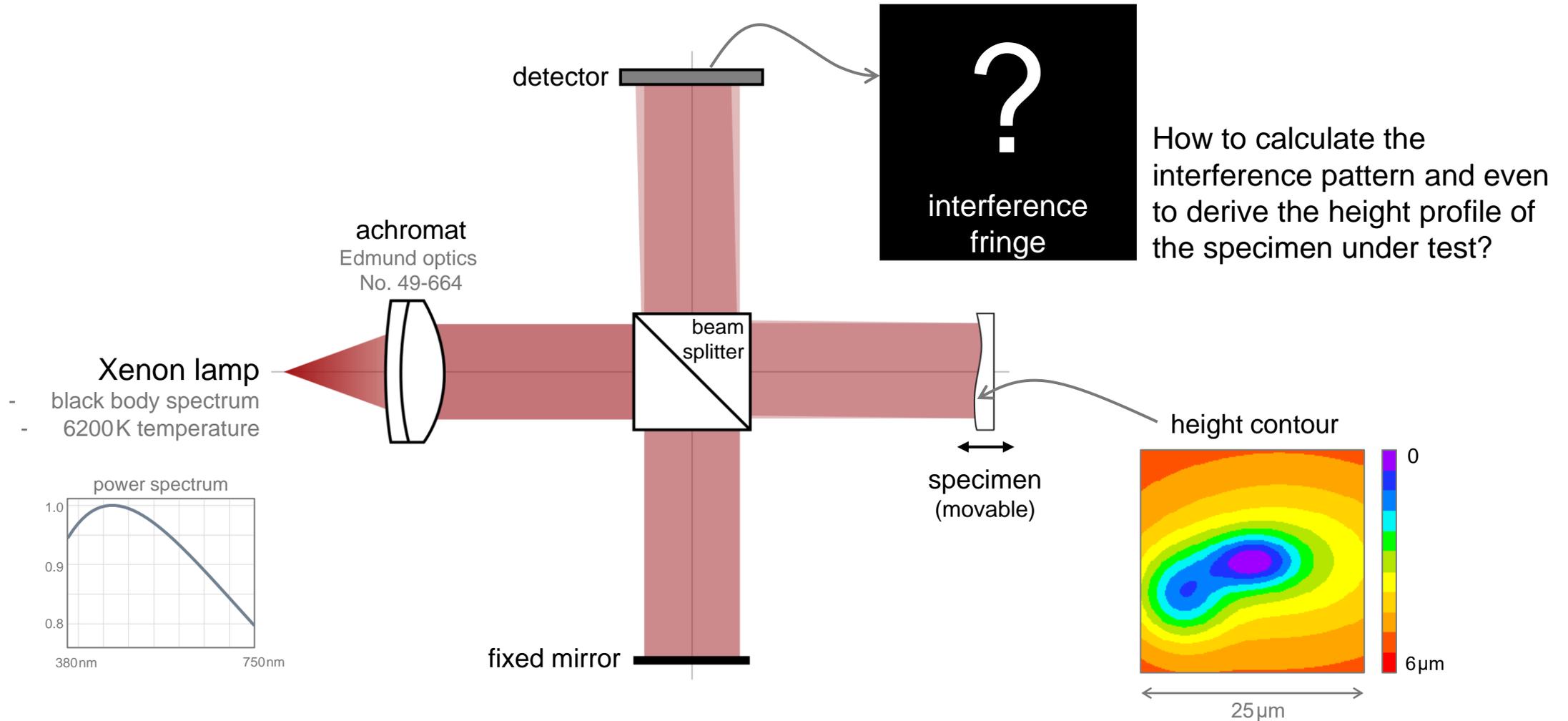
Full-Field Optical Coherence Scanning Interferometry

Abstract

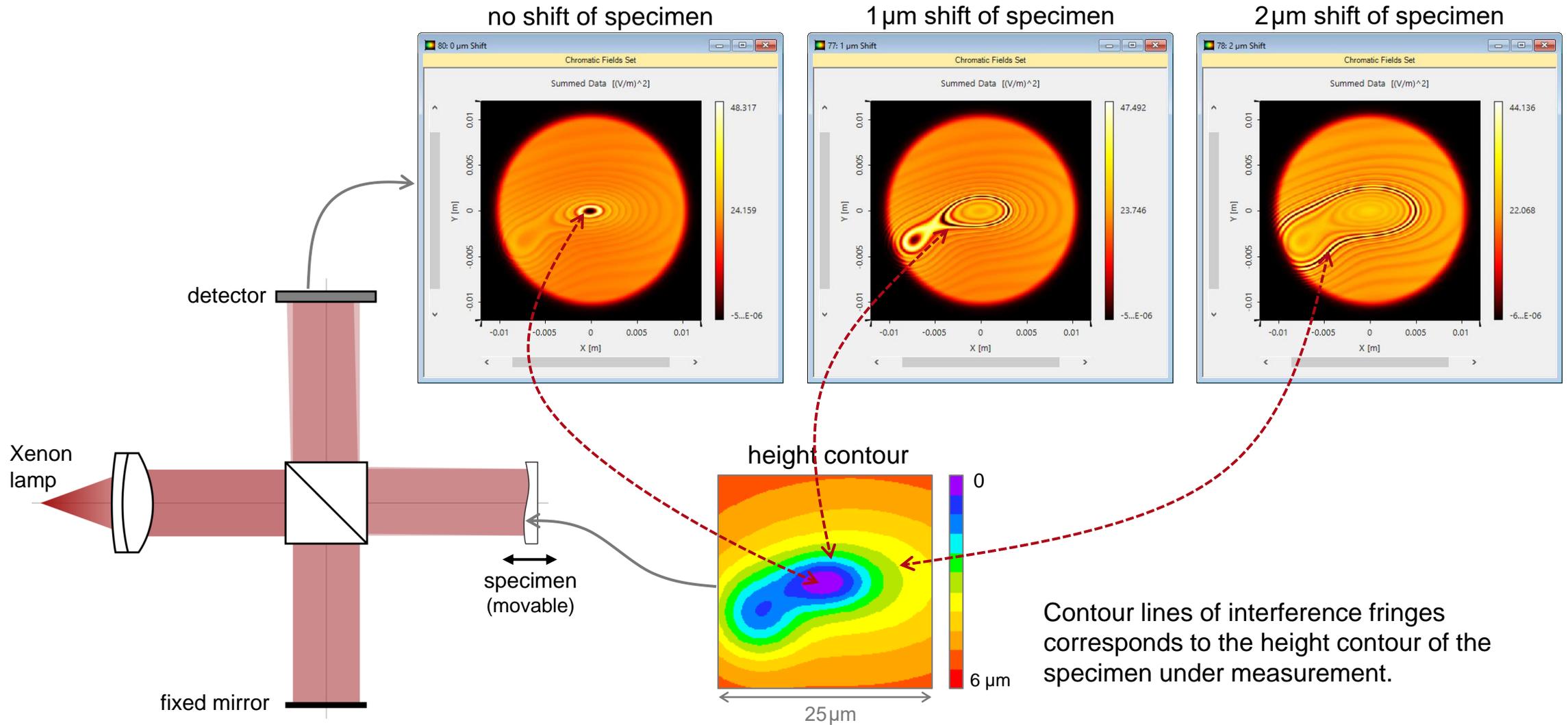


Scanning interferometry is the technique for performing surface height measurement. By exploiting the low coherence of white light source, interference pattern appears only when the path length difference is within the coherent length. Therefore, it enables precise microscopic measurement. Together with a Xenon lamp, a Michelson interferometer is built up and used to measure a specimen with smoothly varying front surface.

Modeling Task

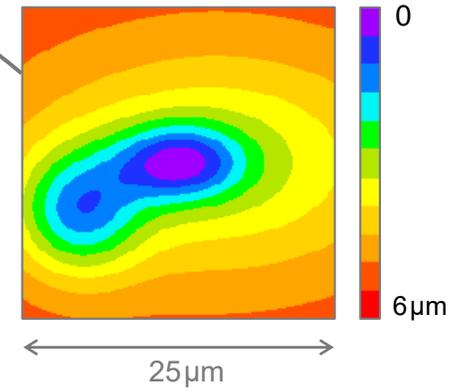
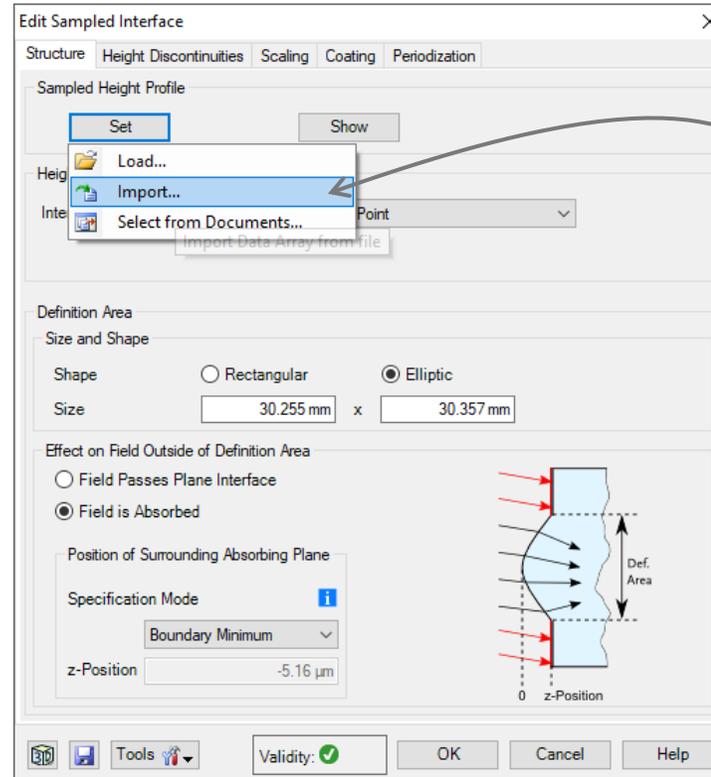
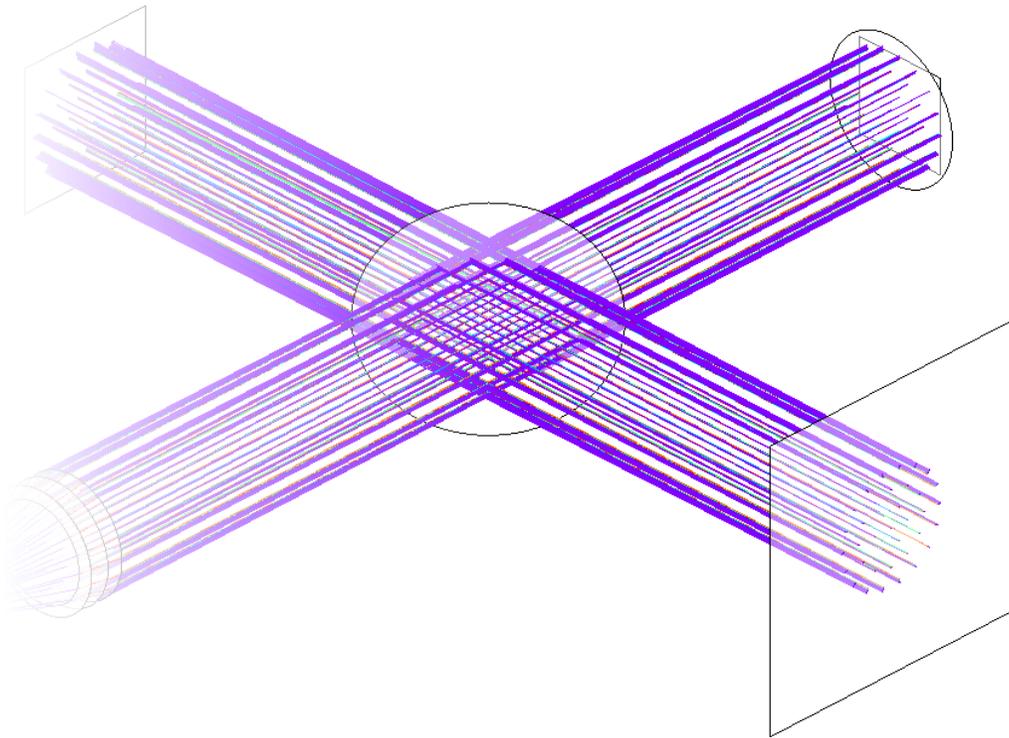


Simulated Interference Fringes



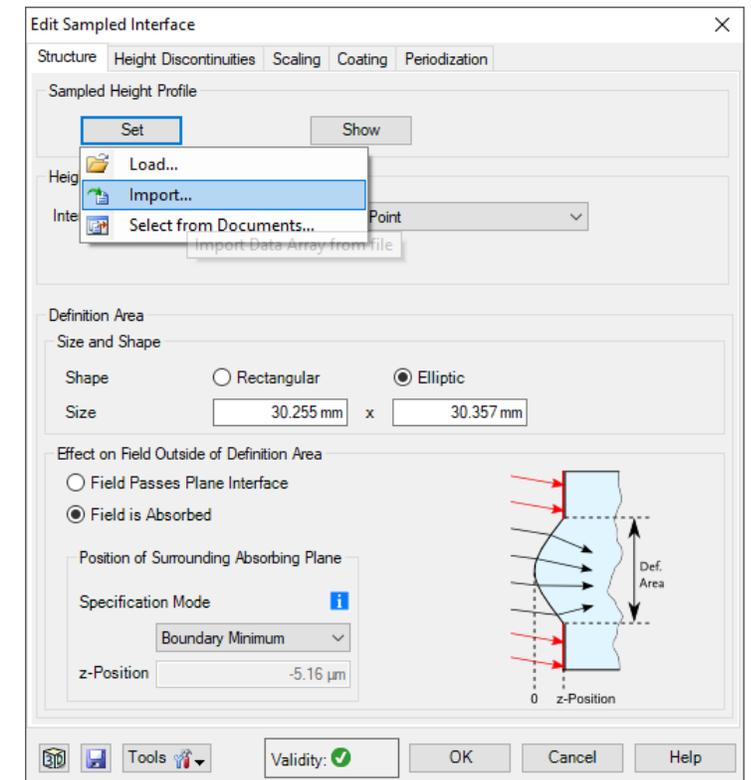
Peek into VirtualLab Fusion

customizable surface definition via import

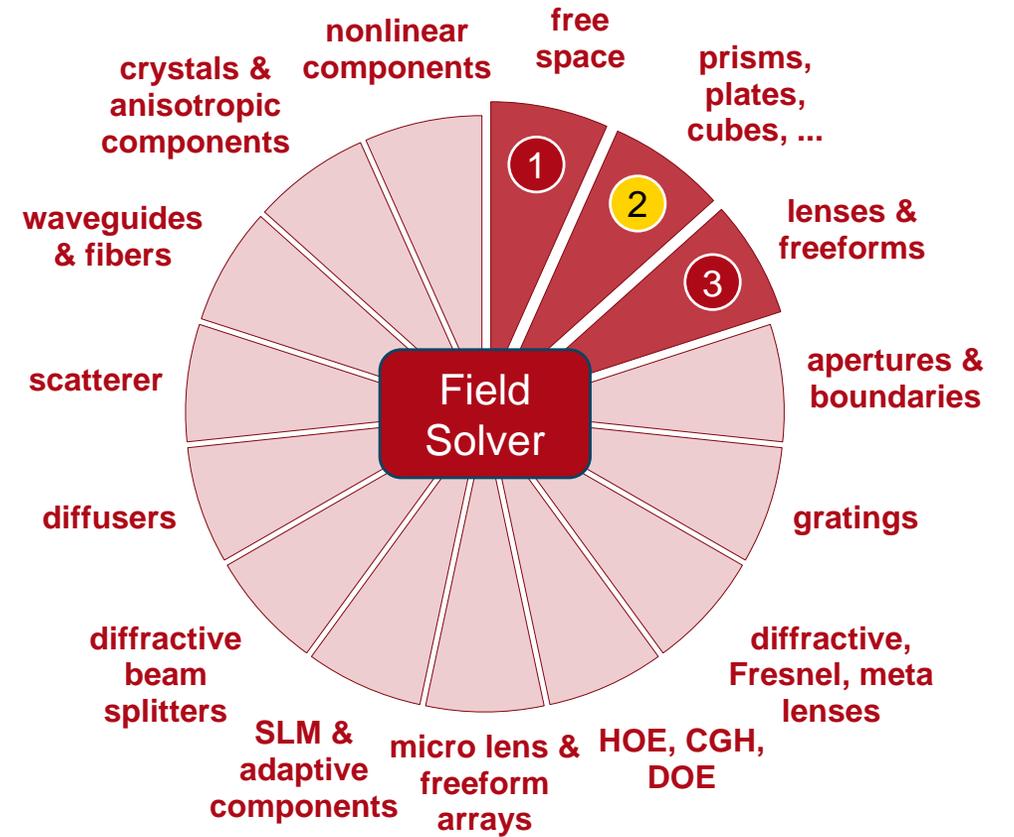
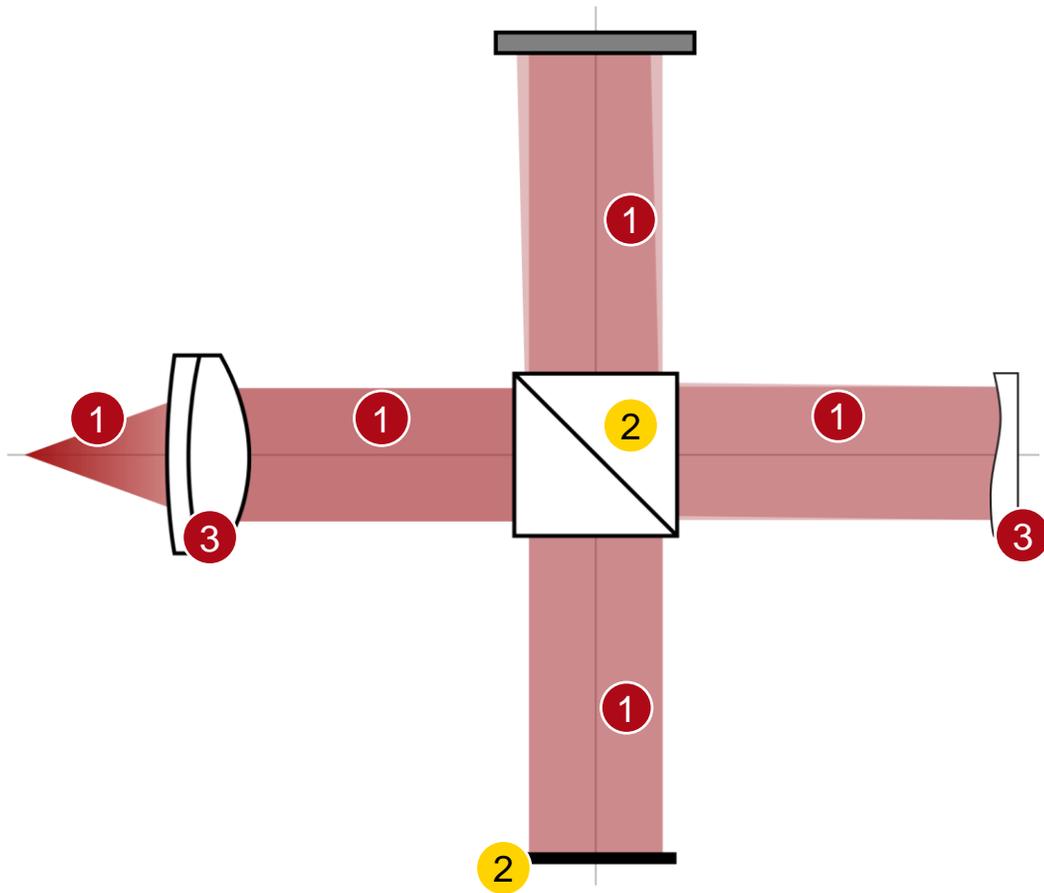


Workflow in VirtualLab Fusion

- Set up input field
 - [Basic Source Models](#) [Tutorial Video]
- Customize surface profile using imported data
- Define position and orientation of components
 - [LPD II: Position and Orientation](#) [Tutorial Video]
- Set channels properly for non-sequential tracing
 - [Channel Setting for Non-Sequential Tracing](#) [Use Case]
- Use Parameter Run to check influence/changes
 - [Usage of the Parameter Run Document](#) [Use Case]



VirtualLab Fusion Technologies



idealized component

Document Information

title	Full-Field Optical Coherence Scanning Interferometry
document code	IFO.0004
version	2.0
toolbox(es)	Starter Toolbox (Non-Sequential Extension)
VL version used for simulations	7.4.0.49
category	Application Use Case
further reading	<ul style="list-style-type: none">- Laser-Based Michelson Interferometer and Interference Fringe Exploration- Mach-Zehnder Interferometer- Fizeau Interferometer for Optical Testing